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Economic and Social Effects of the Oil Industry in Alaska 1975 to 1995

Volume 2

Part 1: Institutional Profile Analysis of Local Governments and Economies
Part 2: Oil Industry Philanthropy in Alaska
Part 3: Employment and Earnings
Part 4: Effects on Individuals and Households
Part 5: Mitigation Options

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Economic and Social Effects of the Oil Industry in Alaska 1975 to 1995

Volume 1

Part 1: State Oil Revenues and Local Governments
Part 2: Capital Projects Data Base Summary

Volume 2

Part 1: Institutional Profile Analysis of Local Governments and Economies
Part 2: Oil Industry Philanthropy in Alaska
Part 3: Employment and Earnings
Part 4: Effects on Individuals and Households
Part 5: Mitigation Options

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Economic and Social Effects of the Oil Industry in Alaska 1975 to 1995

Volume 2, Part 1

Institutional Profile Analysis of Local Governments and Economies

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Introduction

A. Scope of Work

This report, "*Institutional Profile Analysis of Local Governments and Economies*" focuses on the effects of oil revenue on infrastructure development and the provision of public services during the period from 1975 through 1995. Rather than a rigorous quantitative study, this "institutional profile analysis" is a compilation of interviews with Alaskans who have first-hand knowledge of the effects of oil revenues on local governments over the last two decades. These "key informants" include mayors, city managers, representatives of tribal organizations and government agencies, and many others (a list of key informants is provided in the appendix).

The interviews are supplemented by secondary data in some instances, but the methodology is one in which informal questions produce opinions, impressions, memories and perceptions that are not necessarily documented or corroborated.

This report attempts to identify how changing oil revenues affected local government services and infrastructure. The following types of questions are addressed:

- Were facilities constructed with oil revenue that would not have been built in the absence of oil money?
- Have local governments had trouble maintaining and operating facilities built with oil money?
- How was the quality of life affected by infrastructure and services funded with oil money?
- How did local governments adjust to declining oil revenue during the 1986-90 period?
- What role did declining oil revenues have in the recession of 1986-90? Were there contributing factors?

Several key informants noted the difficulty in attempting to separate the effects of oil money from other events, even while acknowledging that those events may have been prompted by, or directly related to, oil money. The following example illustrates the point.

The Alaska Native Claims Settlement Act (ANCSA) culminated a long process of negotiations between Alaska Natives and the federal government regarding aboriginal land claims. Negotiations were influenced by the State land selection process and industrial development that had been increasingly affecting Native lifestyles, cultures and resources, but were brought to a head by the potential development of the North Slope oil fields and the Trans-Alaska pipeline. ANCSA extinguished aboriginal claims to all of Alaska in exchange for title to nearly 44 million acres of land and nearly $1 billion.

While it can be argued that a desire for oil development prompted ANCSA, it can also be argued that ANCSA permitted oil development. Either way, ANCSA had significant cultural and economic impacts that are unrelated to State oil revenue. These impacts include the formation of regional and village corporations that changed Native government, employment, economic participation and incomes. ANCSA allowed development of timber and mineral resources and land itself, and established institutions that use State and federal money to provide health, education and social services to Alaskans.

This is just one example of the many complexities involved in addressing the relationship between oil revenues, economic development and local government services. Despite these complexities, this key informant exercise is useful in establishing a broad understanding the remarkable socioeconomic change brought about - directly or indirectly—by oil development in Alaska.

Important background information is provided in the Volume 1 report "*State Oil Revenues and Local Governments.*" That report presents detailed capital projects expenditure data as well as selected operating budget data for the period 1975 to 1995. To summarize, during this period, State oil revenue increased from $230 million in 1975 to $5.7 billion by 1982 (both figures are in 1995 dollars). The increase

was the result of oil flow from Prudhoe Bay. Both production and price of oil roughly doubled from 1978 to 1980, providing unprecedented revenue and development opportunities for the State. Six years of increasing oil production and relatively high oil prices were followed in 1986 by oil's sudden drop to 1978 price levels. State oil revenue dropped nearly in half and Alaska experienced a recession from 1986 to 1990. The economy as a whole has been fairly stable since 1990; although both the fishing and timber industries have declined, trade and service expansion (due in part to tourism development) have offset those declines.

B. Report Organization

Chapter I provides a statewide perspective on some of the public policy issues that affected local governments in Alaska during the 1975 to 1995 period. Chapter II, III and IV are area-specific analyses (Municipality of Anchorage, Kenai Peninsula Borough and Northwest Arctic Borough, respectively) and are divided into two sections: infrastructure and public services. Within these subsections are discussions of the impact of oil revenue fluctuation on quality of life, economic development, real estate markets, transportation infrastructure development and other topics.

Chapter I: An Overview of State Government Policy Issues 1975-1995

Introduction

The purpose of this chapter is to set the stage for the local-level analysis that follows in Chapters II through IV. In many instances, the effects of rising and then declining oil revenue on local governments were a function of changing statewide policy. This chapter identifies some of the key policy issues that affected local governments in Alaska and the services they provide. A range of infrastructure and public service issues are addressed here, under the general subheadings of Public Services, Utilities, Transportation, Housing and the Arts.

A. Public Services

1. Education

Both capital and operating funding for education have been heavily influenced by oil revenue.[1] However, the period of study also encompasses several policy and fiscal changes that are less directly related to fluctuations in oil revenue but that are important to understanding education funding, municipal debt and infrastructure development in Alaska.

School Debt Reimbursement

City and Borough school districts benefitted from a school debt reimbursement program that assisted in retiring municipal bonds issued for school construction. The debt reimbursement program was established in 1970, soon after the State received $900 million from North Slope oil leases. Rapid population growth (driven in part by oil development), and consequent need for additional schools, caused debt reimbursement to go from less than $10 million annually in the mid— 1970s to over $100 million in 1986.

The school debt reimbursement program made voter approval of school bonds easier. It also may have prompted some municipalities to build schools that were more expensive than would have been built with strictly local funding. In fact, laws and regulations were changed over the years to prevent abuses, especially related to swimming pools and other "non-educational add-ons."

Additionally, some school districts (including the Kenai Peninsula) had excess school capacity as the oil boom ended (around 1995). However, excess capacity can be attributed to the rapid (and, some claim, unforeseen) decline in population growth as the boom ended. There are no blatant examples of excess capacity in a wasteful or abusive sense. There is also no pattern of converting existing schools to other uses in order to take advantage of the debt reimbursement program. Program abuse was minimized by a combination of municipal contributions to projects and Department of Education oversight regarding space requirements.

In the 1986-87 period, faced with rapidly growing program costs and rapidly declining revenues, the legislature placed a moratorium on new debt reimbursement effective in 1988 and attempted to end the program permanently in 1990. By 1993, oil prices were up, the state's recession was over and population growth was again exerting pressure on school capacities. The debt reimbursement program was reinstated with some restrictions in 1993.

The correlation between oil revenue and school debt payments is complicated by the fact that the years of declining oil revenue were also years of declining population in many areas of the state. The need for school construction subsided as population growth

[1] This discussion is limited to primary and secondary education, which is often referred to as "K-12." Funding for the University of Alaska was also affected by oil revenue, but the University system can be considered a statewide institution. The focus of this study is local institutions and economies.

subsided (or even reversed). The conclusion is that the linkage between school capital funding and oil revenue is indirect as well as direct; when oil revenue declines, population growth slows so that fewer new schools are needed.

Other Capital Expenditures Issues

Molly Hooch: The *Molly Hooch* agreement, which assured operation of schools in Alaska's small communities, provides an example of State policy tied to oil revenue. Adjudication of the case was avoided when some legislators agreed to support an increase in oil taxes in exchange for an agreement to spend a portion of the tax receipts on school construction in small communities.

This demonstrates that oil revenue—or the promise of oil revenue—influenced *how* money was spent as well as *how much* money was spent. This distinction applies to all public services and infrastructure development, including the education policy changes discussed above.

State Grants for Education: In addition to the debt reimbursement program, some urban districts also received state grants for school capital projects. Grants are not included in the capital spending reported under the School Debt Reimbursement Program. The distribution of state grants to urban areas appears to depend to some extent on political power, but the availability of funding parallels oil revenue. Grant amounts to each geographic area of interest are reported in sections on the specific communities.

Regional Education Attendance Areas: In the mid-1970s, Alaska adopted a Regional Education Attendance Area (REAA) system that incorporated rural schools formerly operated by the Bureau of Indian Affairs (BIA). Acting as the "Local Assembly" for the unorganized borough, the State paid all school capital and operating costs of the REAAs. The Northwest Arctic REAA received capital grants of $2.6 million in 1983, $2 million in 1985, $5.4 million in 1986 and $0.4 million in 1987. The REAA became the Northwest Arctic Borough School District during FY87 upon formation of the Northwest Arctic Borough.

Urban school districts are funded by local property taxes and state foundation funding. REAAs have no taxation authority therefore all funding comes from the State.

2. Operating Costs

Oil revenue affected state aid for school operations in a number of direct and indirect ways. The reader will recall that State aid for school operations is based on the number of units in each district. Units are defined as groups of students, with the group size smaller in small schools in order to compensate for dis-economies of scale. Every unit is funded at the same level, which is set by statute.

Before the education foundation formula was modified in 1988, urban districts could contribute to school district operating budgets and generally selected property tax proceeds for that purpose. Districts were, however, not required to contribute to school operating costs until the 1988 rewrite of the foundation formula.

The addition of required local contributions (for urban districts only) complicates the relationships between State oil revenue and the flow of State funds to school districts. Until 1988, State education costs depended primarily on the unit value and the number of units. The unit value increased by about five percent annually from 1971 to 1977 while inflation was about 7.6 percent annually. Inflation declined to about 7.1 percent annually during 1978 to 1983, but the unit value increased by about nine percent annually. Although the relationship between inflation and unit value is not exact from year to year, it is clear that unit value increased faster (especially after accounting for inflation) after oil revenue began to flow.

Coupled with population growth fueled by increasing State spending, the increasing unit value caused State education costs to soar. As oil revenue began to decline in 1984, the unit value remained at $42,000. However, population continued to increase, so that State aid for education continued to grow at the rate of (student) population increase.

The 1988 formula rewrite raised the unit value to $60,000, but that change was accompanied by changes in retirement program funding and local contribution requirements so that State costs were not increased to the extent indicated by the higher unit value. Under the revised formula, as required local effort increases, State foundation aid decreases by an identical amount to maintain a constant level of basic funding.

Similarly, as property values (and required local effort) fall, State foundation aid increases by an identical amount.

While it is not possible to include all factors that affected education funding in this discussion, it is clear that the oil revenue decline contributed to the State's push to contain education costs. The fluctuation in oil revenue affected education funding in several ways.

- Because the huge decline in oil revenue (oil revenues hit bottom in FY1987 after peaking in FY1982) reduced total available revenue, education had more competition for funding and generated concern over the level of education costs and the rate of increase in those costs.

- Because urban districts' required contributions to education were dependent upon property values and because property values fell significantly during the 1986 to 1990 recession, a large portion of the "local share" of education costs shifted to the State during the recession.

- Because there is a two-year lag in property valuation (i.e., 1986 property values determine 1988 contributions), State costs continued to increase rapidly even as the recession slowed population growth and the unit value remained constant. Required local contributions fell from $136 million in 1988 to $98 million in 1991 and are not expected to return to 1988 levels until 1999.

- Although population began to increase with the oil price recovery in 1991, the formula applied (low) 1989 property values to determine the State share of education funding. By 1992, required local contributions had fallen to $991 per student (a 35 percent reduction from the $1,536 per student required in 1988). State aid for education (to urban districts) increased 35 percent during the same period ($325 million in 1988 to $439 million by 1992).

  The continued increases in State aid for education during the recession and first few years of economic recovery undoubtedly contributed to the legislature's reluctance to raise the unit value. (The value was raised to $61,000 in 1993, but has not kept pace with inflation.)

- Although a fixed unit value may appear to affect all districts equally, REAAs can be particularly hard-hit. One consequence of the formula's treatment of required local contributions is that as urban property values fell, the legislature poured money into education but districts had no net gain from the additional state aid because the money simply offset declining required local contributions.

- From the State's perspective, urban districts shifted costs to the State as property values declined. The increased costs worked against an increase in the unit value.

- From an urban district's perspective, increased State aid offset reduced *required* local contributions so the district had no net loss. In fact, urban districts can contribute more to education than is required. In 1988, urban districts contributed about $350 per student (23 percent) more than was required. By 1992, total contributions were roughly double the required amount and have remained at that level since. The constant unit value pushed urban districts to make up for inflation by contributing more than required.

- From an REAA's perspective, a constant unit value means the REAA must absorb the effects of inflation because there is no option for local taxpayer contributions to offset inflation.

During the 1990 to 1995 period, a recovery in property values increased required local effort to $113 million in 1995 (compared to $105 million in 1990) which reduced State funding by an equal amount. The State continued to pay the costs of an increasing student population, but raised the unit value only in 1993, by $1,000 (to $61,000 per unit). Through 1995, the State made no major changes to education funding in response to the recovery of oil revenue.

One last issue deserves mention. While education is a major employer in every community, education funding is a particularly important source of jobs and cash in rural areas. The issue here is not teachers, but classified staff such as instructional aids and maintenance personnel. While teachers frequently move to rural communities for a few years and then move on, classified staff are more likely to be long-term local residents. Most of the teachers who move to

rural communities are from urban places geographically and culturally distant from the rural communities.

Compared to urban districts, REAAs tend to have a high ratio of classified staff to students. This provides local employment opportunities, the importance of which is amplified by the general lack of private sector development in small rural communities. Along with Power Cost Equalization and Permanent Fund Dividends, education funding provides examples of government money underwritten by oil revenue as a critical source of cash in rural communities. The emphasis on classified positions in rural areas is a long-term policy that does not appear to have been affected by fluctuations in oil revenue.

In summary, public education in Alaska has been significantly affected by oil revenues. School operating funding increased at an annual rate of about 9% per education unit between the years 1978 and 1983 (including the run-up and peak oil years). Starting with the decline in oil revenue in 1984, the rate of increase in education funding has declined and in fact has not kept pace with inflation. Similarly, school construction was supported generously during the oil-rich years, by the state's school debt reimbursement program. In 1988, due to declining oil revenue that program was placed on hold and was not reinstated until 1993 when revenues recovered and stabilized, at least temporarily.

3. Health and Social Services

There are other areas in which oil revenue was more influential. The oil boom provided money that enabled the State to respond to the long-term clamor for improved health facilities. State funds built hospitals in Petersburg, Cordova and Fairbanks, but not in Anchorage, the Kenai Peninsula or Northwest Arctic boroughs. The Teamster Hospital (later known as Alaska Regional Hospital and other names) in Anchorage was certainly the result of oil revenue, but is a private sector facility.

Oil revenue fluctuations do not appear to have played a significant role in shaping changes to public assistance or Medicaid programs. There were no significant program changes during the oil boom or in the following crash. The program changes in the early 1990s were less influenced by oil revenue than by 1) federal changes allowing two-parent families to qualify for AFDC (which increased costs and had a particularly high impact on families in rural Alaska) and 2) a change from a Democratic administration to a comparatively conservative Republican administration.

The State's major health care and public assistance expenditures are driven by federal mandates. The food stamp program uses only federal money, and neither it nor relatively low-cost state assistance programs are discussed here. The two programs that account for nearly two-thirds of the Department of Health & Social Services' budget are federal entitlement programs. Aid to Families with Dependent Children (AFDC) is by far the largest public assistance program, and those eligible for AFDC are also eligible for Medicaid, which is the largest health care program.

The State shares the cost of both major programs (with the federal government) and has some control over program costs. Program costs are also heavily influenced by economic conditions, especially by Alaska's situation relative to conditions in other states. The public assistance case load closely follows the Alaska unemployment rate, with a two-month lag.

When attempting to determine the impact of oil revenue on health and public assistance expenditures, the primary concern is not how well expenditures tracked the labor market, but whether the legislature changed program rules in response to oil revenues. The State can change income limits that determine eligibility for AFDC and can change the amount of benefits for which eligible families qualify. The State can exercise several coverage options under Medicaid.

During the oil boom, the State made no program changes other than in response to changes in the cost of living. As the boom ended, the legislature continued to fund the case load, which increased substantially. In the early 1990s, skyrocketing costs prompted elimination of automatic cost-of-living adjustments to public assistance benefits and a reduction of benefit amounts for one and two-person families.

The Indian Health Service (IHS) uses federal funds to pay for hospitals and clinics to serve Natives, and also provides operating grants. Neither capital nor operating grants is affected by State oil revenue.

The IHS service package has a few weak spots, notably adult dental care and drug and alcohol services. The State now provides mental health, drug and alcohol-related services that did not exist before the oil boom. Although these services were certainly enhanced with oil money, they were retained when oil prices collapsed. Their survival is due, in part, to increasing awareness of social problems caused by substance abuse and by the availability of Mental Health Trust funds.

The State Revenue Sharing program includes categorical aid for hospitals and health facilities. That category was enriched during the oil boom, but total revenue sharing was reduced as oil revenue declined, so that State support for health facilities declined as well (see Volume 1 report).

B. Utilities

1. Sewer and Water

Fluctuations in DEC program funding are not consistent with oil revenue fluctuations. Funding declined in several of the oil-boom years and increased in 1987, which was a year of relatively low oil revenue. In the years since 1990, funding increased substantially as Governor Hickel pushed the village safe water program and for federal funding for water systems. The federal funding became available in 1992. State funding ranged from $39 million to $43 million in 1992 through 1994, then fell to $25 million in 1995.

State water and sanitation projects were typically funded with bonded debt until after 1980. As oil revenue became available, the State substituted cash for bond proceeds.

There are three major State programs: the municipal grants and Village Safe Water programs are under the Department of Environmental Conservation (DEC), and there was a direct grant program through the Department of Administration.

The Village Safe Water program applies to all second class cities and to any community with a population between 25 and 600. The system installed depends upon the community and may be little more than a washeteria with a source of safe water. A pipe system is generally not feasible for a population less than about 400, but a community's system depends largely on the wishes of the community and what they can afford to operate. User fees are typically the primary means to recover operations and maintenance costs, but various communities use municipal assistance, state or federal revenue sharing money, sales tax proceeds or bingo proceeds to cover costs.

Although Communities are responsible for operations and maintenance costs of sanitation systems, DEC has 13 "circuit riders" that train local workers to maintain systems and offer technical assistance in about 150 villages. DEC also coordinates with the Department of Community and Regional Affairs' utility advisors and with other state and federal agencies.

State funding for projects ranged from $27 million to $33 million annually from the early 1970s through 1980, then declined to less than $11 million in 1982. Funding for municipal grants fell from $23 million in 1980 to $9.3 million in 1982 and $4.6 million in 1983. Funding for the village safe water program declined from $10 million in 1980 to $0.5 million by 1983.

One reason DEC sanitation program funding is not highly correlated with oil revenue fluctuations is the legislature's move toward direct grants as oil revenue increased. Direct grants nearly displaced DEC funding in 1983, grew to over $100 million in 1984 and 1985, then dropped to $18 million in 1986 as oil prices fell. Grants recovered somewhat in 1987 but fell below $10 million annually through 1990. Grants increased to an average of about $15 million annually during years in which rural democrats were in the legislative majority, but faded quickly when urban Republicans gained control of the legislature in 1994.

Federal funding is also an important source of sanitation system funding in Alaska. The Indian Health Service (IHS) was the predominant source of federal sanitation funds in Alaska until 1983, when the Environmental Protection Agency (EPA) and Housing and Urban Development (HUD) began funding projects. HUD money generally goes to the IHS for sewer and water systems to serve HUD housing projects. In the Northwest Arctic Borough, the IHS is the predominant source of funds for sanitation systems, having worked with every community in the area. The flow of federal money is unrelated to state oil revenue.

2. Electricity

Rural communities benefitted from oil revenues through generator upgrades and the Power Cost Equalization program (PCE). PCE is a program that subsidizes electrical generation to reduce power costs paid by consumers (for more information, see the PCE discussion in the Volume 1 report). Without PCE, power costs would be very high in rural areas because fuel is much more expensive in northern and western Alaska communities than in other parts of the state. Fuel is one of the few commodities still shipped by barge to rural communities; most other items are flown in. Transportation and storage costs, along with relatively small volumes and high distribution costs frequently make fuel cost over twice as much in rural communities as in Anchorage.

Before the oil boom, Alaska communities relied on a mix of sources for generating electricity. Anchorage and the Kenai Peninsula Borough relied primarily on natural gas from the Cook Inlet oil fields while most other communities used fuel oil. A few Southeast communities had hydroelectric sites. The primary impact of oil revenue on electrical infrastructure was the development of several hydroelectric sites.

Of the five dams constructed, only Bradley Lake serves a geographic area specified for analysis in this study. Bradley Lake provides electricity to Anchorage and, through interties, to the remainder of the Railbelt. The Susitna project consumed $140 million in project analysis, but was not constructed. It was designed to provide electricity to the Railbelt.

None of the five hydro projects built with the help of oil money are great investments from the State treasury's perspective. Although lower electricity costs may encourage development, State recovery of investment is limited by the lack of statewide sales and income taxes.

Dams generally produce electricity at a lower cost then petroleum-fired generators, but require massive up-front investments and create massive additions to supply. Amortization of up-front costs can make rates unaffordable in the short-run unless the full capacity of the site is used at the outset. Oil money provided an opportunity to develop good hydroelectric sites that could provide electricity at (short-term) affordable rates only with State subsidies.

Electricity is now considered by many to be a necessity in rural communities. Beyond the convenience aspects, electricity is a matter of public health because it is required to operate sewer and water systems.

C. Transportation

Since 1988, Alaska has had no State program to supplement federal transportation funding, so that the State Department of Transportation and Public Facilities' (DOT&PF) expenditures on transportation infrastructure are typically limited to the match required to receive federal funds.

While federal funding has clearly been the long-term driver of transportation capital spending in Alaska, State oil revenue funded several projects, including major road projects in Anchorage. State-funded projects tended to involve direct grants to local governments rather than going through DOT&PF. Because the oil money did not go through DOT&PF, the department's statement that there has been no State *program* for transportation funding is technically correct.

A review of federal programs provides a solid background of the transportation system in Alaska. Because each federal program is unique, funding for the three modes is discussed individually.

Alaska has traditionally relied heavily on federal funding for road, air and marine infrastructure to meet transportation needs. For each mode of transportation, federal funds are available for capital investment (construction, repair and enhancement), but generally not for maintenance costs (such as snow removal) and operating costs (such as staff required to run a ferry).

Each of the three transportation modes has a state match requirement, with the match for specific projects ranging from 50 percent to zero. Alaska's constitutional prohibition of dedicated revenue means that state matching funds for transportation projects almost always come from the general fund.

Allocation of funding to regions of the state was originally based upon road miles in the administrative regions. The five regions were consolidated into three regions in the 1980s, and Southeast, Northern and Central Regions got 20, 30 and 50 percent of total funding, respectively. In part due to perception that the

Northern Region was getting an unfairly large share of funding, the regional allocation system was replaced by a more competitive system. The new system was implemented just as the 1975 to 1995 period of interest ended.

Transportation project expenditure data, by year (1975 to 1995) and location, is provided in Volume 1.

1. Roads

General Fund capital expenditures on roads were highly variable during the study period, but clearly peaked during the oil boom years. In 1979, the state spent $26 million (in 1995$) General Fund dollars on roads. The next year, spending jumped to $158 million, then to $227 million in 1980. After dipping to $87 million in 1981, spending climbed to a peak of $249 million in 1984, before falling to $64 million in 1985.

Although the decline in oil revenue affected State road construction expenditures directly, the primary impact was on the maintenance budget, which declined rapidly in response to the decline in oil revenue. The maintenance budget did not recover as oil revenue increased after 1990. The State's response to a tightening budget has been to limit the number of road miles the State maintains. This has been accomplished by:

- Transferring maintenance responsibilities (and future capital improvement responsibilities) to local governments when possible, and
- Limiting the number of new road miles for which the State accepts maintenance (and future capital improvement) responsibilities. This is done by limiting acceptance of Forest Service roads and by focusing on improvements to existing roads rather than constructing new routes.

Roads typically connect the communities of South-central Alaska's Railbelt. In other parts of Alaska, separation of communities by water (in Southeast Alaska), rough terrain, tundra and/or substantial distance has encouraged air transportation (and marine transportation in Southeast) at the expense of road development. With regard to federal funding, the Alaska Marine Highway System is considered part of the road system.

The federal highway program allocates federal gasoline tax receipts to states for construction projects. Alaska receives far more federal highway funds than it contributes to the highway trust fund and is one of two states with no existing State funded road program.

In part, the lack of a State program is due to circumstances surrounding statehood. The federal government was responsible for all roads in Alaska during territorial days, and the full catalog of roads was retained as eligible for federal funding upon statehood in 1959. The result is that Alaska does not have a combination of local, county, state and federal routes as do most other states. Many Alaska roads eligible for federal funding, including major corridors in Anchorage, would likely be classified as local roads in other states.

Alaska started a State-funded Local Service Roads and Trails (LSR&T) program in 1971. By 1976, bonds totaling $25 million were issued to fund the program, which had a rural emphasis and was designed to "get Bush people out of the mud" by constructing or improving roads that were not included in the federal-aid primary highway system.

The LSR&T program received a total of $25 million in appropriations in 1978 and 1980, then began phasing out in 1982. Because this phase-out is counter to expectations of increased spending as oil revenue began to flow, an explanation is warranted. As oil revenue increased, each house of the legislature was allocated one-third of the capital budget.[2] Legislators chose to fund many projects directly rather than go through established departmental programs. According to memoranda from the mid—1980s, DOT&PF policy was not to seek additional funding for the LSR&T program in order "to avoid duplication of services now being provided by legislative grants and special legislative appropriations."

[2] During the peak oil revenue years, the legislature developed a policy in which one-third of the capital budget was allocated to each of the legislative bodies and to the Governor. Within the legislature, individual legislators had allocations that they could direct as they wished. Many observers of the legislative process noted that the allocation system destroyed the deliberative and public processes. Despite its public policy shortcomings, some consider the process to have resulted in little waste or misallocation of money; they say it was simply a system that allowed legislators to claim individual credit for obtaining money for their districts. Others point to convictions and indictments of legislators as evidence of corruption and waste that characterized the use of oil money.

The program was resurrected in 1984 but was open to first class cities and was driven largely by population. Facing continued budget cuts as oil revenue declined, DOT&PF again began program phase out in 1986. By its final year (1988), the program had spent $65 million on roads, trails and erosion control projects. The program covered over 400 projects in 95 percent of all Alaska villages.

While it is arguable that the State-funded LSR&T program died because oil revenue *increased*, it is more accurate to state that funding was diverted (from the program but not necessarily from the types of projects funded by the program) during the boom years and was not replaced when oil revenue declined. The consequence is that the State no longer funds a program focused on rural roads and trails. One reason for the failure to reinstate funding for the program may be that projects that would have been candidates for LSR&T became eligible for federal aid in 1991.

2. Aviation

State general fund appropriations for airport projects increased during the oil boom and faded with declining oil revenue (see Vol.1, Parts 1 and 2). Many airport projects that used general funds (as opposed to State matching funds) were funded directly by the legislature. No significant appropriations of general funds in excess of the required match have occurred since the oil revenue decline in the mid—1980s.

Regarding operations and maintenance, the State owns over 100 airports and loses money on almost all of them. As for surface transportation, the primary impact of oil money is on the maintenance budget, which was put under pressure as oil revenue declined. The impact of budget pressure included delayed up-keep on facilities, less-timely snow-removal, and in rare instances reduced hours of airport operations.

Air transportation services in Alaska are generally provided by private sector businesses that operate at publicly owned airports and use flight services and navigational aids provided by the federal government. This partnership is the model that applies throughout the nation. While private airports exist in Alaska, most airports used for public transportation purposes are publicly owned.

Federal airport grants for capital projects are available only to public sponsors of airports. Receipt of federal airport grants is contingent upon agreeing to numerous assurances including promoting competition among service providers and allowing public and commercial use of airport facilities funded with federal grants. Revenue from landing fees, leases or other sources associated with federally funded projects can be used for airport activities only. There is little incentive for private contributions to meet matching funds requirements because airport revenue cannot be used to provide a return on private investment or even to return the principle invested.

As for surface transportation, public-use airport capital costs are generally funded primarily by the federal government while maintenance and operations expenses are the responsibility of the sponsor. In Alaska, the sponsor is generally the State, especially for airports serving small communities.

The primary source of capital funding for airports is an excise tax on ticket sales. Tax revenue flows into the federal Aviation Trust Fund and is then allocated to states. Federal funding includes entitlements, discretionary funding and special funding. Aviation funding for Alaska also includes a significant amount ($10.7 million annually in recent years) in "supplemental funding" for airports in small communities. While the law (49 USC 47114(e)) clearly intends this special provision to be an alternative method of apportionment, Alaska has received funding under both "normal" and alternative methods.

Entitlement and discretionary funding can be pooled within several categories, so that funding "earned" by a state-owned airport may be spent at any other state-owned airport in Alaska that is eligible for federal funding in that category. Where the State's "pooled" money is spent depends upon need, as determined by the Department of Transportation & Public Facilities and the political process.

The sponsor is generally required to contribute 6.25 percent to each project. (Terminal construction has a higher match requirement.) Generally, the State contributes half the required match for projects at airports owned by municipalities.

Despite the recovery of oil revenues after 1990, continued pressure on operations and maintenance budgets has prompted discussion of turning airports

(and responsibility for operations and maintenance costs) over to communities, especially communities with alternative modes of transportation.

3. Marine Transportation Infrastructure

State general fund expenditures on dock and harbor construction increased sharply with the rise in oil revenues. In 1979, $6 million in general fund money was appropriated for dock and harbor construction (in 1995$). Spending in 1980 jumped to $30 million and continued to rise to a peak of peak of $63 million in 1984. With declining oil revenues in 1985, spending on docks and harbors dropped back to $9 million. Spending has ranged between $3 million and $20 million since then (detailed expenditure data is provided in Volume 1 of this study).

Ports and harbors have no federal assistance program parallel to highway and airport funding systems. Port and harbor capital projects are submitted individually to the Corps of Engineers for potential approval. There is a 20 percent state match requirement for construction projects and 50 percent match for studies.

Traditionally, commercial marine traffic in Alaska moves by either private barge line or the Alaska Marine Highway System (AMHS) ferries. Barge transportation resembles aviation in that the government operates no carriers. However, while the government builds airports, barge terminal construction has been largely left to the private sector; Bethel has the only state-owned port in Alaska. The State has traditionally funded harbor projects in Alaska.

Barge terminals tend to be privately funded partly because barge companies generally have uplands requirements, are often used only by a single company and because the State spends so little relative to marine infrastructure needs.

As with airports, the State has considered turning harbors over to local governments because budget pressures leave the State with insufficient money for maintenance, repairs and replacement. Unlike roads and airports, the budget shortage could be addressed by increasing revenue rather than by reducing expenditures. Options to increase revenue so that spending could meet harbor needs include complying with existing regulations and modifying statutes to bring berthing fees up to market rates. Money could also be raised via bonding or by increasing the state marine fuel tax. Alaska's marine fuel tax of 5 cents per gallon has not changed since 1977, generates over $7 million annually, and is deposited in the general fund. In contrast to the highway fuel tax (which generates less than the amount required to match federal funds), the marine fuel tax generates about five times more than the State spends on port and harbor improvements.

4. Common Elements to Transportation

Federal funds are the primary source of funding for transportation capital projects and determine how most of the State general funds are spent. Federal funding levels were unaffected by fluctuations in state oil revenue.

During the oil-boom years, general funds were available for many transportation (and other infrastructure) projects. While much of the money went through the DOT&PF, a substantial portion bypassed the departmental prioritization process and was appropriated directly to municipal governments.

When oil revenue declined, the State continued to match all federal funds available but virtually eliminated spending on projects that were not eligible for federal funding.

Despite the spike in State spending permitted by the oil boom, Alaska did not build excessive projects. Transportation needs had existed for years but there was insufficient funding to meet the needs.

DOT&PF does not fund resource development projects, which are loosely defined as projects that are needed in order to develop land or resources. An example is the road to the Red Dog mine in the Northwest Arctic Borough. DOT&PF will consider improvements to "resource development" projects that expand to serve general transportation needs.

The major impact of declining oil revenue has been declining maintenance budgets, especially in real dollars.

D. Housing

In considering the economic impacts of the oil industry in Alaska, housing impacts are important for several reasons. Most important, oil revenue to state coffers made it possible for the state to offer below-market mortgage interest rates. Cheap mortgages, coupled with rapid population growth stemming from expenditure of oil wealth, led to a housing construction boom unprecedented in Alaska's history.

In fact, the State of Alaska's housing policies were a significant factor in the state's economic boom, and then bust, during the period from 1975 through 1995. Although a recession is not typically linked with improved quality of life, the economic carnage of the housing bust helped improve most Alaskans' quality of life with respect to housing.

In 1970, 50 percent of Alaska households lived in homes that they owned. By 1990, home ownership had increased to 56 percent of households. During the same period, the average number of rooms per person increased about sixty percent in owner-occupied housing to almost two rooms per person. In renter-occupied housing, rooms per person increased 31 percent. The proportion of owner-occupied housing units lacking complete plumbing facilities[3] fell from 22.6 percent in 1970 to 8.7 percent in 1990. In renter-occupied housing, units lacking complete plumbing facilities fell from 7.7 percent in 1970 to 5.2 percent in 1990.

Part of the improvement in housing quality came from the excess housing supply created during the boom in housing construction. In 1990, only 81 percent of all housing units were occupied, compared to 89 percent in 1970. The huge surplus supply caused a crash in housing prices. On average, this allowed families to move up the housing scale.

The crash in housing prices had a real downside, however. Many homeowners saw the value of their homes fall to well below the balance on their mortgage. People that had lost their job during the recession were unable to make payments and simply walked away from their mortgages. Foreclosures rose to an all-time high. Residential construction companies went broke and many construction workers were forced to leave Alaska to search for work.

1. The Housing Boom

The 1980-1985 construction boom in Alaska was a product of the State spending of oil revenues. Large increases in operating expenditures produced big increases in employment opportunities. These opportunities—plus a recession in much of the rest of the U.S.—drew thousands of wage-seekers from outside Alaska. Together with employment multiplier effects, State spending produced rapid population increases. Demand for housing and support services caused residential and commercial construction to jump.

The construction boom was intensified by State spending for capital construction and housing subsidies. In total, the rate of increase in construction was one that could not be sustained. At one point, projections of State spending were based on continued rapid increases in the price of oil that would have pushed its price over $100 per barrel. Events soon proved such projections to be naive.

The late 1970's were a time of unprecedented inflation in the U.S. In Alaska, the average annual change in the Anchorage CPI (for all items) was 9.1 percent during fiscal year 1975 through 1980. Housing costs ignited and rose at an even faster 14.7 percent rate during 1979 and 1980.

In this kind of climate, home ownership made sense not just as a way to minimize housing costs or improve a family's housing amenities, but as a financial investment. Where else could the average person borrow $150,000 or more to invest in a red-hot market, except from a mortgage lender? Rapid appreciation in asset value, combined with the high leverage (95 percent loan-to-value mortgages were common) made housing an unbeatable investment opportunity.

Housing demand was also stimulated by an element of panic buying. As interest rates spiraled higher and home prices rapidly increased, many potential home buyers saw themselves being priced out of the home they hoped to own. Their incomes, though they might be rising, were not keeping up with housing costs.

In a climate of heavy demand, including elements of speculation and panic buying, housing subsidies provided a strong impetus to the creation of excess

[3] Complete plumbing facilities include hot and cold running water and at least one indoor flush toilet and shower or bath.

housing supply. A subsidy sustained basic housing demand by keeping the income threshold for qualifying for a mortgage loan near where it had been before interest rates skyrocketed. But, subsidies and questions about their continued existence also fanned the flames of speculative and panic buying. The resulting increase in housing demand was a one-time effect that could not be repeated, unless even greater subsidies were subsequently provided.

The state subsidies were targeted toward low and moderate-income housing, including mobile homes. Only the federal tax exempt interest subsidy applied to mortgage amounts above $90,000. Still, the significant subsidy on the first $90,000 and the ability of higher income households to more readily qualify for a loan, tilted AHFC's average loan amount upward. The median value of owner-occupied housing in Alaska in 1980 was $76,300, according to the U.S. Census. The average sales price on homes financed by AHFC in fiscal year 1981 was $96,167. The housing boom covered a broad spectrum of housing prices, from lower-cost condominiums to better and bigger single-family residences. Only very low cost housing, supplied by existing homes rather than new construction, did not participate in the boom.

The State had established an interest rate ceiling of 10 percent on the first $90,000 of an Alaska Housing Finance Corporation (AHFC) mortgage loan in 1980. For veterans, the ceiling was nine percent. The rates on the portion of a mortgage loan in excess of $90,000 were tied to AHFC's cost of funds borrowed in the bond market. These rates generally were about one percent less than national mortgage rates, due to tax-exempt borrowing. See the Volume 1 report for a more detailed history of AHFC's programs and subsidies.

AHFC's average mortgage rate during 1981 through 1985 exceeded the average rate on its mortgages from 1975 through 1980. Yet, in 1981, residential building permits more than doubled, reversing a steady decline from 1977 through 1980. Permits more than doubled again the next year in Anchorage. Statewide, new residential building permits peaked in 1983 at over five times the 2,230 permits issued in 1980. In Anchorage, the 1983 peak was almost nine times the previous trough in 1979.

The average Alaskan saw home prices zooming and their personal income increasing as high inflation persisted through fiscal year 1982. If Alaska home buyers had not been insulated from the national anti-inflation policy of record high interest rates, far fewer families would have met the income qualifications for a home mortgage. Many more would have balked at the extraordinary monthly mortgage payments they would have faced.

Instead, in an inflationary environment, subsidies provoked an excessive spurt of homebuilding. The regular AHFC subsidy relative to national mortgage rates reached almost 6 percent in 1982.

Subsidies also accelerated the increase in the price of housing, both new and existing. For many households, the decision to buy a home hinges as much on the amount of the monthly mortgage payment as on the price of the house. If the interest component of the monthly payment is reduced by a subsidy, the buyer may tolerate a higher monthly principal payment. Thus, home sellers and builders captured a portion of the subsidy in the form of higher housing prices.

There was a strong sense in the industry that condominium prices in particular jumped to $80,000, the maximum that could be borrowed at a rate that was subsidized to as little as 6 percent for low-income borrowers under another AHFC program, the Home Ownership Fund (HOF) Program.

Housing was an important force in the construction boom that extended through fiscal year 1986. In 1979, before the boom began, residential property constituted 72 percent of the assessed value of all developed property. But, through 1984, 82 percent of the increase in the real value of developed property came from residential construction. The remainder, 18 percent, came from commercial construction.

The statewide full value of assessed real property[4] in 1995 dollars reached a peak in 1986 of $38.2 billion. The real increase in value almost equaled the $20.3 billion full value of real property existing in 1979.

2. The Housing Bust

What could sustain a construction boom so torrid that it roughly recreated a state's existing private capital

[4] These real property amounts include a minor amount for vacant property. Otherwise, they consist of developed residential and commercial property. They exclude tax-exempt property and oil and gas property.

stock in seven years? The answer to this rhetorical question is "probably nothing." The real estate market began to soften in 1984 and was showing danger signs in 1985. A market correction would have been likely even without a decline in state oil revenue. When the State capital budget fell in 1986, there was a lot of money in the State construction "pipeline" that assured continued spending for several years (at a slower rate). The collapse in oil revenue pushed the real estate market over a cliff, but the market was already on the edge of a catastrophic collapse.

In four years (1986 to 1990), the total value of real property in the state had sunk back almost to the level it was at before the boom began. One year later, in 1991, the real full value of assessed real property reached its nadir, at $21.1 billion, a 45 percent drop in value from the peak in 1986. By 1995, real property values in 1995 dollars were still barely ahead of where they were in 1979 before the boom started, 16 years earlier.

Some of this loss of wealth was a loss of what had been only paper gains in the first place. Only those who bought during the boom suffered losses, either realized or on paper. Unfortunately, this included thousands of households across the state, many of whom walked away from their mortgages.

Regardless of changes in value, it is clear that large additions had been made to the residential and commercial capital stock. Total housing units in the state increased from 154,171 in 1980 to 232,608 in 1990. commercial capital stock. Total housing units in the state increased from 154,171 in 1980 to 232,608 in 1990.

With the increase in housing stock, it is clear that the decline in assessed values has been due to price decreases. The nominal dollar value of assessed real property fell 40 percent from 1986 to 1989. This corresponds with AHFC's experience in selling foreclosed properties during the fourth quarter of 1989. AHFC's average sales price on foreclosed property during that period was 45 percent below the average loan balance at foreclosure.[5]

The bursting of the housing bubble produced great bloodletting among mortgage lenders. AHFC saw its delinquency soar from 3.38 percent of its number of loans in 1983 to 14.73 percent in 1987. During the period 1983 through 1995, AHFC foreclosed on 12,885 loans. By comparison, the most loans AHFC had ever held at any one time had been 48,340.

[5] Alaska Public Debt 1989, Department of Revenue, State of Alaska, March 1990.

Table I.D.1
Full Assessed Property Value
1975 to 1995 (millions of dollars)

	Real Property			Personal Property
Jan 1	Statewide	Municipality of Anchorage	Kenai Peninsula Borough	Statewide
1975	$4,331.70	$2,422.40	$272.00	$1,042.30
1976	5632.7	3025.6	363.3	1414.7
1977	6886.7	3634	658.9	1720.5
1978	8487.5	4386.4	979.9	1768
1979	11011.8	5586.3	1429.8	2035.6
1980	12552.6	6474	1523.7	2207.3
1981	13722	6827	1764.3	2887.6
1982	17400.1	9249.7	2100.2	3414.1
1983	18858.8	9169	3020.1	4313.7
1984	21646	11087.6	2293.1	4758.5
1985	24943.4	13212.2	2445.5	4941.5
1986	30201.2	16809.1	3046.2	5274.1
1987	24757.9	11768.6	3012.3	4887.8
1988	20187.2	9009.9	2612.9	4353.7
1989	18090.1	8005	2364.4	4326.3
1990	18091.1	7782.7	2340	4672
1991	18710.4	8276.3	2308	4215.7
1992	19668	9121.9	2360.6	4370.2
1993	20411	9545.1	2361.6	4418.5
1994	21476.7	10099.5	2444.8	4695
1995	22623	10576.7	2542.7	4301.1

Notes: 1. Full values from Alaska Taxable, Alaska Department of Community & Regional Affairs, various years.

Table I.D.2
Real Full Assessed Property Value
1975 to 1995 (millions of 1995 dollars)

	Real Property			Personal Property
Jan 1	Statewide	Municipality of Anchorage	Kenai Peninsula Borough	Statewide
1975	$10,979.7	$6,140.2	$689.5	$2,642.0
1976	12,888.3	6,922.9	831.3	3,236.9
1977	14,749.9	7,783.3	1,411.2	3,684.9
1978	17,154.4	8,865.6	1,980.4	3,573.3
1979	20,296.2	10,296.4	2,635.2	3,751.8
1980	20,935.8	10,797.6	2,541.4	3,681.5
1981	20,989.5	10,442.8	2,698.8	4,417.0
1982	24,783.2	13,174.4	2,991.3	4,862.7
1983	26,267.9	12,771.2	4,206.7	6,008.5
1984	29,018.8	14,864.1	3,074.1	6,379.3
1985	32,598.4	17,266.9	3,196.0	6,458.0
1986	38,243.4	21,285.2	3,857.3	6,678.6
1987	31,319.1	14,887.4	3,810.6	6,183.1
1988	25,404.4	11,338.4	3,288.2	5,478.9
1989	22,526.0	9,967.9	2,944.2	5,387.1
1990	21,718.9	9,343.3	2,809.3	5,608.9
1991	21,145.3	9,353.4	2,608.3	4,764.3
1992	21,401.7	9,926.0	2,568.7	4,755.4
1993	21,479.5	10,044.7	2,485.3	4,649.8
1994	21,999.0	10,345.1	2,504.3	4,809.2
1995	22,623.0	10,576.7	2,542.7	4,301.1

Notes: 1. Full values from Alaska Taxable, Alaska Department of Community & Regional Affairs, various years, adjusted to fiscal year 1995 dollars using the Anchorage CPI, All Urban Consumers, All Items.

Many people who lost jobs in the construction collapse could no longer meet their mortgage payments. Others wanted to sell their homes due to relocation or other reasons. State housing policies were created and implemented to absorb much of the burden of the crash on homeowners. These policies helped many home owners but many others still experienced financial difficulties during the 1986-90 crash or long after it was over.

The losses to households from the crash were in many cases quite onerous. But, in terms of total economic losses, households generally incurred a minor portion. Their losses, excluding paper profits, were usually limited to the down-payment of 5 percent to 10 percent of purchase price, plus a small amount of principal amortization. AHFC lost another 40 percent or more, four times the losses of the borrower.

AHFC created a number of refinancing, extension, and assistance programs for existing borrowers who wanted to stay in their homes. Those who wanted to sell their homes usually faced a sales price far below the amount they owed on their mortgage. AHFC pursued judicial foreclosures when it made economic sense. But, often the corporation allowed borrowers to relinquish title and turn in the keys with no legal obligation to pay deficiency balances (at least one key informant, however, reported that many people did know about or take advantage of the programs available).

AHFC could be so generous in part because various mortgage insurance arrangements and federal agency guarantees limited AHFC's losses on many mortgages in its portfolio. For fiscal years 1985 through 1995, AHFC's provisions for loan losses totaled $185,487,000. Yet, AHFC's financial losses were minor in terms of $12 billion economic loss in real property value between 1986 and 1989 (see Table I.D.2).

AHFC easily absorbed the losses because of its enormous equity capital. On June 30, 1989, AHFC's equity stood at $1,386,546,000. The State had contributed over $1 billion in capital to the corporation. Those contributions were made possible by oil revenue.

As a state agency, AHFC grappled with the housing crash from a political standpoint as well as a business one. Undoubtedly, some judgements that could have been obtained against borrowers would have been uncollectible and some collections would have been less than the costs of obtaining judgments and collecting balances due. More importantly, there was a political view that AHFC policies were responsible for the collapse and that AHFC was obliged to bail out borrowers and the housing industry. By deferring payments, providing assistance, and absorbing losses, AHFC provided another large subsidy to Alaska home buyers, the housing industry, and the economy in general.

AHFC also came under pressure from the housing industry—realtors, construction contractors, banks, and other mortgage lenders—to support housing prices by taking foreclosed properties off the market, or at least engaging in only "orderly" dispositions of the homes it held through foreclosure. AHFC was the focus of attention because as of June 1987, it held approximately 62 percent of all residential mortgages in the state.[6] It was also the mortgage lender most susceptible to political pressure. AHFC resolved its policies in favor of the corporation and the economy taking their losses. But, by the time the debate was over and the development of the management capabilities to dispose of such a large volume of properties had taken place, the market had largely stabilized anyway.

The other secondary market mortgage lenders or guarantors, including the Federal National Mortgage Association (FNMA), the Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac"), and the Government National Mortgage Association (GNMA), also experienced loan losses. Their vast size and national diversification generally immunized them from serious harm.

An exception was the private mortgage insurer MGIC. Its losses caused it to file bankruptcy. The bankruptcy proceedings resulted in another corporation taking over its assets and liabilities, including AHFC's mortgage insurance claims.

The housing market in rural Alaska did not experience the degree of price appreciation or the collapse that hit urban areas. AHFC was not active in rural areas. But, similar programs were offered through the Department of Community and Regional Affairs (C&RA). In some rural areas, particularly those more tied to the cash economy, such as Nome, C&RA financing did result in a less severe housing boom and bust. But, in many of the smaller villages, despite the availability of advantageous financing, rural Alaska never eliminated a "financing gap" that has limited the supply of homes.

[6] Alaska's Economy and Housing Market, Final Report, Scott Goldsmith et al, Institute for Social and Economic Research, University of Alaska Anchorage, October 1987.

Decent, safe, sanitary homes are not generally affordable in rural communities. Because of limited incomes and small markets, the fair market value of homes—in terms of rental income potential—is about one-third the cost of construction. In addition, wetlands classification and land ownership by governments and ANCSA corporations limit the availability of private land suitable for building.

A significant portion of housing in rural Alaska was owned or subsidized by public housing agencies going into the 1986-90 crash. The Alaska State Housing Authority (ASHA), with HUD money and proceeds from ASHA bond issues, constructed much of the housing in rural Alaska. The State did not provide any significant funds to ASHA for its low-income housing programs. Only after ASHA merged with the AHFC on July 1, 1992 was any State oil money involved in low-income housing programs of the type ASHA formerly provided. Such programs continued to rely to a large extent on HUD and other non-State agencies and bond proceeds.

Evidence of the lack of a rural housing boom during the oil boom is provided by the development of the Red Dog mine, which coincided with the end of the oil boom. Because of low housing stock, some mine personnel commuted from Anchorage. In those towns or villages where surplus housing did develop, the psychological impact of the statewide housing bust exacerbated declines in housing prices and prolonged the hiatus in new construction.

In summary, the oil boom ended with no surplus housing stock in most rural communities. The oil-boom period affected construction of state projects but had little impact on housing supply or price, except in those areas more closely linked to the cash economy.

3. Alaska's Banking Sector

In contrast to AHFC, the Alaska banking sector was devastated by the real estate crash. Alaska commercial banks had net loan losses of over $400 million during 1985-90. They had aggregate net income losses for three years in a row, reaching over $200 million in losses 1987. The result was a rapid consolidation of the industry that cut the number of banks almost in half. During the last half of the 1980s, four banks in financial distress merged with others as the result of negotiation. Six failed and were merged with assistance from the Federal Deposit Insurance Corporation (FDIC). The number of bank branches or offices in the state shrunk by 23 percent.

The banks' hemorrhaging undoubtedly stemmed more from commercial loans than residential loans. In 1986, their total 1 – 4 family residential mortgages totaled only $347 million. This was a minor 11.6 percent of their total loans and leases. The banks' percentage of loans in residential mortgages over the period 1975-95 mirrored in inverse fashion the changes in AHFC's percent of the mortgage market. AHFC's share of the mortgage market rose and fell with the creation and phase-out of its interest rate subsidies.

The banks' delinquent loans, residential and commercial, reached a dollar peak of $203 million in 1986 (6.8 percent), and a percentage peak of 7.6 percent two years later ($166 million). Bank deposits peaked in 1986 at just over $4 billion, before bottoming out at about $3.4 billion in 1989. Loans fell much further—from $3.1 billion in 1985 to $1.7 billion in 1989. This dropped the loan to deposit ratio to 51 percent, the lowest recorded during the entire 1975 to 1995 period.

The consolidation left three main banks that had statewide branches. Only one of these had an interstate network. The two purely domestic Alaska banks were viewed by many as having extremely conservative management. Some felt that they were failing to lend to creditworthy business opportunities. One was even written up by federal regulators under the Community Reinvestment Act for failing to make sufficient efforts to make loans in the communities they served.

For banks with no diversification outside the state, a greater degree of conservatism could be expected. And certainly there were lessons to be learned from the financial cataclysm that had just occurred. But, probably the most important reason for a decline in new lending by banks was the tremendous excess capacity in commercial property and business activity created by the crash. There were simply few, if any, new development projects being undertaken.

Savings institutions in Alaska were hit even harder than banks. Their smaller size, lack of interstate diversification, and greater concentration of loans in 1-4 family residential mortgages—54 percent in 1984—made them more vulnerable than banks. The number of institutions plummeted from six in 1985 to 2 in 1989. They recorded an aggregate net loss of income for 1986-89 of $121 million. However, their total assets of $680 million in 1985, compared to $4.9 billion for banks, make them a footnote to the slaughter.[7]

[7] Statistics on Banking, Historical 1934-1994, Volume II, Federal Deposit Insurance Corporation, August 1995.

Table I.D.3
Condition of Alaska's Commercial Banks
1975 to 1995 (000s of Dollars)

Year	Deposits	Net Loans & Leases	Loan to Deposit Ratio	1 - 4 Family Residential	1- 4 Family as % of Net Loans &	Loans Delinquent	Loans Delinquent
1975	$1,250,032	$ 692,381	55.4%	$170,288	24.6%	NA	NA
1976	1,374,073	829,183	60.3	176,242	21.3	NA	NA
1977	1,518,727	1,008,524	66.4	197,594	19.6	NA	NA
1978	1,569,933	1,082,815	69.0	201,009	18.6	NA	NA
1979	1,564,010	1,052,355	67.3	175,522	16.7	NA	NA
1980	1,756,668	1,025,508	58.4	166,892	16.3	NA	NA
1981	1,924,186	1,094,878	56.9	169,816	15.5	NA	NA
1982	2,670,316	1,618,310	60.6	261,200	16.1	NA	NA
1983	3,166,300	2,161,200	68.3	303,800	14.1	NA	NA
1984	3,581,929	2,750,734	76.8	320,361	11.6	$165,929	6.0%
1985	3,896,152	3,148,960	80.8	306,569	9.7	188,832	6.0
1986	4,065,322	2,988,874	73.5	346,775	11.6	203,497	6.8
1987	3,965,495	2,548,183	64.3	303,464	11.9	188,832	7.4
1988	3,747,807	2,197,509	58.6	350,188	15.9	165,929	7.6
1989	3,431,404	1,758,533	51.2	227,184	12.9	41,147	2.3
1990	3,494,089	1,929,260	55.2	279,493	14.5	63,908	3.3
1991	3,533,936	2,000,986	56.6	340,115	17.0	70,604	3.5
1992	3,603,546	2,112,025	58.6	403,766	19.1	36,263	1.7
1993	3,781,082	2,608,680	69.0	667,505	25.6	41,835	1.6
1994	4,043,987	2,717,539	67.2	561,336	20.7	45,726	1.7
1995	$4,058,000	$2,991,000	73.7%	$606,000	20.3%	$ 56,000	1.9%

Notes: 1. 1975-94 figures from Statistics on Banking, Historical 1934-1994, Volume II, Federal Deposit Insurance Corporation, August 1995.
2. 1995 figures from Statistics on Banking 1995, Federal Deposit Insurance Corporation, April 1996.

E. The Arts

The State has directly contributed to the arts through two programs, the Alaska State Council on the Arts (ASCA) and the Percent for Art program. State funding for the arts has followed the ebb and flow of State oil revenues. State funding peaked in fiscal year 1983 at $6.9 million (in 1995 dollars). By 1995, it had retreated to only 12 percent of that peak amount.

In the early years of the oil boom, the State also directly appropriated grants to various local art organizations or programs. Later, the State funneled all such money through ASCA. In addition, the State museum's budget and local government contributions to the arts have undoubtedly been more robust as a result of State spending and sharing of oil revenues.

ASCA's creation was not tied to the State's plethora of oil dollars, but its funding over the years certainly has been. The Percent for Art program has been more of a step-child of the oil boom. The State's feeling of wealth may have smoothed the passage of the State legislation creating it in 1975. Further, much of the construction spending from which the program got its share was tied to the availability of oil money in the State treasury.

ASCA receives appropriations of State general funds. ASCA distributes the State funds, as well as federal funds it receives, as grants to local arts organizations, programs, and individual artists. ASCA was created in 1966 to serve as a recipient for federal funding for the arts, available from the National Foundation on the Arts & Humanities. The Foundation was subsequently split into the National Endowment for the Arts and the National Endowment for the Humanities.

ASCA received a minor amount of grant contributions from charitable foundations. The amount of such independent grant contributions have never totaled more than $15,000 to $20,000 in any one year.

The difference between State and total funding is attributable entirely to federal funds received under different grant programs of the National Endowment for the Arts. These federal funds slowly increased in nominal dollars over the twenty-year period from about $400,000 to about $750,000. In real dollars, federal funding declined about 30 percent.

The Percent for Art program requires that one percent of State funds used for construction costs of office buildings, Alaska Marine Highway System ferry vessels, and other public facilities designed for substantial public use be spent for visual works of art located at, or as part of, the facility. The requirement for schools funded after September 1, 1977 is one-half percent. The percentage requirements apply to State funds granted to municipalities or other agencies for facility construction. No figures are available on the amounts spent under this program.

Table I.E.1
Alaska State Council on the Arts
Appropriations, 1975 to 1995

	Nominal Dollars		FY 1995 Dollars	
Fiscal Year	State	Total	State	Total
1975	221,800	621,078	562,205	1,574,271
1976	430,000	910,164	983,889	2,082,559
1977	479,200	1,024,200	1,026,346	2,193,621
1978	641,400	1,223,600	1,296,363	2,473,075
1979	684,700	1,301,900	1,261,995	2,399,578
1980	1,016,700	1,710,400	1,695,693	2,852,674
1981	2,930,700	3,721,480	4,482,860	5,692,454
1982	4,725,100	5,495,100	6,730,025	7,826,746
1983	4,975,800	5,815,100	6,930,669	8,099,710
1984	4,667,017	5,181,787	6,256,632	6,946,736
1985	4,844,600	5,321,500	6,331,372	6,954,629
1986	4,043,524	4,532,224	5,120,272	5,739,108
1987	2,189,800	2,670,300	2,770,131	3,377,971
1988	1,724,776	2,210,956	2,170,529	2,782,357
1989	1,692,110	2,179,018	2,107,032	2,713,334
1990	1,257,413	1,780,579	1,509,561	2,137,636
1991	1,431,800	2,006,800	1,618,126	2,267,953
1992	1,189,700	1,864,700	1,294,571	2,029,072
1993	1,074,300	1,749,300	1,130,536	1,840,870
1994	1,046,300	1,721,300	1,071,743	1,763,157
1995	862,100	1,537,400	862,100	1,537,400

Notes 1. Nominal dollar amounts provided by the Alaska State Council on the Arts.

2. Fiscal year 1995 dollar amounts adjusted by Anchorage CPI, All Items, All Urban Consumers.

Chapter II: Municipality of Anchorage

A. Infrastructure

The oil boom (1980 through 1985) contributed to placing Anchorage among the fastest growing cites in the nation in the early 1980s. Property values were also increasing rapidly, and the increasing wealth and population combined to promote demand for improved transportation, cultural, recreational and educational facilities.

The Sullivan Arena, Performing Arts Center, Egan Convention Center, library, museum, coastal trail, and numerous recreational fields and schools were built during the boom years. There were also major sewer, water, road and airport improvement projects in response to Anchorage's burgeoning population.

1. The Impact of Oil Revenue—the 1980 through 1985 Boom

There is no doubt that oil revenue contributed to Anchorage's building boom, and strong belief that some projects could not have been built without the sudden and massive availability of cash. Huge increases in property values increased the capacity to issue bonds, but a combination of the school debt reimbursement program and the availability of other state funds reduced the need to incur municipal debt.

If state funds had not been available, some projects may have been smaller in scope or delayed in favor of projects with a higher priority. Some may not have been built if individual bond issues had been required. From a political perspective, there were several groups supporting specific projects. With plenty of money to spend, along with a desire to make each constituent group happy, politicians found it difficult to say no.

No key informant could identify specific facilities (other than office buildings) that were built directly by oil producers. In general, oil companies contribute to the operations of nonprofit organizations; if they contribute to capital costs, they are usually just one of many donors.

There are several points that should be kept in mind as we look back at the oil era. While the oil money was important to development decisions, there was an attitude that the good times would continue with the impending construction of a natural gas pipeline. In addition, this was the opening age of "new federalism" in which responsibilities—but not necessarily funding for them—were shifted to the states. The municipality built trails, parks and recreation projects because there would have been little federal aid available for them. Perhaps most importantly, the projects were driven by the demands and desires of the citizens. Without oil money, population may have increased less quickly, thus reducing the demand for infrastructure. As it was, the facilities that were built all had constituencies, and the Municipality still had to set priorities.

There is no way to determine if bonds, federal aid or other sources of funding would have been sufficient to meet the demands of a smaller population with a less expansive view of the future. It is clear that municipal debt was much lower than would normally be associated with the rapid expansion of schools and other facilities. It is also clear that state oil revenue distributed to local governments took the place of issuing debt.

Despite the abundance of cash, there is little indication that money was wasted on projects that were excessive in nature or scale. Some facilities—the Eklutna water project and the Performing Arts Center—were identified as perhaps excessive in scale for the existing population, but not overbuilt when project life expectancy and population forecasts were considered.

City officials thought that the projects were generally well-conceived but not necessarily well-executed. Because there was a rush to build so many projects so quickly, there were some design flaws that were expensive and some mismatches of design firms and construction companies. For example, the Performing Arts Center was cited for poor planning and cost overruns related to poor project management, and still wasn't handicapped-friendly. The Sullivan Arena had design flaws that took $25 million to fix. Also, there were some operating issues—the main library struggle with the branch libraries and the closure of the Alaska Repertory Theater, for example—that added costs or resulted in poor public perception of some projects.

However, the poor public perception does not reflect utilization of the facilities. All facilities are well utilized and no longer appear excessive. Sullivan arena revenues cover operating and maintenance costs. The Performing Arts Center generates about 40 percent of its budget through operating revenues and contributions, with the Municipality providing the balance of operating funds. Projects such as the coastal trail generate no revenue but are heavily used. Each facility built during the oil boom has a strong constituency, and even the most conservative informants believe that oil money allowed

infrastructure to catch up to existing needs rather than get ahead of needs.

2. Effects on the Quality of Life

Several projects initiated in the boom years—the Performing Arts Center, Sullivan Arena, the library, coastal trail, museum, ski area, ball fields and ice rinks, to name a few—offered the people alternative (or additional access to) recreational and cultural opportunities. All was not positive—the Alaska Repertory Theater closed after the Performing Arts Center opened—but these opportunities generally improved the quality of life.

At a more mundane—but no less important—level, public service projects also helped make Anchorage a more livable community. Construction of several schools and expansion of the University of Alaska improved educational opportunities. Construction of shelters addressed needs of the homeless and runaways. Major road construction projects alleviated increasingly serious traffic congestion problems. Landscaping, sidewalks and bike trails improved neighborhoods.

Municipal government wanted a city that worked for people as well as for cars. While it would not be difficult to find people opposed to the growth that Anchorage struggled with, municipal leaders were proud of Anchorage's All American City status and increasingly cosmopolitan image.

3. Effects on Economic Development

The public meeting/performance centers and airport were frequently cited as projects that contributed to economic development as well as to the quality of life. The Egan Convention Center provided the type of facility required to attract national conventions and conferences. Similarly, the Great Alaska Shootout (a major basketball tournament that provides Alaska with national television exposure as well as attracting visitors) could not occur without the Sullivan Arena.

Airport development—particularly the opening of FedEx and UPS distribution centers—is an important part of the Anchorage economy. However, the linkage between oil revenue, airport development and economic development is relatively weak. Airport improvements did not depend on oil revenue (they used primarily federal funding), and much of the private development using the airport may be attributable to Anchorage's position on the great circle route from the Orient to the United States. In addition, the investment in private facilities took place after the boom, when lower labor costs made new facilities more attractive investments. On the other hand, passenger facilities have a stronger relationship to oil revenue (to the extent that oil money caused population to increase) and have contributed to Anchorage's ability to serve as a hub to rural Alaska and as a visitor destination.

Perhaps more important than any particular facility's contribution to economic development, the construction of facilities compounded into an oil-revenue-fueled construction binge that sustained a large workforce. Construction impacts no longer appeared to be temporary; the construction workforce created demand for additional housing and services. This feedback loop (or investment accelerator, in more technical terminology) contributed to the booming economy.

The rate of construction was not sustainable. When construction collapsed, the feedback loop reversed its effect and contributed to the recession that began in late 1985. While jobs were lost at a rapid rate (especially in the construction industry) and Anchorage real estate values dropped 40 percent in two years, population did not show the same dramatic rates of decline. As noted by Department of Labor economists, Anchorage made the transition from a "boom and bust" cycle to a more stable "service economy" with sufficient underlying strength to avoid collapse in the face of a major decline in one sector (construction).

A government paper written in 1988 argues that the oil price collapse began three months *after* the start of the recession and that declining oil revenue intensified the recession but did not cause it.[8] Several economists noted that Alaska brought the recession upon itself; it was not caused by weaknesses in the markets for goods and services that Alaska sells to the rest of the world, but by State spending at an unsustainable rate and by State policies that encouraged overinvestment in housing.

Regardless of cause, the recession was intense but relatively short. Large scale construction declined throughout the remainder of the 1980s, but Anchorage property values began a slow recovery while employment recovered much more quickly on the strength of the service and trade sectors. The oil boom was a major stimulus to the development of the trade and service sectors. They had been traditionally a smaller portion of total employment than in other

[8] Erickson, Gregg, *The Recession, the Real Estate Crash and Alaska's Economic Prospects*, Division of Policy, Office of the Governor, March 1988.

states and cities. The population growth during the oil boom created economies of scale and opportunities for import substitution that persisted after the boom. The Anchorage economy matured during the oil boom.

In the 1990-95 period construction in Anchorage did not have an apparent connection with the oil industry or state spending of oil revenues. Through the late 1980s and 1990s trade and service sector development stemmed from tourism growth. The release of 1990 census data showing Anchorage's relatively high growth rate and high income levels spurred development by national retailers, including Walmart, K-Mart, Costco and others. More recently Anchorage has experienced a flurry of hotel construction activity.

The municipality—in fact, the state—is no longer so dependent upon oil revenue to sustain its economy. Overall employment growth through the 1990-95 period occurred while oil industry employmnet declined (see Volume 2, Part 3, Employment and Earnings). As evidence the waning dependence on oil, consider that oil revenue dropped about as fast and far in 1994 as in 1986, yet no recession followed that revenue decline. The economic stability in the 1990s may be attributable to a combination of budget reserves that help stabilize spending and to policy and spending decisions that no longer overstimulate the housing market or construction sector.

4. After the Boom

The rapid decline of oil revenue in 1986 put a definite end to the building boom that had begun to slow a year earlier. The revenue decline also raised concerns about the ability to maintain and operate facilities statewide and contributed to budget constraints in 1986 and 1987. Although the real estate crash and recession hit Anchorage very hard, the community did not face the degree of maintenance problems experienced in some parts of the state. While rural areas often lacked the tax base and the local knowledge to maintain and operate facilities and equipment purchased with state funds, Anchorage had both a large tax base and large, diverse labor force.

Still, Anchorage had its problems. Declining property values and a tax cap initiative constrained spending, so that road maintenance became an issue. Facility operations were not a serious problem, but maintenance was sometimes deferred. Financial problems would have been much worse if the municipal debt load had been higher.

Deferred maintenance remains an issue into the 1990s despite the increase in oil revenue and economic recovery. Several schools and roads need major repairs, but most building projects have been well-maintained.

The recession (1986 through 1989) did not end construction completely. Roads and schools were the major projects, but they used primarily federal funds and bond proceeds, respectively. In general, the facilities built during the boom have served their purpose well. The talk of infrastructure in recent years focused on replacing the jail and building new ball fields and parks.

The recession brought structural changes to the economy. Young, single males with high incomes dominated the construction workforce, which was cut in half over a very brief period. Unemployed construction workers tended to leave the state rather than work in other industries. This contributed to the real estate crash, which caused the banking sector to enter a tail spin. The effects of declining population and spending spilled into the service and trade sectors, but they were not hit as hard and soon recovered.

Some economists concluded that the oil revenue collapse contributed to the real estate crash and recession in Alaska, but that oil money was not the cause of the decline or of structural changes in the economy. The following factors support that point of view:

- The Anchorage real estate market began to soften in 1984 and vacancy rates were rising by 1985. Several builders were bankrupt before the end of 1985.

- The real estate crash and related financial institution problems were not limited to Alaska. This was the time of the national Savings & Loan crisis. The crisis had its roots in the (Tax Reform Act of 1986's) termination of several tax benefits for real estate. Previously, depreciation schedules, tax rates and "at-risk" and passive activity rules allowed real estate investments to provide adequate returns to investors despite a low or negative cash flow.

- The recession in Alaska coincided with economic recovery in most of the country. For many who came to Alaska during the boom and who lost their jobs in the crash, the timing was good to return to other states - therefore there was a relatively quick exodus from Alaska, particularly in the construction workforce.

- Construction was overdeveloped and was the sector in which most of the job losses occurred. Although restaurants, hotels and some other

businesses were "ahead of themselves" on the development curve, Anchorage's retail and service industries were still relatively immature. The trade and service sectors recovered quickly and continued to grow. This growth was not a "cause and effect" relationship; construction workers did not take retail or service jobs nor did retail and service jobs replace construction jobs. The expansion of Anchorage's service and trade sectors followed a national trend.

- For most of those who did not lose their jobs during the crash, the primary effect of the recession was a paper loss on the value of their homes. This "wealth effect" may have contributed to reduced spending, but the quick recovery indicates to some informants that anxiety was a more important determinant of spending than was real estate value.

- The failure of Alaska incomes to keep pace with inflation is not limited to a short period. Real income of Alaskans has trended downward since 1980.

B. Public Services

While the State directed a large portion of oil revenue to infrastructure development, some oil revenue expanded State-provided services or increased assistance to local governments. In addition, there are strong linkages between infrastructure development and public services.

In Anchorage, public services were also influenced by property values, which swelled the municipality's tax receipts from 1980 to 1986, then declined rapidly. In general, Municipal employment expanded from 1980-1986, as municipal revenues and (State and municipal) spending grew. Anchorage had a "strong mayor" form of government, but created an executive team (cabinet) to improve its ability to cope with new demands on utilities, public safety, public services and finance.

As oil revenue declined beginning in 1985 and—more to the point—municipal property values tumbled in 1986 through 1988, Anchorage no longer had the revenue to maintain the status quo. Government employment ratcheted down through attrition and some layoffs. Anchorage began a period of economizing as it became apparent that cities would need to take care of themselves because State assistance and capital spending could not be sustained.

As the budget declined, there were many challenges with municipal relationships. Structural changes at the lower echelons—particularly with the municipally-owned telephone utility—led to struggles with unions and there were disagreements about where cuts should be taken. The Municipality created a high-level position to coordinate government affairs.

Municipal changes are more difficult to link to oil revenue during the recovery period because a change in administration brought in a comparatively conservative mayor. While the economy turned around by 1990, municipal government didn't begin to grow until 1993.

To put the municipality's financial situation in perspective, consider that Anchorage survived the recession without implementing a sales tax. City government did economize, but was able to continue to provide services without using all available sources of revenue.

1. Education

Education is perhaps the service most affected by the oil boom and following recession. As noted in Chapter One, capital and operating funding for education were heavily influenced by oil revenue. From school-year 1975 (FY76) through 1980, Anchorage's student population decreased by nine percent (due to post-pipeline job losses and out-migration) while funding increased by 52 percent. The increase in funding is attributable primarily to inflation, which was 50 percent during the period.

From 1980 to 1985, the student population increased by 15 percent while funding increased by 79 percent and inflation was 24 percent. The effect of oil revenue on education funding was significant, as emphasized by a ten percent ($15 million) reduction in state aid during FY87 as oil revenue fell. The funding reduction put real per-student funding back to the 1980 level.

The foundation formula revision in 1988 left real per-student funding only slightly higher than the 1987 level. In 1989, despite a reduction in student population and no adjustment for inflation, state funding increased by seven percent. This was followed by a 10 percent increase in 1990 with only a one percent increase in student population.

State aid was increasing rapidly in the face of low oil revenue. However, the increase was the result of declining property values rather than legislative intent. According to the foundation formula, required local contributions are subtracted from a school district's basic funding level to determine State aid. As Anchorage property values declined, required local contributions declined and were offset by identical increases in State aid.

The conclusion is that oil revenue influenced education policy and spending, but not always in a straight-forward manner. Perhaps the most complex relationship is that State education spending (perhaps unintentionally) became counter-cyclical as property values fell. A two-year lag in reflecting property values in the formula delayed the impact of declining property values until 1989 and 1990. By 1991, student population and state aid were better aligned, increasing by three and four percent, respectively.

After 1991, increasing levels of required local effort (due to property value increases starting in 1989) caused State aid to increase at a slower rate than student population. From 1991 to 1995, student population increased by 13 percent while State aid increased by two percent.

Oil revenue has affected education funding not just through the level of appropriations in a given year, but also by shaping the foundation formula and by reflecting property values, which reflect the economy in general. The economy also influences population growth, which affects the number of schools required. The impact of oil revenue on school capital costs is more direct than the impact on operating costs.

In addition to the school debt reimbursement money discussed in Volume 1, Anchorage received school construction grants of $17.1 million in 1983, $1.7 million in 1989 and $44.5 million in 1993. Those grants supplemented nearly $350 million in bonded debt issued from 1975 to 1995.

2. Other Public Services

Municipal involvement in other services was generally less affected by the oil revenue cycle. Health care was historically provided by a military hospital, a Native hospital (both federally funded) and two private hospitals, one of which was built during the oil boom. There has been tremendous growth in the health care industry, some of which may be related to oil revenue.

Technological advances in Anchorage's hospitals were, in part, made possible by oil-induced population growth that provided economies of scale. Improved health care contributed to import substitution, which means that fewer people left the city to receive medical care. At the same time, airport improvements in rural communities allowed more people to go to Anchorage for medical care.

However, the Municipality was (and is) not directly involved in health services to a significant extent. Nor were health services in Anchorage affected directly and significantly by State expenditures of oil revenue.

The Municipality of Anchorage was also not a major player in housing. Until the mid-1980s, AHFC was the dominant force in the housing market. As AHFC policies and participation became less significant, the municipality's involvement increased, particularly for low-income housing. However, nonprofit organizations became the major players in the low-income housing market in 1990.

As noted in Chapter One, statewide appropriations for transportation infrastructure were greatly influenced by State oil revenue. Anchorage certainly had its share of projects during the oil boom. From a public service perspective, however, road maintenance (rather than road construction) is the issue of concern. Road maintenance remained adequate during the recession and into the 1990s.

Municipal employment declined from a peak of about 3,600 in 1986 to about 3,000 as the recession ended in 1990. Over half the jobs lost were at the Anchorage Telephone Utility. According to informants, the job loss did not cause significant deterioration of service.

Reported effects of oil revenue on the arts are inconsistent. Some individual organizations may have suffered after the boom and after the completion of the Performing Arts Center, but overall support did not diminish when the oil boom ended.

Chapter III: Kenai Peninsula Borough

Introduction

The Kenai Peninsula is south of Anchorage and separates Cook Inlet from Prince William Sound. Often considered "Anchorage's playground," the region is an economic force in its own right. Cook Inlet was an oil-producing basin before Prudhoe Bay construction began. The oil and gas industry not only provided jobs in the Kenai Peninsula Borough (KPB), but also contributed to Anchorage's economy by providing gasoline and natural gas at prices that encouraged business development.

The KPB's economy was (and remains) diversified, with commercial fishing, sport fishing and tourism-related businesses well established before the oil boom. Population growth rivaled that of Anchorage, increasing 27 percent from 1970 through 1975. Anchorage population increased by 33 percent during the period. However, while Anchorage's population declined by about 15,000 upon completion of the Trans Alaska pipeline, KPB population continued to increase. From 1975 through 1980, KPB population increased by 19 percent.

KPB population increased at an annual rate of 10 percent during the oil boom years (1980-1985), compared to a four percent growth rate between 1975 and 1980 and a one percent growth rate for the ten year period between 1985 and 1995 (see Volume 2, Part 3, "Employment and Earnings"). As with the statewide economy, the economic growth during the boom years isn't attributable directly to high oil prices, but rather to the effect that high prices had on State revenue and spending. In addition, while Alaska was booming, the U.S. economy was experiencing a severe downturn. The migration of people looking to Alaska as a place to find a job accelerated the Alaska economy.

A. Infrastructure

1. The Impact of Oil Revenue—the 1980 through 1985 Boom

By one account of the boom years, money was figuratively "coming in faster than it could be counted." One official described an incident in which he received a note that requested an immediate response regarding how the borough would spend $5 million to $6 million that would be inserted in the State capital budget. There was little study of, or planning for, major projects and some decisions were made without much public or private discussion.

The same key informant tempers that "spending spree" image by pointing out that, relatively speaking, the borough government did not receive a lot of cash from the State (with the exception of school debt reimbursement). Throughout the 1975 to 1995 period, the KPB's primary source of revenue was local taxation of the Cook Inlet oil and gas industry. Most tax receipts were used to pay off the local share of bonds for schools.

A significant amount of cash was available to cities within the borough. Several cities received state appropriations for infrastructure that (in nature or scale) were not driven by the market. For example, Homer received money for port development and Seward built a prison, major dock, and coal loading and ship repair facilities. In the opinion of key informants, these developments could not have happened without oil money.

There is agreement that most of the oil money was spent on basic infrastructure such as schools, roads and facilities that promote economic development. However, a number of projects were excessive in scale or poorly conceived economic development pipe dreams. Soldotna's Olympic sized ice arena was cited as an example of non-basic infrastructure, but informants point out that it is heavily used.

The Seward grain terminal and ship yard were cited as examples of a projects that may have been overly ambitious. However, informants point out that funding for the grain terminal was pulled before completion and
that it became a coal loading facility.[9] The shipyard in Seward was trying to compete with Ketchikan and Seattle, and closed because it was underused.

Some key informants emphasize that oil money wasn't wasted on "white elephants" but rather that the availability of oil money speeded development of projects that would have occurred in the future. When, if and how projects would have been built if not for the oil boom is speculation, especially with regard to the linkage between oil boom and population growth, and between population growth and the demand for infrastructure. However, one fact is indisputable: cities

[9] Funding for the grain terminal was pulled when it became obvious that Alaska barley from State-subsidized agricultural developments could not be brought to world markets at competitive prices. The incomplete facility was converted to handle coal several years later.

in the KPB ended the oil boom with substantial infrastructure and little debt. Most cities within the KPB were able to garner enough State funding to remain debt free.

The borough government sold bonds that went beyond their practical bond capacity, mostly for school construction. Thanks to the school debt reimbursement program, the borough experienced no ill effects from its debt load. Key informants noted that borough bond sales were affected by politics. While school districts throughout the state were getting cash appropriations for school construction, KPB did not get cash because their representatives were in the minority. Given the rapidly increasing demand for school space, the alternative to direct grants was to sell bonds for construction and then be partially reimbursed by the State.

Other reasons for high construction costs for schools include 1) local control and 2) inability to predict school requirements accurately. As a second class borough, KPB did not have complete control of school facilities construction; the communities (more than the Borough) determined school size and amenities. The KPB has several communities with small schools that could have been consolidated to reduce school construction costs. In the early years, the State funded amenities (pools, auditoriums, etc.) that were expensive to build and maintain. The State tightened building requirements as debt reimbursement costs increased.

Regarding enrollment, Kenai had experienced several years of growth at a pace that required at least one new school per year. Given the lag between bond approval and the date a school can be ready for occupancy, it is no surprise that the KPB got ahead of the student enrollment curve when population growth slowed suddenly in the 1986 school year. A few schools were mothballed during the late 1980s until population began to increase and the schools were needed.

Oil money also funded projects other than the schools and economic development projects discussed above. During the five years just before the oil boom, less than $7 million (in 1995 dollars) in general funds went to capital projects in the KPB. Over $350 million (in 1995-value general funds) was pumped into capital projects in the borough from 1980 through 1986 (see Volume 1 for capital project spending details).

Of that $350 million, one-third was for energy (a hydroelectric site) and 30 percent (nearly $85 million) was for roads. Other major categories include docks and harbors ($23.8 million), parks and recreation ($17 million), water and sewer ($9 million) and aviation ($7 million). Airport improvements can be attributed to the match required for the vast amounts of FAA money available in Alaska. Kenai is an alternate landing site for the Anchorage airport and required upgrades to meet safety requirements.

2. Effects on the Quality of Life

The expenditure of oil revenue was seen as providing an opportunity to catch up on needed infrastructure as well as to build for the future. The disruption normally associated with rapid population growth was minimized in the KPB by improvements to schools, roads, hospitals and facilities that enhanced economic development and diversification. Key informants noted that transportation improvements offer not only direct improvements to quality of life through time savings and convenience, but also reduce the cost of living.

The Alaska Housing Finance Corporation (AHFC) was cited as having a more important impact on quality of life than did many of the direct construction projects. Oil money capitalized the program and permitted housing loan subsidies that changed the complexion of the state. AHFC unleashed the housing construction industry and generated affordable, quality housing.

3. Effects on Economic Development

Infrastructure developments supported the tourism and fishing industries in the KPB. Roads and airports were particularly important to tourism development. Improved access prompted strong increases in tourism, which in turn prompted additional infrastructure improvements. Docks and harbors also encouraged strong growth in water-borne tourism.

Docks and harbors also benefitted the fishing industry, but the growth in fishing was undoubtedly more closely tied to strong salmon runs and favorable market conditions than it was to infrastructure. Oil money was perhaps more important to the fishing industry as a source of financing private sector ventures than as a source of public infrastructure. Oil money capitalized the Commercial Fishing and Agriculture Bank and allowed the State to expand other fisheries loan programs. These sources of capital were extremely helpful to undercapitalized fish processors and harvesters.

To some extent, strength in the tourism and fishing industries probably lessened the impact of the oil revenue decline. Population in the KPB fell by 1.6 percent from 1985 to 1988, while Anchorage's population fell by 5.1 percent during the same period.

4. After the Boom

The recession ended the building boom, but the KPB went through the recession in good fiscal condition. Several factors contributed to the borough's ability to weather the recession:

- The Kenai Peninsula Borough has a strong industrial tax base, especially in oil and gas production. This tax base propped up property tax receipts despite a substantial decline in residential property values.

- Bonded debt (other than for schools) was low because much of the money in the boom was cash appropriations from the State. The school debt reimbursement program was critical to the KPB. The borough was fortunate in that about 25 percent of the statewide debt reimbursement went to the KPB (which was home to about seven percent of Alaska's student population). School debt would have been an extremely heavy burden without the reimbursement program.

- The KPB is a 2nd class borough, which means the only major services are education and roads.

- The KPB reduced both capital and maintenance costs by building prototype schools. In the early 1970s, the KPB took over the school maintenance budget from the Board of Education. There are legal guidelines established for maintenance budgets, and long-term maintenance costs were reduced because KPB did not defer maintenance.

- State Revenue Sharing dollars were available to the KPB, but voters turned down a borough tax levy for road maintenance. Once the revenue sharing dollars were spent, there was no more money for road maintenance.

- Hospitals, emergency medical service and fire and police service are provided by service districts, so the KPB government is streamlined compared to 1st class boroughs. There are some disparities between service districts based on their tax base. For instance, the Soldotna Hospital is funded by Kenai, Soldotna, North Kenai, Tyonek and oil platform tax receipts, and a low mil rate can generate a lot of money. The Soldotna hospital has state of the art facilities. However, the Homer service district has a comparatively low tax base, and their hospital facility is quite a bit smaller and less modern than Soldotna's. Seward has little tax base and won't support a high mil rate. The city of Seward took the hospital over, but maintenance has become a divisive issue for the Seward community in the mid 1990s.

B. Public Services

As noted above, the KPB itself has very few powers over services. Most services (those other than education and some road maintenance) were provided by service districts.

During the recession, the KPB experienced budget pressure attributable to declining property values, especially residential property. Borough employment levels did not change significantly during the recession, partly because the borough did not provide a full range of services. As a 2nd class borough, the public has to approve services and powers the borough would assume. Cash available during the oil boom (and disparity in communities' tax bases) combined to encourage formation of local service districts rather than expansion of borough powers.

As the recession hit, the mayor reduced the work week to four days, deferred or eliminated discretionary expenses and cut the 16-member assembly to 9 members. This significantly changed the representation by eliminating overlap between service districts.

Because the KPB contracted for road maintenance, they reduced contractual expenditures rather than the number of employees. The KPB also attempted to improve systems when possible. For example, KPB implemented one of the first graphic systems for tax assessments, which has been very effective and efficient.

Chapter IV: The Northwest Arctic Borough

Introduction

The Northwest Arctic Borough (NWAB) straddles the Arctic Circle to the East of Kotzebue Sound. Borough formation (in 1986) is attributable to the development of the Red Dog mine. As a home rule borough, the NWAB is responsible for education, taxation, planning and zoning. The state operates airports, provides social services (through contract) and provides police services.

The NWAB is the second largest borough in the state, yet has a population of fewer than 7,000. Over 90 percent of the residents are Inupiaq Eskimos. There are 11 communities in the borough. Three of them—Kotzebue, Kiana and Noorvik—were selected for analysis.

Kotzebue is by far the largest community, with nearly half the borough population living in the community. As the urban center of the borough, Kotzebue has the most developed private sector and cash economy. There is commercial fishing and processing in Kotzebue, and most of the federal, state and local government, school district, ANCSA Corporation, and health service jobs in the borough are in Kotzebue. Kotzebue developed as a trading center because of its access to the three major rivers that flow into the Sound. It remains the transfer point for ocean to inland shipping and is also the regional air hub. Though it has an urban character relative to the villages of the region, at least half the local livelihood is from subsistence fishing, hunting and gathering.

Kiana and Noorvik, the two other communities selected for analysis, are much smaller and have economies based primarily upon subsistence activities. Both are located on the Kobuk River 45 to 60 miles east of Kotzebue. Neither community has road links to other communities. Snow machine, small boat, plane and barge are the primary modes of transportation in the communities. As airports have improved during the past 20 years, most commodities other than fuel are flown in. Fuel remains the major item still shipped by barge.

There are few private sector jobs in either Kiana or Noorvik. Many residents find summer work at the Red Dog mine, in Kotzebue Sound commercial fisheries or as firefighters for the Bureau of Land Management/Alaska Department of Natural Resources. Construction projects offer another source of seasonal work.

Although local government and the NANA Regional Corporation (the regional ANCSA corporation) pursue economic development opportunities, protection of the traditional lifestyle is an important development consideration. At the same time, employment and training of local residents is a priority, so residents can improve their ability to function in a cash economy while maintaining subsistence activities.

During the 1970s, the NWAB's population increased by about 100 people per year (less than two percent annually), reaching 4,800 by 1979. The growth rate jumped to about four percent during the oil boom of 1980 through 1985, then fell to less than one percent through 1990 and increased to about two percent during the early 1990s. Kotzebue and Kiana grew by about two percent annually during the 1970s, while Noorvik grew at only about 0.5 percent. Growth in Kotzebue was about three percent annually during the 1980s, with some of the growth as a result of migration from smaller neighboring communities. From 1990 through 1995, both Kiana and Noorvik grew more rapidly than did Kotzebue (detailed population data is in Vol. 2, Part3).

A. Infrastructure

"Major" projects in rural Alaska do not have the same meaning as in urban Alaska. The following comparison lends perspective to the discussion of infrastructure development in the NWAB. During the entire 1975 through 1995 period, general fund capital budgets affecting the NWAB were a total of $235 million (in 1995 dollars). Anchorage's share of capital budgets reached $350 million in general funds in a single year, and exceeded $200 million in four of the six boom years.

There is also a huge difference in the ability of local governments to raise money. Neither the Borough nor any community in the borough has issued debt. Further, the Borough imposes no property or sales taxes. Both Kotzebue and Kiana impose sales taxes and the Red Dog mine makes payments in lieu of property taxes, but infrastructure development is strongly influenced by state and federal funding.

There are no roads connecting communities, so "infrastructure" generally refers to airports, sewer and water systems, local roads and trails, community facilities and bulk fuel storage tanks. From 1975 through 1977, less than $1.5 million was spent on infrastructure in the NWAB. Most of that money was for a dock and senior center in Kotzebue. Kiana received $20,000 in general funds for airport improvements and Noorvik received no capital funding.

Construction of schools and other buildings brought state spending in the Borough to over $13 million in 1978. Additional airport improvements, local road improvements and energy appropriations kept spending over $1 million in 1979. The relatively high levels of spending in 1978 and 1979 appear to be unrelated to oil revenue (see Vol. 1, Part 1).

The oil boom brought a massive increase in spending for infrastructure. Over half of all capital spending during 1975 to 1995 occurred during the 1980 to 1985 period. Some of the major categories are described below (all amounts are state funding in 1995 dollars).

Education accounted for one-quarter of the spending from 1975–1995, and half of that was during the oil boom. Kotzebue got $16 million for schools during the boom, while Kiana and Noorvik continue to use schools that were built in the 1960s and early 1970s. Over $22 million was spent on aviation, nearly all of it during the boom. All three communities of interest had airport improvements; Kotzebue and Noorvik received over $3 million each and Kiana got $400,000. Community assistance for various facilities, flood and erosion control, energy and sewer and water projects account for most of the remainder of state capital spending in the NWAB.

1. The Impact of Oil Revenue—the 1980 through 1985 Boom

Some key informants believe that little infrastructure would have been developed without oil money while others believe oil money simply permitted more rapid development of infrastructure that would have been funded by other means. Despite the apparent incompatibility of these opinions, further discussion uncovered some common ground.

Rural Alaska in general, and specifically the NWAB and communities within it, do not have the tax base or the financial strength of a cash economy to fund many construction projects. Therefore, little infrastructure development would occur if funding relied upon local financial effort. However, development occurred before the boom and would have continued—or accelerated—without the oil revenue increases of 1980 through 1985. The important points are:

- State and federal funding have driven infrastructure development throughout the 1975-1995 period; local financial effort has never been a significant factor.

- the state-funded Local Service Roads and Trail Program funded many rural erosion control and road enhancement projects before the boom years and probably would have continued to do so if the boom had not occurred.

- there was recognition that air transportation was critical to the health and safety of rural Alaskans and that rural airports needed to be further developed.

- sewer and water projects were also recognized as health and safety issues, and the state and federal funding for them were independent of oil revenue fluctuations.

Some projects—recreation halls and other facilities not related to health and safety, for example, probably would not have been built if not for the "excess cash" available during the oil boom.

Rural Alaska did not experience the full extent of the boom-bust cycle. Fewer projects of smaller scale (compared to urban areas) did not generate a construction workforce that anticipated an ever-expanding economy. Projects were viewed as independent of each other and served the needs of the existing population rather than being designed in response to rapid population growth. There wasn't a population or housing boom in rural Alaska and consequently there was little reaction to the urban real estate crash. The rural infrastructure that was built during the boom was used in the same way (and by the same people) after the boom.

In short, there were no public projects funded with local debt or any source other than state and federal money. Although some projects used local labor, others used crews brought in by contractors. Several key informants noted that local jobs are important to the community and individuals, not only for the immediate cash they provide, but also because the training helps residents get other jobs.

It was also noted that rural representatives to the Alaska legislature carried considerable political clout.

The "Bush Caucus" was successful in directing capital funding to rural regions, including the Northwest Arctic. Capital spending in the Northwest Arctic Borough, on a per capita basis, was impressive, even for Alaska in the boom years (see Volume 1 capital spending data).

Nevertheless, most of the investment in infrastructure was considered to be well spent. During the boom years, over one-quarter of state capital spending (in 1995 dollars) in the NWAB was for school construction, yet schools built in the 1960's are still in use. The fifteen percent spent on aviation during the boom is considered critical to the communities. Air is the major mode of transportation and many runways were dangerous before improvements were made. Another quarter of expenditures was for energy development, erosion control, roads and water and sewer systems. Projects of this type were considered necessary to bring communities up to minimal living standards.

Over two-thirds of the state investment in infrastructure during the boom are in the "essential" categories described above. There were no reports of excessive scale of those projects, but there was some concern that erosion control money could have been used more strategically and that projects were not engineered properly. A technique that worked in Kotzebue was applied in Noorvik, but the soils are quite different so that results were not as good as expected. The money available during the boom led people to expect quick fixes, but erosion control might be improved through long range planning and phased projects.

Grants for community facilities and other assistance received less enthusiastic endorsement. Agricultural projects administered by a non-profit association in the lower and upper Kobuk areas produced high quality vegetables, but the program died for lack of funding after 1986. This project was begun in 1978, before the oil boom.

Poor quality construction has made some facilities unsuitable for their intended use. For example, the recreation center in Noorvik is no longer open. The foundation was inadequate (poorly engineered and constructed) so the community now uses the center for storage. The Noorvik fire hall literally fell apart and is no longer functional. Heavy equipment purchased by Noorvik faced a similar fate.

Problems like those cited in Noorvik are not typical. In general, facilities built with oil money are still in use, but maintenance is frequently a problem. In some cases, maintenance issues were addressed with oil money. For example, the Noorvik city office building was built before 1980, but was weatherized and had the heating and plumbing systems upgraded. Before these improvements, the maintenance costs were prohibitive and there was some discussion of turning the building over to the National Guard and trying to find some funds to build a new building. The improvements reduced maintenance costs significantly and there are no longer problems handling maintenance costs.

Kiana, Kotzebue and other communities were more fortunate than Noorvik with regard to facilities and equipment. In general, facilities throughout the NWAB were appropriate in nature and scope, but maintenance has been a problem in many communities.

2. Effects on the Quality of Life

Improvements to air transportation were cited as having the greatest impact on quality of life in rural communities. Airport improvements enabled residents of outlying communities to take advantage of services available in Kotzebue, and in Anchorage and Fairbanks. Medical care for rural residents has improved immensely because of better air access.

Additionally, airport improvements have improved safety in general, reduced weather related problems and permitted larger planes to land. The improved air service reduced the cost of food and other commodities. Before airports were built or improved, all supplies were delivered in bulk by barge. The communities had a hard time storing these supplies. Only fuel comes in by barge anymore.

Other projects—recreation halls, fire halls, senior centers, vans for health assistance, improved sewer, water and electricity services, for example—improved the quality of life by improving safety and health, providing opportunities for recreational activities, increasing convenience and/or reducing the cost of living. Erosion control projects have protected public and private property.

From a social perspective, the oil boom provided opportunities to supplement the subsistence lifestyle with cash income. Communities used local help for construction projects when possible. Putting local people to work allowed them to learn the basics of construction while earning money. It also built a sense of ownership and knowledge that welfare payments are not the only route from a subsistence economy to a cash economy.

Key informants suggested that the impact of oil revenue on the quality of life could have been improved more if there had been more long range planning. Kiana and Noorvik city governments, however, were small and unprepared for the flood of money from the state in the 1980-85 period. The facilities built were generally useful, but could have been better planned and constructed.

3. Effects on Economic Development

Residents of the NWAB, and especially the small communities within it, continue to rely heavily on subsistence activities. However, as electricity, sewer and water systems and other amenities became viewed as necessities rather than as conveniences, the need for cash increased. Rural residents are highly dependent on federal and state programs and ANCSA Corporation dividends as a source of cash.

There are some seasonal jobs in fisheries, construction and fire fighting (and, more recently, in mining) but these jobs tend to be outside the small communities and are unrelated to oil development. Permanent positions tend to be in the school district, local government, and ANCSA corporations (including health care). These jobs also have little connection with the oil industry.

Key informants in the small communities noted that investments during the boom have not led to economic development or diversity in the communities. Other than fishing, there are few private sector jobs in small communities. Contrary to much of the Railbelt and Southeast Alaska, tourism in the small communities is virtually nonexistent.

Kotzebue has been more fortunate in terms of employment opportunities. Other than the Red Dog mine, Kotzebue has the only significant private sector economic activity in the borough. Kotzebue airport improvements contributed to tourism development and may have helped several businesses to develop. However, the airport improvements may have occurred without the oil boom.

Few projects during the boom can be classified solely as economic development projects. There was a proposal and apparently some funding for a sawmill project, but it was not built. Key informants did not know the history of the project.

Key informants do not see the Borough's economy as being closely related to oil. Although the oil boom resulted in construction of facilities that may not have been built without oil money, it produced no sense of an economy wide boom. Similarly, the crash had no major impact other than the end of a construction period. However, there was some belief that enough infrastructure had been built in these communities and that capital projects were not a real priority by the time the boom ended.

Simply stated, the economy did not experience a significant boom or a bust; it remained primarily a subsistence economy throughout the cycle. The Red Dog mine and formation of the borough offer further evidence of the NWAB's isolation from the oil revenue cycle.

The most significant economic development in the Borough is Red Dog mine. The mine is about 90 miles north of Kotzebue and holds some of the richest zinc deposits in the world. It is owned by NANA Regional Corporation and operated by Cominco, Inc. Its annual payroll is $10 million to $15 million.

For purposes of this study, there are several important points regarding mine development.

The Red Dog Mine prompted formation of the Northwest Arctic Borough. The borough formed in 1986, after the oil boom, because the mine offered a steady source of revenue. The oil boom did not provide sufficient incentive to form a borough. The mine allows the borough to operate without imposing property or sales taxes on residents.

Considerations in developing the mine included its potential negative social and cultural impacts. More specifically, creating jobs for local residents was a priority, but so were maintaining the ability of residents to live a subsistence lifestyle and minimizing the negative impacts of cash availability, such as alcohol consumption.

4. After the Boom

The primary long-term impact of infrastructure development in rural communities was not economic development, it was the necessity to generate cash to operate and maintain facilities. Opinions regarding the cost of maintenance—and the ability of communities to generate money for maintenance—sometimes vary. One point of agreement is that road and airport maintenance is not a problem for local governments. Road maintenance is a minor issue because there are few road miles and because snow machines are used heavily during the winter. Airports are operated and maintained by the State.

There is substantial disagreement regarding maintenance of other facilities. One key informant noted that communities seem to be doing a good job at maintaining their facilities, but that it is very expensive to do so because fuel costs (for both heating and generating electricity) are so high. Also, even for buildings that are winterized, freeze-ups occasionally occur and can result in expensive repairs.

Other informants noted that some older buildings are not well suited to the climate. They also noted that the end of the oil boom reduced revenue sharing and municipal assistance funding. In response to reduced funding, Noorvik eliminated electricity in storage facilities, the recreation center and the day care center. These facilities have not been used as intended since the mid-1980s.

Noorvik appears to have a greater degree of difficulty with maintenance than do Kotzebue and Kiana. This may be partly attributable to lack of sales tax revenue in Noorvik.

The issue of maintenance costs did not suddenly appear at the end of the boom then fade with the economic recovery in the 1990s. The root of the problem is high fuel cost, and fuel cost has been high irrespective of oil revenue. The Power Cost Equalization program kept electricity costs in check for several years, but budget pressures have threatened the program since the mid-1980s. Without state support of electricity rates, Kotzebue and Kiana would join Noorvik in facing difficult choices as costs rise without an increase in revenue (additional discussion of the Power Cost Equalization program is in Vol. 1, Part 1).

There are many tales of improper maintenance resulting in system or facility failure in rural Alaska. While the stories are often true, lack of operating funding frequently contributed to the maintenance problems. For example, damage from freezing would be reduced if high fuel costs did not cause buildings to go without heat.

The process of electrification is typical of progress on maintenance issues. As generators were initially installed in several communities, electricity was not yet considered essential in many homes and systems may not have received the attention they required. The result was poor service and high maintenance costs. As people raised their expectations regarding standards of living, demand for electricity rose, as did the demand for reliable service. Breakdowns and power outages are no longer frequent because people are better trained and better understand how important electricity is to the community. Some communities have even established electric boards. Maintenance of utilities is now a high priority (see Volume 1 for additional discussion on the Power Cost Equalization program).

Rural economies were generally less affected by the oil revenue cycle than those of urban areas. Just as there was no significant population or employment boom as oil revenue increased, there was no significant bust when oil revenue declined. Part of the reason for stability in the NWAB may be the Red Dog mine, which began development just as the oil boom ended.

B. Public Services

There are two forms of government in NWAB communities. Traditional tribal governments were duplicated to some degree when the state effectively coerced communities to form municipal governments in order to be eligible for the Municipal Assistance and Revenue Sharing programs. These programs were the primary source of operating funds for local governments during the boom.

As Municipal Assistance and Revenue Sharing money decreased after 1986, some governments were hit harder than others. Borough formation coincided with the end of the boom and provided a replacement for State money. The Borough was formed so that it could impose property taxes on the Red Dog mine. Although no tax is actually imposed, tax authority allows the borough to negotiate payments in lieu of taxes. Eighty percent of the Borough's budget comes from the Red Dog Mine.

Borough staff provide planning services throughout the borough (except in Kotzebue, which does its own planning) but other services are limited by revenue. The borough government did not experience the oil boom and has had a small staff since its formation in 1986.

Kotzebue and Kiana have had few changes at the local government level, while Noorvik eliminated several positions in the late 1980s and early 1990s. Noorvik now has two police officers instead of four, the day care center was eliminated and some people lost their jobs, and city maintenance has fallen from five people to three.

Education is the top funding priority of the borough, and has been since the 1988 foundation formula revisions required local contributions by school

districts in organized areas of the state. Neither the borough nor municipal governments play a major role in most other public services. Health care is provided through state and federal funding, and transportation maintenance is primarily a state function, particularly at the airports.

As noted in Chapter One, health care funding has been affected by oil revenue and by other factors. Oil money permitted the construction of a senior residence facility in Kotzebue and contributed to substance abuse programs. State funding for health care through the Revenue Sharing program declined as oil revenue declined. Airport maintenance in rural communities has not suffered as a result of the decline in oil revenue.

Utilities have been constructed with state and federal funds (with more money flowing in recent years for sewer and water projects) but are operated at the local level. The state has subsidized electricity for years, through the Power Cost Equalization program and its predecessors (see Volume 1 for additional information on the Power Cost Equalization program). Those subsidies survived the recession but have been under constant pressure and may soon be eliminated.

The federal government—through Housing and Urban Development (HUD)—has been a major player in the housing market. The AHFC was not heavily involved in rural housing during the boom. AHFC now plays a larger role in *financing* rural homes, but federal programs are far more important with regard to *providing* rural housing.

Federal programs have helped build about 250 homes per year throughout rural Alaska. The homes are typically leased (with a purchase option) to individuals, with lease payments based on the ability of the family to pay. Lessees are responsible for operating and maintenance costs, so that the location of new homes is determined by what people want and can afford as well as by the availability of land. Lease receipts are recycled, so that economic development contributes to the number of homes that can be built.

Appendix

List of Key Informants

Barker, Barbara, Alaska Housing Finance Corporation, Planning and Program Director

Bowers, Paul, Director, Statewide Aviation, DOT&PF

Cameron, Mark, Finance Director, Alaska Housing Finance Corporation

Crawford, Larry, Past Anchorage City Manager (1978-81, 1990-98)

Dennerlin, Chip, former Manager for Public Services & Intergovernmental Affairs, Municipality of Anchorage

Donner, Jo, Research Analyst, Alaska Department of Labor

Emerson, Lisa, Budget Chief, Department of Health & Social Services

Fink, Tom, former Mayor of Anchorage (1988-94)

Fried, Neil, Economist, Alaska Department of Labor

Gillman, Don, past Mayor, Kenai Peninsula Borough

Greene, Chuck, Mayor, Northwest Arctic Borough

Hauck, Jim, Fiscal Analyst, Alaska Legislative Affairs Agency

Holder, Tim, Coastal Management Planner, City of Nome (1981-86)

Jeans, Eddy, School Finance Officer, Department of Education

Keinheder, Jack, Senior Policy Analyst, Office of the Governor

Kelton, Keith, Director, Division of Facility Construction & Operation, Department of Environmental Conservation

Kinney, Ross, Past Chief Financial Officer, Kenai Peninsula Borough

Kovark, Bruce, former Kotzebue City Manager

McKinnon, Mike, Chief of Planning, Southeast Region, DOT&PF

Morgan, Michael, Facilities Manager, Alaska Department of Education

Ott, Martin, Chief, Planning and Administrative Services, Northern Region, DOT&PF

Schaeffer, Pete, Director, Kotzebue IRA Council (past ten years)

Scott, Mike, Kotzebue City Manager (1986-90, 1995-present)

Skin, Glenn, Noorvik City Administrator

Tolley, John, Chief, Planning and Administrative Services, Central Region, DOT&PF

Wells, Jake, Noorvik Mayor (1995-present), City Administrator (1975)

Westlake Sr., Larry, past Mayor of Kiana, current Vice Mayor

Economic and Social Effects of the Oil Industry in Alaska 1975 to 1995

Volume 2, Part 2

Oil Industry Philanthropy in Alaska

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Introduction

A. Background and Purpose

The oil and gas industry has donated millions of dollars and its employees have worked untold amounts of time to support Alaska communities since the 1970s.

The intent of this report is to describe and analyze oil industry philanthropy statewide and on the local level. Part of the corporate responsibility of many publicly held companies includes financial and in-kind support of not-for-profit community-based programs and services where the companies operate and their employees live. This study describes the level of impact the industry has had on Alaska arts groups, social service agencies, education, youth and community programs.

The study looks at corporate giving statewide and in the Municipality of Anchorage, the Kenai Peninsula Borough, and the Northwest Arctic Borough communities of Kotzebue, Kiana, and Noorvik. These regions represent a broad range of socioeconomic environments. The Municipality of Anchorage is the headquarters of Alaska's oil industry. The Kenai Peninsula Borough has been the home of oil drilling platforms in Cook Inlet, natural gas and fertilizer plants, and oil refineries since the 1960s. The Northwest Arctic Borough is a traditional Inupiat Eskimo region along the Arctic Circle, where jobs are scarce, subsistence is a primary component of the economy, and the impact of oil development is invisible.

B. Scope of Work

This report is based on an analysis of financial data gathered from the major oil corporations operating in Alaska from 1975 through 1995, as well as interviews with key informants in the oil industry, nonprofit organizations, state and local government, and tribal entities. (See Appendix A). Case studies of recipient organizations illustrate the impact of the corporations' philanthropic giving on the nonprofit community as a whole.

The case study method is frequently used to examine contemporary events and is especially useful when quantifiable data is limited. It was clear from the outset of this research that financial contribution data would be difficult to obtain from all corporations or their foundations for the entire study period. Data from most nonprofits also would be unavailable due to the lack of standardized accounting procedures, the ever-changing management of those organizations, and the temporary nature of many nonprofits.

During the study period, BP Exploration (Alaska) Inc., ARCO Alaska, Inc. and Exxon Company, U.S.A. were the controlling owners of the trans-Alaska oil pipeline on Alaska's North Slope. Based on the size of lease holdings within the state, a total of 15 past and current oil producers were identified as significant players during the study period. The McDowell Group requested a list of charitable contributions for the 20-year period from each of the following companies:

- Alyeska Pipeline Service Co.
- Amerada Hess Corporation
- Amoco Corporation
- ARCO Foundation
- BP Exploration (Alaska) Inc., (now BP Amoco)
- Chevron Corporation
- Exxon Company, U.S.A.
- Louisiana Land and Exploration Co.
- Marathon Oil Company
- Mobil Oil Corporation
- Phillips Petroleum Company
- Shell Oil Company
- Texaco Inc.
- Union Texas Petroleum
- Unocal

McDowell Group initially contacted the director of community relations for each company, requesting:

- dollar amounts and number of nonprofit organizations receiving donations from 1975 through 1995, and

- description of the institutions and activities supported.

The financial data received by McDowell Group varied according to description and number of years reported. In addition, some companies did not answer the request, had no contributions during the 20-year period in question, or did not begin activity in Alaska until the end of the study. Amerada Hess exercised its right not to disclose any information. The corporate spokespersons who responded to the request indicated the following difficulties in releasing the information:

- the company was not required to retain reports after 10 years,
- records were archived in a location unknown to current staff,
- company mergers occurred within the study period, making records from one or the other company difficult to obtain,
- accounting practices and computer programs had changed and the information could not be accessed electronically,
- company staff would provide data only in the aggregate to ensure confidentiality, or
- the company did not have the staff available to gather the information.

McDowell Group made several attempts to obtain the data from the companies and their corporate foundations. Requests for Internal Revenue Service forms 990 PF (private foundation) tax reports proved to be a fruitless and lengthy search for the proverbial needle in a haystack. Inter-library searches of corporate and foundation directories, and annual reports resulted in little information. During the study period some companies sold their lease holdings and pulled out of the Alaska market, while others merged. For example, in 1987 BP bought Standard Oil (Sohio) outright (already owning 55 percent). Even with the assistance of Alaska's BP Exploration, McDowell Group was unable to obtain detailed information regarding Sohio's contributions to Alaska nonprofits. Only a few Sohio newsletters, found in the Anchorage BP library, were available for anecdotal descriptions of Sohio philanthropic activities. The anecdotal information is insufficient to include Sohio contributions in the database, but the company's activity is described in the report. An Alaska newspaper search proved to be quite fruitful for other stories of philanthropy.

Most nonprofit contributions were reported by recipient organization and geographic location, and category and amount of contribution. Where location of the nonprofit was not available, attempts were made to distinguish the region. The regions of study were:

- Statewide
- Southeast Alaska
- Municipality of Anchorage
- Kenai Peninsula Borough
- Prince William Sound
- Matanuska-Susitna Borough
- Fairbanks and surrounding communities
- Interior
- Western Alaska
- North Slope
- Northwest Arctic Borough

The categories used for reporting contributions differed by company, making it difficult to classify the data. For example, BP reported nonprofit contributions to Arts, Health and Social Services, Education, Civic Affairs, and Environment. ARCO Alaska, Inc. and the ARCO Foundation categorized contributions as Arts and Humanities, Community, Education, Environmental, and Public Information. Some companies reported contributions by recipient, but did not classify the gift. To standardize the data into categories, McDowell Group used the grants classification system of the Foundation Center.[1] Some classifications have been combined in this analysis into seven broad categories: Arts/Culture/Humanities, Community/Civic, Education, Environment/Wildlife, Health/Human Services, Recreation/Leisure Activities, and Youth Development. (See Appendix B for definitions of each category).

A few companies did not specify nonprofit recipients, but categorized contributions by type. This resulted in an "unspecified organization" receiving amounts of money in most of the Foundation Center categories.

It is impossible to total the amount of contributions

[1] The Foundation Center is an independent nonprofit clearinghouse for information on foundations, corporate giving, and related subjects for grant-seekers, grant-makers, researchers, policymakers, the media and general public. McDowell Group worked with the Center's San Francisco and New York libraries, its archive center at Indiana University library, as well as through the State of Alaska Library and the University of Alaska Anchorage consortium library.

from responding companies for the 20-year study period. No information was available before 1980, and only one company reported contributions at that time. The preponderance of the data is from 1988 through 1995. Where reported amounts were aggregated through 1997, contributions were averaged over the years.

All information reported by Alyeska Pipeline for the years 1982-1995 was unspecified by region and by kind of gifts. For some contributions, ARCO Alaska, Chevron and BP Exploration did not specify years and categories. The result was a large unspecified category of gifts. In addition, 44 percent of the total amount could not be designated to a particular region. Based on analysis of the remaining gifts, it is likely that most of the undesignated gifts went to Anchorage. More than 11.5 percent of the contributions could not be classified by type, but the majority probably would fall into health and human services, education and the arts, similar to those gifts that could be categorized.

Due to the limited nature and availability of data, key informant interviews were especially important to this study. Interviews were necessarily informal and exploratory, with several general questions guiding the discussions:

- What process and criteria were used to determine financial nonprofit support?
- What other types of support did the company lend to nonprofits?
- Do you have a sense of how corporate support has affected Alaska's nonprofit institutions?
- What types of programs and services did the contributions support? What were the secondary benefits? What projects, programs, productions would not have occurred without industry support?
- Have nonprofits experienced fluctuations in oil industry support? If so, how has that affected activities?
- How has Alaska's quality of life been improved by this support?
- Have Alaska nonprofits become too dependent on oil industry grants?

The study team conducted 66 interviews with key informants. Interviews with oil industry representatives helped determine the policy or process, or lack thereof, behind corporate benevolence, as well as various trends and fluctuations in giving. Interviews with nonprofit directors and board members determined the extent and impact of corporate financial or in-kind support, and a description of corporate and employee involvement in the nonprofit sector. As interview corroborated interview, the limitations of the data diminished in importance in terms of the overall story that can be told of corporate giving in Alaska. Much of the information presented here affects current philanthropy as well as past.

Some key informants preferred to remain anonymous, but allowed their comments to be used in the report. Their names are listed in Appendix B; attribution in the text is limited to their general title. Others quoted in the text gave approval to use their names.

C. Report Organization

Chapter one provides an overview of oil company philanthropy in Alaska. While any discussion of dollar amounts is necessarily limited by the quality of the corporate data, some trends are apparent. Chapters two and three discuss the recipients and trends seen in the Municipality of Anchorage and the Kenai Peninsula Borough, where industry involvement is most visible. Chapter four examines the effect of oil corporation philanthropy in the Northwest Arctic, which can best be described as indirect. Throughout each chapter, case studies provide an interesting story of the industry's relationship with Alaska nonprofits. Tables and a list of key informants are provided in the appendix.

Chapter I: Overview of Community Institutions Supported Directly by the Oil Industry

A. Introduction

Hundreds of Alaska nonprofit organizations have been the recipients of direct oil industry philanthropy since the 1970s. The amount or type of donations hinge on company philosophy, in-state profits, and/or the size of Alaska lease holdings. The corporations give cash donations, raise large amounts of money through the United Way employee match program, and make valuable in-kind donations, ranging from computer equipment to vehicles, to management and development (fund-raising) training. The largest contributors in Alaska have been ARCO Alaska, Inc. and the ARCO Foundation, giving more than half of the total reported. BP Exploration contributed about one-fourth of the total. Alyeska Pipeline Service Co. ranked a distant third, followed by Exxon U.S.A., and Chevron. All other companies contributed less than 1 percent of the total reported.

McDowell Group was unable to collect complete financial data for this report, therefore the true amount of charitable donations from the oil industry is under-represented. Trends, however, are apparent. From available information the study team constructed a database that indicates the same trends described by key informants. While this study reports dollar amounts to illustrate those trends, the reader should bear in mind that these amounts represent a fraction of the exact amount.

In the course of the McDowell Group's industry survey, Alaska's major oil and gas companies reported more than $53 million in donations between 1980 and 1995 to arts groups, social service and community organizations, youth and recreational activities, education and the environment. (See Philanthropy by Year). It is estimated that the oil and gas industry gave at least $60 million to nonprofits; perhaps as much as $80 million. More than $6.1 million, or 11.5 percent, of these donations cannot be classified by type. The total excludes contributions by individual employees under company employee-match programs such as United Way.

TABLE I.1

STATEWIDE OIL INDUSTRY PHILANTHROPY BY YEAR ($), 1980-1995

Year(s)	Total
1980	165,491
1981	118,895
1982	1,004,884
1983	1,778,063
1984	1,458,283
1985	807,984
1986	894,429
1987	981,549
1988	1,888,465
1989	5,508,700
1990	6,294,663
1991	6,219,019
1992	7,494,832
1993	7,434,434
1994	4,791,681
1995	6,214,261

More than 44 percent, or $23.4 million of the cash contributions reported to McDowell Group were unspecified by region. Nearly one-third, more than $17 million, of oil and gas philanthropy went to institutions in the Anchorage region, and it is estimated that the preponderance of unspecified donations also were to Anchorage nonprofits. As the following table shows, statewide organizations received only about 12 percent, or $6 million, and other regions garnered far less. For the most part, the corporations gave to the regions where their employees lived.

TABLE I.2

REGIONAL CONTRIBUTIONS, 1980-1995

Region	Total	Percent
Unspecified	23,444,892	44.2 %
Statewide	6,032,836	11.4 %
Anchorage	17,384,591	32.8 %
Kenai Peninsula	1,098,501	2.1 %
Southeast Alaska	1,361,432	2.6 %
Western Alaska	302,382	0.6 %
Fairbanks	2,000,754	3.8 %
Matanuska-Susitna	350,503	0.7 %
Prince William Sound	288,495	0.5 %
North Slope Borough	696,332	1.3 %
Interior	43,332	0.1 %
Northwest Arctic	51,582	0.1 %
Grand Total	**53,055,632**	**100.0 %**

In addition to a company's cash donations, oil-patch workers tend to be involved in their communities. Those who live in the Municipality of Anchorage and the Kenai Peninsula Borough are known for their volunteerism, participating in the community as members of nonprofit boards, coaching little league sports, helping at the charity of their choice. Some companies offer match programs to encourage individual employees to give time as well as money to the nonprofit of their choice. One company, for example, encourages employees to volunteer their time by promising to donate $250 to an organization if an employee works 60 or more hours for that organization. Involvement of this kind extends a corporation's influence into a community.

Some nonprofits designate at least one seat on their board of directors for the oil industry. These board members provide a pipeline to cash contributions, often lend business and management expertise, and act as an advocate and liaison for the organization. In Anchorage, the annual United Way campaign is usually chaired by a well-known oil industry executive who brings management skills, name recognition, hundreds of employee contributions and a company match, as well as a challenge to other corporations to increase their effort.

During the 1975-95 study period, total North Slope production remained high and the price per barrel varied, ranging from a low of $13.12 per barrel in 1978 to a high of $34.10 in 1981 in nominal dollars. A major oil price collapse of the mid-1980s was not consistently passed along to nonprofits. Organizations in their infancy, or those with poor management and a narrow-funding base, suffered the most or closed their doors at the time. Directors of well-established nonprofits reported more significant declines in industry support in the early 1990s, as companies restructured their Alaska operations. In 1999 as interviews were conducted for this study, benevolent dollars were steadily declining. With the price per barrel reaching an all-time low in fall 1998, nonprofit groups were expecting fewer and smaller grants from Alaska oil, at least through 1999.[2]

The preponderance of data reported here begins in 1989, the first year that contribution levels were available from BP. Using available data and interviews for previous years, certain conclusions can be drawn about charitable contributions from 1980 through 1988. Information before 1980 is strictly anecdotal, gleaned from interviews. Only Alyeska Pipeline Service Co. and the ARCO Foundation reported individual contributions by recipient before the mid-1980s. Major givers aggregated contributions by category after that time. Interviews and documentary research, therefore, became very important to analysis and interpretation.

B. Sources of Charitable Giving

Nationwide, billions of corporate dollars are given annually to charity, but comprise only a small percentage of the total support of nonprofit institutions. According to *Giving USA*, an annual report on philanthropy, individual giving is the largest source of funds collected by nonprofit organizations. In 1997, individual gifts and bequests accounted for 85 percent of an estimated total of $143.46 billion to nonprofits.[3] Corporations and corporate foundations contributed

[2] The proposed BP Amoco and ARCO merger, announced in March 1999, could result in increased financial support of community organizations by 50 percent over the combined 1999 ARCO – BP Amoco level, according to the company. Advertisement, "An open letter to all Alaskans," *Juneau Empire*, April 6, 1999, 18. Paid for by ARCO Alaska, Inc. & BP Exploration.

[3] Giving USA 1998, Arin E Kaplan, Ed., AAFRC Trust for Philanthropy.

5.7 percent of the total, compared to 4.8 percent in 1990. Other charitable foundations contributed 9.3 percent. The report indicates that corporate giving increased tenfold over 30 years and more than doubled for the same period when adjusted for inflation. *Giving USA* observes a trend toward strategic corporate support, in which corporations tie charitable gifts to programs and organizations that are related to their business. The authors of *Giving USA* also note that companies support nonprofits through marketing, public relations and advertising expenditures, in addition to charitable gifts and grants.

In Alaska, corporate donations comprise a small but important percentage of a nonprofit's budget. In only a few cases have corporate dollars become the major source of funding for an annual single program or activity. Depending on the organization, other funding sources include federal, state or municipal grants, non-corporate foundations, special fund-raising events, and individual contributions such as memberships. Until the mid- to late 1990s, the oil industry was the largest of all corporate givers in Alaska. When this began to change, ARCO Alaska, Inc. joined with the United Way of Anchorage and the Alaska Community Foundation to sponsor a series of workshops designed to help nonprofits expand their support base. As state oil revenue and direct contributions have decreased, nonprofits have been looking more to individuals for major gifts, planned giving, and endowments. As this study was underway, nonprofits were reporting an increase in corporate contributions from the telecommunications and banking sectors. [4]

C. Company Guidelines

In Alaska, oil companies have contributed most to nonprofits in communities where they have the greatest presence. One community affairs director described company policy as the "95 percent rule: It's to support community endeavors where our employees work and live." The other 5 percent may go to high-visibility programs in other communities, or programs with statewide impact. McDowell Group found that most companies reported contributions to specific locations, with the bulk of the money going to nonprofits in Anchorage, the corporate headquarters of the oil industry. Companies operating on the Kenai Peninsula funneled many of their donations to organizations there. Fairbanks and the North Slope also enjoyed support, and far less money was given to organizations in communities outside oil industry employment centers.

For many corporations, philanthropy is part of the corporate culture. It also helps foster good will in a community and promotes the company. In Alaska's young industry, policies for giving varied by company and ranged from well-defined to "politically correct" and self-serving. One former community relations director described a company's giving as "pretty much self-serving. The whole purpose was to position themselves in the community. Fortunately that also helped other people." Other companies reported large annual budgets set aside by the parent corporation to fulfill the requests of Alaska organizations.

A 1992 *Alaska Business Monthly* survey of 148 companies doing business in Alaska indicated that 92 percent gave charitable contributions because of "interest in the local community." The second reason was the "reputation of the nonprofit" (48 percent), and the third was to "enhance employee relations" (30 percent). Some companies noted that "increased visibility for their organization" was an important motivator.[5]

The survey also found that many companies did not have a clear plan for giving. As Alaska's oil industry matured, the number of requests for charitable dollars increased, while the amount available decreased. That prompted some oil companies to tighten their criteria for giving. In general, companies direct most of their grants to nonsectarian, nonpartisan, nonprofit organizations. Companies do not give money to individuals, nor for travel, and seldom for capital projects. Alaska corporations with grant-giving foundations such as ARCO, usually follow guidelines set by the corporate foundation.

Executive turnover in Alaska forced some companies to have a contributions policy, according to one community affairs director. "You've got senior management who come and go, so we have to have consistency in our giving," he said. For that company,

[4] Joy Atrops-Kimura, president, Alaska Chapter, National Society of Fundraising Executives, interview by author.

[5] Geri Shafer, "Giving in Alaska," *Alaska Business Monthly*, December 1992, p. 25-27.

corporate donations were made "to improve the quality of life in those areas" where company employees worked and lived. When prices, production and profits fell in the early 1990s, the company cut its philanthropy across the board, reducing programs equally. With declining prices and corporate layoffs in 1998 and 1999, the company described a similar strategy: an overall cut in 1999 of about 25 percent in corporate contributions and a few grants to be eliminated. Nonprofits eliminated from the recipient list were in communities where the company had little or no presence.

One corporate foundation dictated that the parent company reserve 1.5 percent to 2 percent of its yearly Alaska profits for grants within the state, based on the number of Alaska employees. The corporation was allowed annual in-state discretionary giving of at least $1 million, which went out in contributions, other support, and memberships. Sometimes corporate giving in Alaska exceeded $1 million. "They (Alaska executives) did what they wanted," said a former public relations director. "If it was something they wanted to do bad enough, they did it." An example was a $300,000 gift for an Anchorage emergency shelter. "It came straight out of Alaska operating funds" rather than designated discretionary monies, because the Alaska operation was "over the top of its $1million discretionary for that year."

The *Business Monthly* survey found that in nearly 70 percent of Alaska operations, individuals rather than committees decided which nonprofits would receive grants. About 30 percent had committees making these decisions.

Some committees review the funding requests as well as the nonprofit's mission and financial statements. If a nonprofit had a large endowment or other large funding sources, the grant request probably would be denied. According to one former committee chair, "If an organization had a $1 million endowment, we would say, 'There are greater needs.' "

Companies also used what might be called "intangible" criteria to determine support: the effectiveness of the nonprofit, its visibility, employee involvement with the organization, the level of volunteer workforce, other corporate funding, success of individual fund-raising, and the organization's collaboration with other grant-makers.[6]

D. Trends

As Alaska's oil industry grew, the nonprofit community swelled, particularly in Anchorage, where oil money was more easily available. Development directors report that some nonprofit institutions became overly dependent and did not seek other types of support.

With the boom and bust of oil, less-established organizations folded, the result of inflated budgets, poor management, or the inability to raise funds from a variety of sources.

Health and human service organizations drew 27.2 percent of the donations to all regions, more than $14.4 million. Education totaled 17.1 percent, or $9.1 million, and the arts, 14.6 percent, more than $7.7 million. Because much of the data available to McDowell Group was undetailed, it is expected that the 11.6 percent of the unspecified gifts would fall into the arts, education, and human services categories.

The following table summarizes the data collected from 1980 through 1995. The majority the donations fell between the years 1989-1995, making key informant descriptions about activity before 1989 very important. The descriptions presented in this report represent a cross-section of the nonprofit community and are critical to the analysis.

TABLE I.3

ALL REGIONS
STATEWIDE PHILANTHROPY
1980-1995*

Organization/Type	Total	Percent
Arts/Culture/Humanities	$7,736,547	14.6%
Community/Civic	6,612,395	12.5%
Education	9,077,960	17.1%
Environment/Wildlife	4,380,805	8.3%
Health/Human Services	14,432,058	27.2%

[6] Industry key informant, interview by author.

Recreation/Leisure Activities	1,576,127	3.0%
Youth Development	3,096,320	5.8%
Unspecified Type	6,143,421	11.6%
Grand Total	**$53,055,632**	

*Represents only contributions reported to McDowell Group by oil company sources

The 20 nonprofit organizations receiving the most contributions represent all nonprofit categories except community/civic and recreation/leisure activities. United Way of Anchorage, classified as health and human services, tops the list. Alaska Pacific University and the Principal's Scholarship Program, started by Sohio and continued by BP, are second and third. Due to the large amount of unnamed contributions, the largest category is unspecified.

For a few years, the Nature Conservancy of Alaska, classified as environment, received large oil industry gifts, inflating the environmental category. No other environmental organizations received major donations, although the Bird Treatment and Learning Center of Anchorage ranked 16th among all recipients.

TABLE I.4

TOP 20 NONPROFIT RECIPIENTS, 1980-1995 *

Organization	Category	Total
United Way of Anchorage	Health/Human Services	$ 4,699,190
Alaska Pacific University	Education	1,130,500
Principals' Scholarship Program	Education	836,000
Nature Conservancy of Alaska	Environment/Wildlife	825,000
Alaska Center for the Performing Arts	Arts/Culture/Humanities	701,000
KAKM	Arts/Culture/Humanities	461,404
Imaginarium	Education	451,750
Anchorage Daily News/Newspapers in Education	Education	450,000
Boys and Girls Club of Anchorage	Youth Development	448,853
Alaska Department of Fish and Game Research Fund	Environment/Wildlife	384,100
Anchorage Concert Association	Arts/Culture/Humanities	373,220
Covenant House Alaska	Health/Human Services	367,850
Anchorage Symphony Orchestra	Arts/Culture/Humanities	364,500
Salvation Army (Anchorage emergency shelter)	Health/Human Services	300,000
Bird Treatment and Learning Center	Environment/Wildlife	286,300
Junior Achievement of Alaska	Youth Development	260,310
Anchorage Opera Association	Arts/Culture/Humanities	434,750
Boys and Girls Club of the Kenai Peninsula	Youth Development	211,550
Alaska Public Radio Network	Arts/Culture/Humanities	205,700
Unspecified Organizations		24,070,342

*Represents only contributions reported to McDowell Group by oil company sources

1. The Arts

Alaska's quality of life, if described by access to the arts and humanities, improved dramatically during the oil boom years. Strong cultural programs were important to attracting employees who would be willing to stay in Alaska over the long term. One company's guidelines called for sponsoring "quality of life in key communities" where large numbers of company employees live. In the 1970s and early 1980s, oil company support of statewide arts was strong and good public relations. While the dollars have dwindled, the competition has not, nor has the process – the most visible programs generally attract the largest grants.[7]

The Alaska State Council on the Arts, created in 1966 to receive federal arts funds, facilitated the growth of local arts programs, passing along state and federal dollars. The Arts Council drew increasingly larger state grants in the early years of this study, swelling to $4.98 million (in nominal dollars) in fiscal year 1983. With more money to spend, Alaska politicians were sensitive to the arts, passing legislation that created the art in public buildings and 1 percent for art and artists in schools programs. Statewide conferences on the arts were held annually. The Alaska Repertory Theater was formed as a resident professional theater company. Many corporate dollars went directly to local nonprofits across the state to help provide extra programs, tours and performances, as well as more publicity for arts companies and oil companies.

Arts Alaska started in 1976 as a nonprofit arm of the Arts Council and later spun off as a separate entity. Support of the organization illustrates the positioning some companies were wont to do as they explored for oil along the North Slope or other parts of the state. Between 1979 and 1981, an $80,000 oil grant paid for more than two-thirds of a cultural folk dance tour of rural Alaska.[8] The Aman Folk Ensemble visited villages as small as Nuiqsut and Kaktovik on the North Slope, and other communities from Unalakleet to Kotzebue, including corporate base camps. During one tour, the ensemble's 50 dancers, live musicians and ancient instruments were flown to rural destinations in a plane provided by an oil company. A member of the Arts Alaska advance team recalls "a lot of sensitivity at the time. I got the message I needed to be careful about what I said about the industry in these Eskimo communities … We were careful we didn't get into politics. We just spoke positively that this (dance concert) would not have happened without the oil industry."

Arts Alaska managed tours of artists through 1987, called "Alaska Shows to Go." It reportedly attracted large corporate contributions annually, ranging from $5,000 to $30,000, primarily because it was a statewide organization.[9] Donations began to decline about 1985 and the board decided in 1987 to cease tours and use an Arts Alaska endowment to support local arts programs.

About 1982, Juneau's Perseverance Theater began drawing oil dollars. The community theater built a statewide reputation, in part due to oil industry grants that ranged over the years from $4,000 to $70,000. The money allowed Perseverance to take productions throughout Alaska. A statewide internship program at the theater brought in developing artists from Fairbanks, Tok, Haines, Chevak, Port Protection, Toksook Bay, and Kiana, one of the villages in this study.

A bit of censorship was attached to these grants: family plays generally drew large amounts; productions that appeared to be less mainstream or risky did not. For Perseverance Theater, the boom and bust of corporate grants was more related to executive taste than to oil prices.[10] As with many arts groups, industry contributions were important to the scope and size of Perseverance productions. Large contributions enabled the theater company to tour the state, provide support for interns and company members, and more significantly, demonstrate a strong base of support that helped attract funding from other sources.

A corporation's name, as well as its cash, is important to a cause. Major oil grants help attract funds from diverse sources, including other corporations, foundations, and government. As one

[7] Natalie Rothaus, former executive director, Juneau Arts and Humanities Council, interview.

[8] Nancy Harbor, president, Alaska Center for the Performing Art; former Arts Alaska employee; current member, Arts Alaska Board of Directors. Interview by author.

[9] Ibid.

[10] Merry Ellefson, acting production manager, Perseverance Theater, Juneau, interview by author.

professional fundraiser said, "I think of those (oil) dollars as leveraging dollars. Once you have the company logo, there's a credibility for leveraging other money." With a major grant from Alyeska Pipeline Service Co. in 1998, Perseverance Theater was able to leverage large matching grants from Fred Meyer Foundation and Dearing Films. The new money also helped unlock a substantial challenge grant from the City and Borough of Juneau.[11]

Two very popular arts festivals in Southeast Alaska – the Sitka Summer Music Festival and Juneau Jazz and Classics -- gained industry support in 1981 and 1988, respectively, and were still receiving funds in 1999. The Fairbanks Summer Arts Festival received its first oil company grant in 1983, and over the years had grants from ARCO, Alyeska, BP, Mapco (Williams), and Sohio. "They've been very loyal," said its founder, Jo Scott, who has raised hundreds of thousands of dollars in statewide support for the festival. "I get upset with people who criticize the oil industry too much. They certainly got us going."

Oil contributions to the Fairbanks festival, however, have decreased by half in recent years, with $10,000 annual gifts reduced to $5,000 by at least two companies. Industry grants comprised only about 5 percent of the festival's annual budget in the 1990s, Scott said. All three of these arts festivals attract renowned international performers, and participants and audiences from across the state. The industry gifts were just part of a broad and diverse funding base, and were important to leveraging other grants.

Over the years public radio has enjoyed corporate underwriting, but it did not always grow or shrink with the oil-driven economy. Underwriting reached a high in 1989, when four major oil companies gave grants, as large as $80,000. In 1999, the oil industry ranked among some of its smallest underwriters, although oil was still a major source of all corporate dollars. APRN has had support from ARCO Alaska, BP, Exxon, Alyeska, Chevron and Shell, and an ARCO Foundation grant. APRN's coverage of the Exxon Valdez oil spill made the statewide network unpopular with Exxon.[12] Information from Exxon and the network indicates no contributions to individual radio stations or APRN after 1989, although Exxon pledged substantial amounts to public television in Anchorage.

As oil prices crashed in the mid-1980s, even the most celebrated groups experienced a dramatic decline in funding. The Alaska Repertory Theater and Anchorage Arts Council soon went out of business, victims of the natural selection process. McDowell Group data shows the industry donated $166,500 to Alaska Repertory Theater between 1980 and 1988, and nearly $81,000 to the Anchorage Arts Council, amounts that are likely under-represented.

Depressed oil prices also signaled a loss of state government support to the arts. As oil revenues to the state decreased, the Alaska State Legislature cut programs and services. By FY 96, state general funds to the Alaska State Council on the Arts had been reduced to the minimum required to match federal grants. Where once single grants from the Arts Council reached $120,000, the largest in 1999 was $19,000. Funds for touring were practically non-existent in 1999. "Now you can't even get money to send a string quartet to Bethel," said Helen Howarth, the council's executive director.

In the early 1990s, Alaska arts groups were hit with a double whammy, as corporate priorities began to shift from arts to social services.[13] One company representative described the trend as a change in philosophy as oil profits fell: "We tried to focus more money where it would make the difference," i.e., programs that emphasized social services, education, the environment and the community. Some nonprofit directors did not believe Alaska's successful arts programs were hurt significantly by the change. Rather, patronage of the arts as a whole grew as marginal groups became healthier and access to cultural opportunities increased.

2. Social Services

The change in priorities reflected a nationwide trend in which the voice of advocacy was shifting toward education and more community-based concerns.[14] For

[11] Peter DuBois, artistic director, in newsletter to members, Perseverance Theatre, March 1, 1999.
[12] Colleen Liebert, marketing director, Alaska Public Radio Network, interview by author.

[13] "Oil companies shift priorities" by Jay Blucher, *Anchorage Daily News*, Sept. 9, 1990, p. F1.
[14] Ibid.

this report, the multitude of community-based social service, medical and mental health programs have been lumped into the health and human services category. For all years, health and human services averaged 27 percent of the industry's philanthropy statewide; education, 17 percent; and the arts, 14.6 percent. In 1989, arts and humanities received 17 percent of the corporate gifts from the oil industry; education, 18 percent; and health and human services, 22 percent. In 1992, the portion devoted to health and human services reached 32 percent, while the arts and humanities received 14 percent, and education programs, 19 percent, according to McDowell Group data.

In 1989, the largest portion of BP's and ARCO Alaska's philanthropy budgets went to social services, which ARCO called "community." Community services were to be directed toward the "disadvantaged" and to "provide accessible health care," according to a former community affairs director. Social services emphasized such areas as domestic violence and pediatric needs. Companies were beginning to look for "the root cause" of family problems, according to a company representative. In addition, "the company wanted to fund things like dental care for low-income kids, because that's the kind of stuff they were not getting." Food bank programs became popular, with money being designated for allergy prevention and diabetes nutrition programs for children.

The Food Bank of Alaska, an Anchorage-based collection agency, provides a good example of community social services. The organization distributes food to food banks throughout the state, and the local banks supply soup kitchens, shelters and other nonprofits in their region. The Food Bank of Alaska has drawn steady, although not large, support over the years. Every company reporting data to McDowell Group reported contributions to the statewide organization, as well as to local food banks. In the first three years of the 1990 decade, industry gifts to the Food Bank of Alaska averaged $30,000.

The largest social service institution in Alaska is the United Way, an umbrella agency that collects funds for local nonprofits. A strong United Way signals a healthy nonprofit sector. United Way has had widespread oil industry support throughout the years, with employee contributions matched by corporate dollars. While the agency has chapters throughout Alaska's urban areas, the oil industry generally limits its gifts to the Anchorage and Kenai chapters. Each will be discussed later in this report.

3. Education

For the latter years of the study, 1989-1995, support for education varied from 14 percent to 21 percent of the annual total of oil industry giving.

Corporate grants seemed more likely to support educational opportunities than educational facilities. The ARCO Foundation, for example, generally would not support specific researchers or their projects, individual schools, or unrestricted grants to colleges or universities. Academic programs, teacher improvement, and services to help low-income and minority students were likely to gain sponsorship on the elementary and secondary level. On the university level, minority student achievement and retention programs, and disciplines related to "earth-resources industries" such as oil, attracted foundation dollars.[15] Similarly, Unocal Foundation supported specialized areas of higher education, and Alaska Unocal guidelines recommended support of educational opportunities.[16] While other companies lacked specific guidelines, McDowell Group found that most education dollars were directed to specific programs. Scholarship programs often specified that students major in oil-industry related fields.

4. Environmental Support

The shift in giving philosophy in 1990 – from arts to social services – was in response to a "changing civic need," according to oil industry representatives. They told the *Anchorage Daily News* that companies intended to provide more support for social services and other programs, not to decrease arts or other funding. And they were careful to decry any link to specific events such as the 1989 Exxon Valdez oil spill in Prince William Sound.[17]

Environmental causes began to enjoy corporate support in the late 1980s with the "greening" of corporate America. In Alaska that heightened after the

[15] ARCO Foundation Annual Report 1993-1994, March 1995.
[16] Unocal Foundation Annual Report 1993; also Memorandum to Contributions Committee (Unocal, Anchorage), March 19, 1993.
[17] Blucher, "Oil Companies..." *Anchorage Daily News*.

oil spill. Support for these programs jumped from just over $26,000 in 1988 to $754,642 in 1990, according to McDowell Group data. Part of that increase reflects the addition in 1989 of BP contribution figures to the database, and that company's sizeable contributions to the Nature Conservancy of Alaska in 1989 and 1990. However, contributions to environmental groups by Exxon alone went from $7,000 in 1989 to a high of $77,000 in 1991. Exxon's environmental philanthropy dropped to $38,500 in 1995. For all companies, donations to environmental and wildlife causes increased from 1990 through 1995, but were still less than 8 percent for all years represented in the McDowell database.

For this report, the environment / wildlife category includes spring clean-ups, recycling projects, science centers and wildlife rehabilitation, among other things (see appendix). The Prince William Sound Science Center in Cordova was incorporated just weeks after the Exxon Valdez dumped 11 million gallons of crude in the Sound. The idea for the research center in the Sound had been in the making for months before the accident, and it quickly became the administrative home of the federally funded Prince William Sound Oil Spill Recovery Institute. Since the mid-1990s, the Exxon Valdez Oil Spill Trustees Council (EVOS) has funded about 80 percent of the Center's research programs.[18] "Science of the Sound" education programs for children, developed in cooperation with the U.S. Forest Service, have attracted oil industry dollars since 1990.[19]

The research program at the Science Center is considered a model. In its 10 years in Prince William Sound the Science Center has requested and drawn substantial support from the ARCO Foundation for its education programs. It has also received steady, though less, unrestricted support from BP. "We probably could not have run those (education) programs without that (oil money)," a Center representative told McDowell Group. Alyeska has given in-kind donations to the Center, including two trucks, "a wonderful donation to receive." Other in-kind oil-company gifts include computers and oceanographic instruments. The Center at one time requested a small grant from Exxon, but was turned down. Expecting the same, the Center has not requested additional help from Exxon.

The Nature Conservancy of Alaska, a statewide environmental program, began attracting oil dollars in the 1980s. Industry support represented about 40 percent of Nature Conservancy's fiscal year 1999 budget, although the organization expected a 25 percent cut for fiscal year 2000, due to depressed oil prices. A Conservancy representative said the Alaska arm of this national organization has been allowed to grow because of corporate contributions. The Conservancy's list of corporate sponsors for FY 1999 indicates ARCO Alaska, Alyeska Pipeline, and BP Exploration as members of the "Chairman Circle," the category for contributions reaching $10,000 or more. McDowell data indicates $835,000 in oil company donations to the Conservancy since 1989. More than 60 percent was given by BP.

Conservancy representatives describe their alliance with the oil industry as that of a partnership, instead of the adversarial relationship many environmental groups have with oil. Its board of directors includes two corporate chairs and a board member from the oil industry. Alternatively, environmental groups are generally considered to be at odds with oil companies. One corporation's guidelines describe giving to environmental organizations as "building relationships with balanced-need environmental groups," and "promoting environmental education programs." As another company's representative said, "Environment always seems to be at the low end of the spectrum" when it comes to his corporation's financial support. "We couldn't support those who are suing us all the time."

E. In-Kind Contributions

Across the state, nonprofits compete for the same pool of money, whether it be corporate, individual or

[18] The Exxon Valdez Oil Spill Trustees Council was created through federal and state mandate to manage the $900 million settlement with Exxon.

[19] Education programs include a hands-on "Discovery Room" at Prince William Sound Community College (since 1992), programs that travel to elementary schools in the region, and a summer science camp (since 1995).

government. For the period of this study the majority of the corporate money given to nonprofits came from the oil industry. In Anchorage it was easier for nonprofits to appeal to the industry due to their proximity, but as the competition got tighter, these corporations became more discriminating in doling out contributions.

Companies often look for opportunities to give away used equipment. Such donations are considered in-kind, but these become as important as cash to many nonprofits. Several nonprofit directors, when asked about company benevolence for this report, mentioned BP's computer giveaway to school districts statewide. When the company changed computer systems in 1998, it donated 1,500 computers and set up so-called teacher exploration centers in 10 districts from Ketchikan to Barrow, and Juneau's Southeast Regional Resource Center. BP joined with Lynden Transport to move the equipment, Apple Computer for guidance on developing the work-stations and technical support, and GCI for three months of free Internet service. The computers were upgraded, software and training provided. BP paid for release time for teachers to be trained to use the new technology centers. "The concept was to put together a process that got the teachers and students involved," said external affairs director Tom Gallagher. Set-up cost the company about $700,000; the entire project was worth $2 million, he said.

Other companies have given away computers, trucks, cars, and other equipment. A letter from ARCO Alaska to McDowell Group states that their cash contributions "do not begin to reflect ARCO Alaska's total community involvement. … (T)hey do not take into account the millions of dollars we have given in in-kind donations such as the 1,500 computers we donated in 1997 to schools statewide. And they do not reflect the many thousands of hours our employees have volunteered in the community…"

The former director of a community senior center said she "didn't want to go asking" for support because she knew the oil companies "get hit up all the time." The senior center often received cash and services, but it was the service she appreciated the most: clearing brush behind the facility; sweeping the parking lot; lending, setting up and taking down the tent for the annual July 4th barbecue; repairing the barbecue pit, and numerous other things senior citizens often find it hard to do. "I would far rather ask for help than money," she said.

Volunteering service, donating used equipment, and lending facilities may be solutions to continuing nonprofit support when oil prices, production and profits are down. The 1992 *Alaska Business Monthly* survey indicated that almost 50 percent of 148 Alaska companies reported company products as a form of contributions. Nearly 40 percent donated materials, 23 percent gave meeting space, and many said their employees donated general management, advertising and marketing skills. Fifty-two percent of the companies reported that employees volunteered time to nonprofits.[20] If companies support nonprofits because of their "interest in the local community," what better way to become involved than to actually participate in community activities and events.

F. Summary

Over the years, Alaska's nonprofit community has grown tremendously in part due to contributions from the oil industry. Dennis McMillan, executive director of United Way in Anchorage, described the impact of oil in terms of quality of life: "There's been massive improvement in the quality of life because of the oil industry in Alaska. So much of the state's infrastructure that makes it easy to live here is a result of the oil industry. We have a very, very strong third sector in Alaska, and wherever there's a strong third sector you find a healthy economy." That "third sector" is comprised of nonprofit groups. McMillan believes that a healthy third sector contributes to the state's overall economic stability.

Many nonprofit organizations qualify for state, municipal, and/or federal grants, and also fall under the United Way umbrella. Oil contributes to every source. As one corporate letter to McDowell Group stated, "We hope that your study of the impact of the oil and gas industry on the State of Alaska takes into consideration royalty payments and taxes paid by the

[20] Shafer, "Giving in Alaska," p. 26.

industry, both of which have contributed greatly to the economic stability of Alaska." Those payments accounted for most of the state's general fund revenue for the 20-year period of study.

Chapter II: Municipality of Anchorage

A. Introduction

More than half of Alaska's population lives within the Municipality of Anchorage and immediate area.[21] Anchorage is also the headquarters of Alaska's major industry -- oil -- and the headquarters of the state's nonprofit sector.

From the arts to the zoo, Anchorage has become a more attractive town in which to live due in part to the growth of the oil industry and its beneficence to nonprofit organizations. Oil and gas employment in 1990 averaged 6,000 industry employees in Anchorage. By 1996 that had fallen to 3,300. During the oil boom years, the city had built a large and modern infrastructure, and a cultural center seldom found in cities of this size. The boom and bust of the economy also brought Anchorage its share of social problems. The Anchorage nonprofit community became a very important part of the solution to these problems.

B. Trends

Anchorage nonprofit organizations drew the greatest number and largest amount of oil industry contributions during the 20 years of this study. Oil companies reported $17.4 million in philanthropic giving in Anchorage, more than 30 percent of the $53 million statewide total reported to McDowell Group. This total does not represent individual employee donations under the companies' employee-match programs. And as previously explained, its is a fraction of the whole amount, due to the limited figures McDowell Group was able to obtain for this study. Most of the data collected for the study begins in 1989, which is used as a benchmark for the Anchorage market.

TABLE II.1

ANCHORAGE REGION
OIL INDUSTRY PHILANTHROPY ($), 1980-1995*

Organization/Type	Total	Percentage
Arts/Culture/Humanities	$3,656,473	21.0%
Community/Civic	379,179	2.2%
Education	2,877,282	16.6%
Environment/Wildlife	1,007,480	5.8%
Health/Human Services	7,957,169	45.8%
Recreation/Leisure Activities	292,545	2.0%
Youth Development	1,214,463	7.0%
Grand Total	**$17,384,591**	

[21] In 1997, the state's population was estimated at 611,300, with 254,849 people in Anchorage, and another 53,450 in Matanuska-Susitna Borough. Alaska Department of Labor, *Alaska Population Overview*, 1997 Estimates.

*Represents only contributions reported to McDowell Group by oil company sources.

1. The Arts

Making Anchorage an inviting place to live is one reason oil companies give to arts and humanities programs. One company's arts and humanities guidelines for giving dictate that the company "sponsor quality of life in key (corporate) communities." McDowell Group data shows that the Anchorage arts, culture and humanities community captured more than $3.65 million in oil-company donations, probably far less than the actual total, but an indication that company employees value these activities. Anchorage would not be what it is without the commitment oil companies have made to the state, according to several key informants.

In the 1980s the infrastructure of the arts -- theaters, museums and a performing arts center -- were built in Anchorage, offering people alternative or additional access to cultural activities**.** Corporate dollars are seldom directed toward capital projects, but Exxon, ARCO and BP donated half a million dollars to the Anchorage Performing Arts Center's Discovery Theater -- named after the discovery of oil in Alaska. While the PAC was often criticized for construction-cost overruns and other problems, it became the stage for the Anchorage Symphony Orchestra, the Anchorage Opera, Anchorage Concert Association performances, and many other cultural events.

The major portion of the PAC's budget has come from the Municipality of Anchorage and income from renting the concert hall and theater to arts organizations. For the first few years of its existence, the PAC also enjoyed oil support for program production, but in 1995 the center ceased to produce, "not wanting to risk the financial base of the facility to put productions on stage," according to PAC president, Nancy Harbor. Now the Anchorage Concert Association and other arts company performances fill the hall. It was oil company philanthropy that helped market the PAC when the facility was one of Anchorage's biggest political problems.[22]

Since the center opened in 1988, ARCO donations have sponsored the PAC's "Ushering in the Arts" training program, saving the PAC thousands of dollars every year in training and ushering services. If the PAC or arts companies had to pay even minimum wage for ushering, it would have a major impact on budgets. Now about 350 ushers work monthly for free at all PAC and other Anchorage arts events, their pay being the opportunity to attend the performances.

The Anchorage Concert Association, established in 1950, attracts world-renowned performers to play the PAC. In the early years of the PAC, oil-company support helped import such concerts as Itzhak Perlman, the National Symphony, and the Martha Graham Dance Company. Assuming oil money could not have been replaced by other dollars, many artists might not have performed in a market the size of Anchorage. The subsidy also helped keep ticket prices affordable so more people could attend, bolstering PAC attendance. Any major contribution of $10,000 or more has a huge impact on ticket prices, according to

[22] Harbor.

Anchorage Concert Association development director, Joy Atrops-Kimura.

Audience figures increased significantly from 1988 to 1995, spiking to 58,000 in one month during the 1994 performance of *Phantom of the Opera*. While the *Phantom* had no corporate sponsorship, key informants believe it is an example of the caliber of shows that now play in Anchorage because of previous company support for acclaimed performances. As Harbor states: Only in an Alaskan city like Anchorage could one "catch a 40-pound salmon during the day and hear Itzhak Perlman in concert in the evening."

Since 1989 ARCO has helped the Anchorage Concert Association bring the *Nutcracker Ballet* to town. "Oil is critical in helping with the massive cost of getting the production" to Anchorage, Atrops-Kimura said. Busloads of children, who would otherwise not be able to attend the ballet, come to the ARCO Community Performance. Without the industry support of the ballet, the concert association could not bring the professional ballet companies to Anchorage without outrageous ticket prices.

While contributions from major oil companies have been a vital source of funding for Anchorage's established arts organizations such as the Symphony and Concert Association, smaller, younger nonprofits have often found oil money more difficult to obtain. Arts companies that did not survive the first major economic slump of 1986 - '87 failed in part because they did not have enough diversity in their funding base.[23]

McDowell Group data shows that for all years, Anchorage arts, culture and humanities programs attracted about 21 percent of the oil dollars headed for nonprofits; health and human services received nearly twice that. The arts category includes arts councils, museums, music festivals, Native culture, and public broadcasting. The most visible organizations – the Anchorage Symphony Orchestra, Anchorage Opera and the Anchorage Concert Association – garnered most of the contributions.

2. Health and Human Services

In 1997, Anchorage had more nonprofit organizations per capita than other U.S. cities of its size.[24] Health and human service organizations captured at least 46 percent of the contributions to nonprofits during the 20-year study period, twice that of the arts and almost three times more than education programs in Anchorage.

3. United Way

In any city, the United Way is one of the most visible indicators of a healthy nonprofit sector. It is also considered an excellent gauge of corporate charity.[25] The umbrella agency collects corporate and individual funds, then disburses grants to local health and human service agencies and youth programs. United Way becomes an attractive and easy way for business and government to fulfill their philanthropic responsibility. In Anchorage, it is often oil industry fund-raising that takes the agency over the top of its goal. The annual United Way campaign is generally chaired by an oil industry executive, earning individual companies and their employees plenty of media coverage, and plenty of good public relations for the industry as a whole. It's easy for oil companies to "take credit for what (they) do" during the weeks' long United Way campaign held every fall, say industry observers.

Data collected by McDowell Group shows contributions to United Way chapters in Anchorage, Kenai, Fairbanks, Valdez, and the Matanuska-Susitna Borough, communities where oil industry employees live and/or work. Several Southeast Alaska towns have United Way chapters, but it appears they received few, if any, oil industry contributions. Rural Alaska has no United Way, but some undesignated funds from the Anchorage campaign were to be sent to rural areas beginning in 1999.[26]

In United Way campaigns, employers generally match the total raised among employees. At the end of the 20-year study period, oil industry matches ranged from 50 cents given by the company for each $1 donated by employees, to $1 from the company for each employee

[23] Howarth, Harbor, and others.

[24] Jewel Jones, manager, Social Services Division, Municipality of Anchorage, interview by author.

[25] Interview, Mike Navarre, mayor, Kenai Peninsula Borough, and former member, Alaska House of Representatives, Kenai; also McMillan, Jones.

[26] McMillan.

dollar. Before the first major oil-profit slump, some companies were providing a $2 to $1 match. "Per capita, hands down, they're the most generous," said Anchorage United Way's McMillan. Even in the declining years of the 1990s, at least 25 percent of the total raised for United Way of Anchorage came from major oil corporations and the Alyeska Pipeline Service Co., he said.

Twenty-seven agencies were under the United Way umbrella in 1975. New Anchorage nonprofits got their start in the early 1980s when oil money was plentiful, then succumbed during the mid-1980s recession or were consolidated into a similar organization. By 1992, Anchorage United Way supported 38 nonprofits. That grew to 49 at the time of this study. Many of them were collaborative efforts of individual organizations with the same mission.[27]

Anchorage United Way was not as dependent on oil contributions in the late 1990s as in earlier years, but oil's impact on the agency has been significant for the 20-year period. Annual United Way goals in Anchorage often reached $6 million. Giving by all petroleum-industry sectors, including support services, increased annually from 1984 to 1992, when companies raised nearly $2.6 million of $6.1 million, almost 43 percent of the total. Industry contributions then declined, with a spurt in 1997, when industry comprised about 31 percent of the total raised. Fluctuations in industry giving were tied to company restructuring and layoff, McMillan said.

[27] Jones.

TABLE II.2
UNITED WAY OF ANCHORAGE CAMPAIGN HISTORY

Year	Total Industry Support*	Amount from Major Oil	Total Amount
1980	$900,000		
1981	970,000		
1982	1,200,000		
1983	1,320,000		
1984	1,300,000		
1985	1,540,000		$ 3,745,979
1986	1,546,000		3,672,954
1987	1,975,000		4,332,495
1988	2,523,000		5,104,639
1989	2,591,741		5,354,843
1990	2,929,741		5,948,767
1991	3,021,279		6,422,616
1992	2,600,000		6,100,000
1993	3,103,787	$ 2,509,555	6,300,000
1994	2,577,668	1,974,724	6,150,000
1995	2,507,742	1,803,636	6,050,000
1996	2,640,653	1,974,016	6,400,000
1997	3,004,833	2,174,417	7,000,000
1998	2,754,775	1,910,811	7,400,000

Source: United Way of Anchorage
*In 1993 United Way split the petroleum industry into two teams: Major Oil & Oil Support. The Amount from Major Oil indicates the amount of dollars contributed by the major production and refining companies. Total Industry Support includes oil production and refining companies as well as the service sector. Contributions from the service sector have grown since 1993.

Per capita the oil industry is considered to be the most charitable of all business and government sectors that contribute to Anchorage United Way. In the late 1980s to early 1990s, Alyeska reportedly had the highest per capita giving in the nation. In the late 1990s, ARCO and BP took that spot.[28] Anchorage oil company headquarters have been known for fund-raising duels to see which corporation could raise the most during the fall campaigns. Even during reorganizations or cutbacks, employees were challenged annually to reach deep into their pockets. Sohio's corporate newsletter, the Sohio Intercom, reported:

> "Standard Alaska employees came through again, contributing $260,000 to the 1987 United Way fund drive and easily topping SAPC's $225,000 campaign goal…Employee response was overwhelming," said SAPC United Way Chairman Joe Liska. "Despite the unsettling times of yet another reorganization – employees still gave generously to this worthwhile cause…."[29]

[28] McMillan.

[29] " Standard Alaska tops United Way,"*Sohio Intercom*, January 1986.

When contributions began to decline in the 1990s, industry leaders met with Anchorage United Way officials to warn them. ARCO and the United Way then collaborated to help nonprofits become more efficient, better utilize their boards of directors, and expand their funding base. In 1999, retail business, professional groups, and Native corporations were the fastest growing sectors contributing to the United Way. "There's been a deliberate plan, a deliberate weaning of those (oil) dollars, even though by far they're (oil) the most generous of all the donors," McMillan said.

Many United Way organizations also qualify for state funds and municipal grants, and serve as referral agencies for people who need some sort of assistance. During periods of high grants and corporate contributions, fewer people ask for government assistance because there are more private organizations to help them, according to Anchorage Social Services Manager Jewel Jones. Those who do ask are often referred to a private agency. "If those organizations are not there, the folks are still going to be at government's door," so the impact is greater on municipal social service programs when state corporate grants are reduced, Jones said.

4. Crisis Centers

Human service agencies are often popular causes, particularly family crisis centers and shelters for abused women and at-risk youth. In Anchorage, women's crisis centers have steadily received grants from the oil industry, in varying amounts. From the mid-1980s to 1995, grants to Abused Women's Aid in Crisis, Standing Together Against Rape, and the Anchorage Center for Families varied from a high of nearly $50,000 to a low of $300, according to McDowell Group data.
Covenant House Alaska, which operates shelters and programs for at-risk youth, opened in 1988 and has steadily received grants from five oil companies, from $100 to $30,000. An annual grant from one corporation allows it to run a special summer program for teens. Covenant's board of directors includes members from the oil industry. "They've listened to where the gaps are and fund them. It's not only the cash they provide at times, but the expertise," said Covenant's executive director, Diedre Pharer. The oil companies are "an important partner in the scope of making the program work."

Homeless shelters and soup kitchens such as Bean's Café have attracted steady industry dollars over the years. ARCO in 1982 donated $300,000 to help the Salvation Army purchase the McKinnell House for an emergency shelter in Anchorage. According to an Associated Press story, the contribution came at a time when the Anchorage housing crunch was "so acute that Mayor Tony Knowles is considering asking the Army to open surplus barracks to the homeless. Dozens of families are living in pickups and campers on roadside pull-offs in the area."[30]

It also came at a time when ARCO Alaska had reached the top of its $1 million in discretionary giving allotted by the ARCO Foundation. The money reportedly came straight out of ARCO Alaska's operating funds.[31]

5. Community Gifts

The Community/Civic category of gifts includes chambers of commerce, economic development, visitor's bureaus, civic clubs such as Lions and Rotary, community volunteer programs, minority groups, and business and professional groups, among others. McDowell Group data indicates $380,000 in contributions to Anchorage civic and community nonprofits, one of the smallest categories of corporate giving. One of the most prominent examples of giving within the city of Anchorage is the annual BP / YWCA Women of Achievement awards.

In its tenth year in 1999, the women's recognition awards started with a $10,000 grant from BP Exploration. Fifteen women are nominated from the greater Anchorage community and honored for excellence in their chosen business, profession or volunteer activities. For several years, BP also paid for the printing of awards ceremony invitations and programs, then stopped printing and increased the annual grant to $15,000, more than half the

[30] Associated Press, "ARCO gives $300,000 to Salvation Army," *Fairbanks Daily News-Miner*, Sept. 13 1982.
[31] Industry key informant, interview by author.

cost of the event. BP's president serves as corporate chairman of Women of Achievement. A reception for the nominees is held in the BP office building.

The YWCA opened in Anchorage in 1989. BP has "been there from the beginning," said Executive Director Sharon Richards. No other corporations have matched BP's gifts.[32] The Women of Achievement awards luncheon is the biggest fundraiser of the year. Businesses and corporations throughout the city purchase tables at the luncheon, and the number of guests averages more than 800. All proceeds go to operating expenses for other YWCA activities.

The Women of Achievement awards are an example of the importance of visible corporate support to leverage other sources of funding, according to the YWCA director: "In the world of nonprofits, if you appear to be successful that attracts other support, because you are a credible organization. Success breeds success," Richards said.

6. Education

According to McDowell Group data, the oil industry contributed more than $2.8 million to education in Anchorage, including scholarships, educational conferences, literacy programs, parents' groups, Alaska Pacific University and the University of Alaska Anchorage, community schools, vocational training, libraries, and The Imaginarium. Overall, education represented about 16.5 percent of the total benevolent dollars spent in Anchorage.

Grants to educational institutions, such as Anchorage's public schools and universities, were often restricted to particular programs, key informants said. McDowell Group data shows few dollars directed toward individual schools or districts; rather the contributions were specified for science fairs and special programs. On the university level, the data shows Alaska Pacific University received more than $1.13 million 1980 – 1992 from ARCO, BP, and Exxon. BP gave the lion's share, about 63 percent, and ARCO placed second. Some companies have taken advantage of the state's education tax credit law that allowed a tax break for gifts up to $200,000 annually to two or four-year post-secondary institutions.[33]

Contributions directed to the University of Alaska Anchorage were generally for specific one-time programs, with most of the contributions given through the University of Alaska Foundation, where corporations could designate how the money would be spent. UA Foundation annual reports show a broad range of giving, making a total impossible. ARCO Alaska and BP gave over $10,000 in 1988 through 1992, and between $5,001 to $100,000 in 1993 and 1994. BP and Exxon gave between $5,001 and $100,000 in 1995. The ARCO Foundation gave separate grants in some of those years.

[32] McDowell Group data shows no other corporate gifts to the Anchorage YWCA, although executive director Sharon Richards indicated other companies have given small grants.

[33] Corporations will receive a 50 percent Alaska tax credit for a $100,000 gift to any accredited two or four-year post secondary institution; any amount over $100,000 allows a 100 percent tax credit. The maximum tax credit is $150,000, so a corporation cannot give more than $200,000 in one year and still qualify for the tax credit.

TABLE II.3

OIL GIFTS TO UNIVERSITY OF ALASKA FOUNDATION

1987	$101 to 500	$501 to 10,000	Chancellor's Circle	
		ARCO	ARCO	
		Chevron	Chevron	
		Standard AK Production Co.	Standard AK Production Co.	
		Tesoro AK Petroleum Co.		
		Chevron U.S.A. Corp.		
		Exxon Education Foundation		

1991	$101 to 500	$501 to 10,000	10,001 and above	
		Shell Oil Co. Foundation	ARCO Alaska, Inc.	
		Tesoro Petroleum Companies, Inc.	BP America, Inc.	
		Unocal Foundation	MAPCO Alaska Petroleum, Inc.	
			Exxon Co., USA Alaska Operation	

1995	$101 to 500	$501 to 5,000	$5,001 to 10,0000	100,001 or more
		ARCO Alaska Inc	BP Exploration	Mapco Alaska
		ARCO Foundation	Exxon Company	Petroleum, Inc.
		ARCO Oil and Gas Co.		

Source: Annual Reports, University of Alaska Foundation

Corporations also directed contributions to non-school based education programs in Anchorage, including The Imaginarium. The hands-on science center opened in October 1987 as oil prices and Alaska's economy plummeted, but the discovery center was not new in terms of community commitment. The "Core Four," as the founders were called, had researched the feasibility of a discovery learning center in Anchorage and rallied broad-based support. The center was incorporated in 1985.

Anchored by the ARCO Foundation, the oil industry "more than any other industry, got The Imaginarium going," said Chris Cable, the center's director. BP joined in 1989, Exxon and Unocal in the early 1990s. Alyeska was the first sponsor of Trick of Treat Town, an alternative Halloween celebration held by The Imaginarium. According to interviews, oil service companies have also contributed to The Imaginarium. About 40 separate businesses now donate to the center, and most of those are related to the oil industry.

The Imaginarium offers educational programs companies can easily sponsor. "We're an easy sell, because we're technology based and kid-based," Cable said. Over the years ARCO has "adopted" 10 of Anchorage's poorest elementary schools, paying for The Imaginarium to take programs into the classroom "to get kids excited about science."

In addition to cash contributions, the center has enjoyed in-kind contributions from Anchorage companies. "You hear about the big checks but you don't hear about the printing, the conference rooms, the pieces of pipeline, graphics support and other services," Cable said. One oil company has donated less cash but more in-kind services. As the dollars decline, the challenge for The Imaginarium and other nonprofits will be to find ways to maintain or grow their programs. In the late 1990s, oil companies were targeting contributions more to special projects than general operating funds, and the amount of money was diminishing. "The trend is they want more accountability for the money they give and we get less

each year," Cable said. "Those contributions are there, but every year they go down a little more and a little more and a little more."

About 70 percent of The Imaginarium's budget comes from memberships, the rest from corporations, charitable foundations, and individuals. At one time 30 percent to 40 percent of operating dollars came from oil; in 1999 it was about 5 percent to 10 percent.

7. Environment / Wildlife

Alaska's long winters melt into litter in Anchorage and other urban centers. Across the state the oil companies join with community groups to clean up their towns, to the tune of several thousand dollars each year. During the study period, BP Exploration was the chief industry sponsor of the Anchorage Chamber of Commerce Clean Up, according to McDowell Group data. The company also gave a sizeable amount to the Anchorage Waterways Council for its annual creek clean up.

Spring cleanups, litter prevention, recycling and landscape projects fall into the environment / wildlife category. The Alaska Zoo, bird treatment centers, and natural resource conferences also fit this category. Environmental and wildlife programs in Anchorage drew just over $1 million during the 20-year study. The bulk of those donations did not go to groups that might want to prevent oil development at some time, but those with an agenda removed from most of the environmental issues affecting exploration and development.

The nonprofits receiving the most in this category were Alaskans for Litter Prevention and Recycling (ALPAR), the Alaska Zoo, and spring clean-ups. The Bird Treatment and Learning Center, a nonprofit that rehabilitates sick and injured wild birds, became a popular cause in the 1990s, receiving almost 33 percent of Anchorage environmental dollars, according to McDowell Group data. The bird treatment center was incorporated in 1989, just after the Exxon Valdez oil spill, but it had been a working group for a year before the accident. BTLC did not work on any oiled birds, nor receive any oil company donations until 1991, according to director Barbara Callahan.

Contributions to the center come from the ARCO Foundation and BP, which gave $50,000 each for two years to help BTLC purchase land for a Potter Marsh nature center, Callahan said.[34] The gifts represented about half of the amount needed for the land. ARCO has continued to give substantial amounts to be used as operating funds. The center has cared for about 1,100 birds each year since it opened, and reached about 28,000 people in the greater Anchorage area with its educational programs about birds in their habitat. The 1999 chairman of the BTLC board of directors was a senior biologist at ARCO.

BTLC is housed in the same building as the Alaska office of the International Bird Rescue and Research Center, of Berkeley, Calif. The international center has contracts with Alaska Clean Seas and Alyeska Pipeline to provide a regional response center in Anchorage, as part of the oil companies' oil spill contingency plans. Alyeska reportedly donated about $5,000 each year to the IBRC. The research center also has contracts for service with Alyeska.

In 1989, $62,000 was spent in Anchorage to help groups improve the environment or care for wildlife, money that was generally pledged the previous year. When companies announced in 1990 that more money would go to environmental causes, contributions increased to $239,750 the next year. An $82,000 decrease in 1992 was followed by a similar boost, then environment/wildlife corporate oil gifts fell to $68,500 in 1994, according to McDowell Group data.

8. Youth Development

Anchorage youth have reaped more than $1.2 million in oil company contributions over the years, about 7 percent of the total for the 20 years of study. The youth development category encompasses scouting and 4-H programs, Boys and Girls Clubs, Big Brothers and Big Sisters, and Civil Air Patrol, among other groups. The largest amount went to the Boys and Girls Clubs and was reportedly given by Sohio. McDowell Group was able to obtain only anecdotal information regarding Sohio's contributions in Alaska, so the company's contributions are not included in the database. (See Introduction). Sohio reportedly gave Boys and Girls clubs over $500,000 from 1979 through

[34] These amounts are not consistent with information reported to McDowell Group by ARCO and BP.

1986.[35] Even without Sohio, Boys and Girls Clubs of Alaska comprised 40 percent of the Youth Development category.[36] Scouting groups were also popular, including Cub and Boy Scouts, Brownie and Girls Scouts, and Campfire Girls. These organizations drew 33 percent of the gifts in this category. Again, the study team believes the amount of benevolence to youth groups is actually much higher. Many adults were scouts as youth, have their children involved and volunteer their time as scout leaders, so these programs tend to be popular.

The business youth organization, Junior Achievement, was the third largest attraction among Anchorage youth groups, receiving 23 percent of the $1.2 million given to Anchorage youth development organizations, according to McDowell Group data.

9. Recreation/ Leisure Activities

Anchorage youth also benefit from the numbers of recreation programs the industry has sponsored over the years. Donations to recreation and leisure activities were less than 2 percent of Anchorage philanthropy, about $293,000, McDowell Group information shows. The money helped sponsor everything from the Special Olympics to dog mushing and Charlie's Classic Cars. The category includes public schools and university athletic programs, booster clubs, little league, parks and playgrounds, fairs, and recreation programs for the disabled.

Aside from a one-time gift of $20,000 to the Anchorage Organizing Committee for the 1992 Olympics, donations in this category were generally in the $100 to $500 range. The largest gifts -- $10,000 annually between 1988 and 1995 –-went to the Alaska Sled Dog Racing Association for the Exxon Open race.

Special recreation programs for the handicapped, including the Special Olympics, Challenge Alaska and Alpine Alternatives, gained the largest block of support at 35 percent. The Foundation Center primarily codes sports activities for the mentally and physically challenged as recreation, and secondarily as human services, the category used for other programs for the disabled.[37]

Like scouting and other youth programs, recreation programs are sponsored in part because many little leagues, swim clubs, gymnastics and other teams may have oil company dads and moms as coaches, and sons and daughters as competitors. Recreation is also leisure time, and Americans are often known as armchair athletes, making the Great Alaska Shootout, hockey and baseball teams certain to attract sponsorship.

Even money from well-known oil corporations cannot guarantee the teams or athletes will win. Some gifts proved to be an embarrassment to the supporting company. Take for example, $100 to John Suter, the Iditarod poodle race. He not only lost the race but lost some of his dogs, who certainly were not bred to be racers. That gift was one the sponsoring company would just as soon forget, according to its public affairs director.

C. Summary

Between 1989 and 1995, the years that McDowell Group data is most complete, contributions to Anchorage nonprofit groups ranged from a high of $2,968,982 in 1992 to a low of $1,032,709 in 1994. The low came at a time that work forces were being reduced at the two largest companies, BP and ARCO, as well as Alyeska Pipeline. With production at Prudhoe Bay in steady decline, the face of Alaska's oil industry was once again changing.

Because McDowell Group data is incomplete for the years preceding 1989, it is impossible to paint a complete picture of Anchorage nonprofit groups' ability to weather the 1986-'87 recession. Interviews and newspaper articles indicate some nonprofits skidded to a halt during those years, as did Anchorage construction and other segments of the economy. While industry newsletters still boasted of substantial contributions, most of that money was pledged well before oil prices plunged. Sohio, for example, said it spent nearly $1 million in Alaska philanthropy in

[35] "Standard Alaska contributes $100,000 to Boys and Girls Club," *Sohio Intercom*, April 1986.

[36] Established in Anchorage in 1966 as separate organizations, the Boys Club merged with the Girls Club in 1985.

[37] Jean Johns, librarian, San Francisco Library, Foundation Center. Also, Margaret Webber executive director, Alpine Alternatives, Anchorage.

1987, much of it in Anchorage.[38] ARCO Foundation grants dropped about $80,000 statewide from 1986 to '87, with a corresponding decline in Anchorage.

Some experts in the nonprofit world considered the 1986 crash sort of a leveling-off period for nonprofits. Organizations that had a solid mission and widespread community support were able to absorb the cuts. Some nonprofits used this time as an opportunity to broaden their funding base and make changes. Companies that toured the state with grand performances stayed in Anchorage; others scaled down the size of their productions. The survivalists had well-established, well-managed and distinctive programs. Others may have offered duplicative services, been poorly managed, and/or been too reliant on oil revenue, whether from state grants or company giving. Those organizations became the victims of nonprofit natural selection.

Trends in giving in Anchorage were typical of the rest of the state from 1989-1995. The largest amounts went to health and human services, with arts, culture and humanities in second place from 1989 through 1991, when education began to draw more dollars as the industry shifted its grant- making priorities.

[38] "Standard Alaska is more 'involved' than ever," *Sohio Intercom*, February 1987.

Chapter III: Kenai Peninsula Borough

A. Introduction

Alaska's first exploratory oil well was drilled in Cook Inlet in 1898. Fifty-nine years later, Atlantic Richfield discovered oil at what became known as the Swanson River Oilfield. Union Oil Company later found a large gas field at Kalifonsky Beach and Amoco discovered the first gas offshore at Middle Ground Shoals. The first refinery in Alaska was built at Nikiski in 1962 by Chevron (Standard Oil of California). Incorporated in 1960, the Kenai Peninsula was home to Alaska's oil and gas industry long before Prudhoe Bay became the center of activity. Commercial and sport fishing, and tourism are also important mainstays of the local economy.

The names of Kenai's industry players changed during the years of this study, but included Unocal, Marathon, Phillips Petroleum, ARCO Alaska, Shell and Chevron. Tesoro-Alaska Refinery Corporation has had major impact on Kenai communities, but is not included in this study, because it does not own or operate crude well. Tesoro supplies gasoline and other petroleum products to markets throughout the state, and has some foreign exports.

At the time of the research, Marathon had shifted its focus from oil production to natural gas and owned 30 percent of the Kenai liquefied natural gas plant. Phillips owned 70 percent. Unocal had a fertilizer and a natural gas plant in the borough and oil platforms in Cook Inlet.[39] Chevron and Shell had left the region. Three independents, Anadarko Petroleum Corp., Union Texas Petroleum Corp. and Forcenergy, Inc. were the newest operators in Cook Inlet Basin.[40] Union Texas Petroleum Corp., and Forcenergy, Inc. were not part of this study.

The Alaska Department of Labor estimated the population of the Kenai Peninsula Borough in 1997 at 48,098. The cities of Kenai and Homer were the largest communities.[41] KPB's population grew 61 percent from 1980 to 1985, the oil boom years. (See Volume 2, Chapter III). From 1980 to 1995, annual employment in the oil and gas industry ranged from 1,163 in 1983 to 1,619 in 1990.[42] Kenai had high unemployment during the recession, but an overall healthy economy helped the nonprofit sector grow over the years, especially after a United Way chapter was established in the borough. Local taxation on the industry was the primary source of KPB revenue throughout the 20-year period of this study.

B. Trends

Slightly over 2 percent of the $53 million in industry philanthropy reported to McDowell Group went to the Kenai Peninsula Borough during the study period. Most of the information collected from participating companies represents only the last five years of the research, 1990 to 1995. ARCO and BP were not operating in the region during these years, but a number of employees lived in the Kenai and were involved in their communities. Their employee match contributions went to Kenai, and they used their company names when employee groups were involved in Kenai area activities. When ARCO pulled out of the region, its contributions did not seem to drop off, Kenai industry observers say.

For the companies still operating in the Kenai, corporate donations were made for the most part where company employees worked and lived – in the communities on the Peninsula. While those companies have given to many Peninsula nonprofits, McDowell Group found that communities closest to the oil rigs, refineries and gas plants -- Kenai city and Soldotna --

[39] Unocal also had lease holdings in the Kuparek and Endicott fields.
[40] Kenai Peninsula Borough Economic Development District, Inc.

[41] Kenai city population in July 1997 was estimated at 6,971; Homer at 4,126. Alaska Department of Labor, *Population Overview*, 1997 Estimates.
[42] Alaska Department of Labor statistics, reproduced in employment summary, Kenai Peninsula Borough Economic Development District.

received most of the funds. Much of the generosity was in the form of services and in-kind contributions.

Corporate philanthropy was not always purposefully designed at the smaller, local companies. Gifts were often made at the recommendation of an executive instead of a grants committee. The major guideline was that donations stay on the Peninsula. Phillips Petroleum Company, operating in the Kenai since 1968, attempted to keep all of its donations within the Peninsula, where 52 employees and their families lived. With headquarters in Anchorage and operations in the Kenai, Marathon sponsored nonprofits in both communities, although most of its workers lived in the Kenai. Unocal's administrative offices were in Anchorage and its major operations were in the Kenai region. The company insisted that contributions stay within the Kenai or greater Anchorage area. About two-thirds of the company's employees lived in the Kenai, and gave their volunteer time to local nonprofits. They wanted company contributions to stay in the communities were it would get the "most bang for the buck," said Unocal's public Affairs consultant, Roxanne Sinz. Local contributions were generally less than $1,000 and did not have to be approved by a distant corporate office. Contributions over $1,000 were made through the Unocal Foundation.[43]

Anchorage grant requests were more competitive and funding decisions were made by a committee of employees who worked at the Anchorage office. Kenai executives appeared to have more autonomy. When guidelines were adopted for local giving, funds were allocated only to individual organizations that did not get United Way support, since the company already supported the annual United Way campaigns in Kenai and Anchorage. Like other corporate donors, Unocal required that the company receive recognition for its "corporate citizenship" from the nonprofits it supported. Kenai communities were so small that the company funded the majority of requests and had little trouble gaining recognition for its assistance, according to Sinz.

[43] Memorandum, Contribution Committee Guidelines, Unocal, March 19, 1993.

TABLE III.1

KENAI PENINSULA BOROUGH PHILANTHROPY, 1980-1995*

Organization/Type	Total
Arts/Culture/Humanities	$ 36,991
Community/Civic	49,793
Education	66,402
Environment/Wildlife	178,800
Health/Human Services	506,088
Recreation/Leisure Activities	37,745
Youth Development	222,682
Grand Total	**1,098,501**

*Represents only contributions reported to McDowell Group by oil company sources.

Information from the Kenai companies was only available for the 1990s; for all companies giving to Kenai, McDowell Group was able to collect data for only 10 years. The local companies were known for their manpower and in-kind contributions, among Kenai's nonprofits. According to interviews, the oil and gas companies were very much a part of the Kenai, especially in the city of Kenai which was closer to their base of operations. Rather than be some "huge offshore industry," these companies helped create a "sense of community." They were seen by many as the backbone of the region, whose employees became personally involved in the towns in which they lived.

1. The Arts

Unlike industry benevolence statewide and in Anchorage, the arts, culture and humanities groups ranked last among Kenai area nonprofits receiving oil industry funds. Donations to the arts did not even appear in the data until 1988. For the 20-year period, arts and humanities programs received only about 3 percent of the $1.1 million in KPB philanthropy, according to data collected by the study team. Much of this was headed toward Homer, a community on the

southwestern regional side of the Peninsula that has become known as a center for the arts.

Under the umbrella of the Alaska State Council on the Arts, the Homer Arts Council was one of five local councils in Alaska with a paid director (although volunteer staff). The Council helped support and work with local arts groups, and sponsored programs of its own, including an annual concert series; the *Nutcracker Ballet*; writing, poetry, visual art and dance workshops. The Council also provided year around programs for children and scholarships to arts camps.

Most of Homer Arts Council revenue is earned through gate receipts, fund-raising, and annual memberships. Less than 10 percent comes from corporate sponsors, including ARCO and BP. Both companies have an employee match program, periodically providing the Homer council with "a nice little bonus," according to director Joy Steward. The Alaska State Council on the Arts provides 15 percent of Homer's operating budget, made possible by state revenues generated from the oil industry. Incorporated in 1975, the Homer Arts Council received annual grants from ARCO. These were cut in half in 1991, as the company was increasing grants to health and human services. Chevron also contributed regularly until it pulled out of the Peninsula, and BP made contributions beginning in 1990, Steward said. The Homer Arts Council never asked Exxon for support.

BP and ARCO also contributed to Homer's Pier One Theater. Interestingly, the McDowell data shows no contributions to the theater or council from Marathon, Phillips or Unocal, that operate 90 miles to the north. Steward finds it "harder to knock on doors when there is no office nearby" to ask for financial support. A handful of ARCO and BP employees who live in Homer and were active in the community, helped direct contributions to Homer nonprofits, she said.

Gifts from Unocal, Marathon and Phillips Petroleum were delivered to arts groups in Kenai city, closer to their operations. Information collected by McDowell Group indicates that less than $6,000 went to arts groups in the city of Kenai. The Kenai Arts and Humanities Council and the Kenai Potters Guild are all-volunteer organizations, and probably receive in-kind services as well as some small cash contributions. While few cash donations appeared in the data offered to McDowell Group by local companies, their personnel were involved in arts, often as volunteers or performers.

Both Kenai and Homer have public radio stations, but memberships were left to individual employees. Only two companies made corporate donations to the stations. It was unclear if these were actually memberships or in the form of underwriting.

Most of the money spent on arts and cultural programs in the Kenai for the 20-year period likely came in the form of grants from the Alaska State Council on the Arts, fueled by oil tax revenue. In 1985, for example, Homer was the site of hearings on the state arts council's long-range planning process. In the days of statewide arts tours, the region was often on the touring circuit. And, like many communities in Alaska, some of the towns on the Peninsula have benefitted from the state's artists in schools and art in public building's programs.

2. Health and Human Services

More than half a million dollars flowed into health and human services, including United Way, in the Kenai Peninsula during the 20-year study period. The oil and gas industry provided the most support for this type of program for all the years of philanthropic data collected by McDowell Group. ARCO and BP Exploration were the major donors to all nonprofits throughout the region, but their money was not easy to get -- nonprofits had to write formal grant requests for it. Smaller amounts of cash, equipment and volunteer services were more quickly available from companies operating on the Peninsula.

Outside of Kenai Peninsula United Way, the organization collecting the most cash was the Kenai Peninsula Food Bank, which served other nonprofits throughout the region. According to McDowell Group information, nearly 24 percent of contributions to Kenai social service groups went to the food bank, most of it from ARCO, with BP second in the running. Smaller donations came from Exxon, Unocal,

Marathon, and Tesoro. Over the years, the food bank also received used vehicles from two companies, which the agency "certainly could not have afforded," said its director, Peggy Moore.

Though cash contributions to the food bank were high compared to other social service organizations, only a small part of the food bank budget came directly from corporations. About 20 percent was from United Way, which collected large amounts every year from the oil and gas industry. Unlike many social service agencies, the food bank received no money from the state, except as reimbursement for a lunch program for low-income families. More than 30 percent of its income was from handling fees and dues paid by the organizations receiving the food.

Located in Kenai city, the food bank distributed food to about 60 organizations from Homer to Hope, including Native tribes, churches, the Salvation Army, women's shelters, children's camps, Boys and Girls Clubs, and others. Much of the food collected by the Kenai bank came from the statewide food bank in Anchorage (see chapter 3). The Kenai Peninsula Food Bank also ran a free daily soup kitchen, sometimes frequented by industry employees, who donated to the collection plate.

The food bank felt the pinch of oil company belt-tightening over the years, with deferred maintenance on the facility as a result. But the generosity of the oil and gas industry had "been absolutely critical" to the agency since its inception in 1988. The companies "played just a huge role" in what KPB nonprofits have been able to do, Moore said.

Kenai Peninsula women's shelters, senior citizen centers and hospices were also popular recipients of oil industry philanthropy. Together, these agencies received 39 percent of the dollars earmarked for health and human services. While they ranged in location from Seward to Homer, those serving the largest populations – Kenai city and Homer -- received the most. McDowell Group found that BP and ARCO distributed their support throughout the Peninsula, while local companies kept their contributions closer to their operations in the city of Kenai. These agencies also received services in lieu of cash contributions.

Some nonprofits appreciated the help as much as the cash. A former director of the Kenai Senior Center said she seldom asked for cash, knowing the Kenai oil companies were "hit up all the time." The senior center often received cash and services, and it was the service she appreciated the most: clearing brush behind the facility; sweeping the parking lot; lending, setting up and taking down the tent for the annual July 4th barbecue; repairing the barbecue pit, and numerous other things senior citizens often find it hard to do. "I would far rather ask for help than money," she said.

The senior center started in 1971 in a trailer donated by Phillips Petroleum. It served about 370 people its first year. By 1998, more than 1,220 senior citizens were visiting the center each year for meals, wellness clinics, social activities and volunteer programs. The center also offered Meals on Wheels for shut-ins. The Kenai municipal government provided the facility, vehicles, and utilities. Most of its revenue came from federal, state and municipal grants, and the United Way; direct contributions from the oil and gas industry comprised less than 10 percent. But this was a very important percentage, because it provided events that would have been difficult for the center to put on each year, such as the annual Thanksgiving dinner and Valentine's Day breakfast, and ongoing services.

About 30 miles down the road in Soldotna, the experience has been different. The Soldotna Senior Center seldom asks for contributions because of its location. In response to requests, it has received small grants from ARCO and BP, but the center is off the radar screen of local oil operators. The center does receive United Way funds.

3. Kenai Peninsula United Way

Kenai Peninsula nonprofits share the wealth of United Way campaigns in both Kenai and Anchorage. Thousands of dollars collected by the Anchorage United Way are earmarked for Kenai by oil-patch employees who choose to live on the Peninsula but work elsewhere.

A Tesoro executive started the Kenai Peninsula United Way in 1985. It is now the umbrella organization for

26 agencies, ranging from Boys and Girls Clubs to Senior citizen's centers. Kenai area oil and gas companies are one of the largest contributors to the Kenai United Way – averaging about $150,000 in contributions annually. Without industry contributions, Kenai nonprofits would be "hurting…The oil industry does a tremendous amount during United Way's six-week campaign. Even the agencies that are down on oil realize that industry giving is vital to their organization" said United Way Executive Director Helen Donahue.[44]

Campaign pledges from oil and gas companies ranged from 31 percent to 70 percent. The corporate match to employee contributions has fluctuated with the region's oil-driven economy. For example, Tesoro in 1998 reportedly paid 75 cents to each employee's $1, rather than its previous dollar per dollar match. Still, the Kenai United Way received substantial direct support from Tesoro that year. Though ARCO and BP did not have operations on the Kenai, the Kenai United Way raised sizable amounts from both companies that generally were matched dollar per dollar.

[44]Donahue was Kenai United Way director at the time of the interview for this research, but has since retired.

TABLE III.2

OIL CONTRIBUTIONS TO KENAI PENINSULA UNITED WAY

Year	Campaign Goal	Raised	Oil Company Contributions	Percent
1988	$ 260,000	$ 329,000	$ 103,563	31 %
1989	320,000	357,000	206,041	58 %
1990	350,000	408,000	283,327	69 %
1991	420,000	458,000	281,424	61 %
1993	n/a	n/a	n/a	n/a
1994	n/a	n/a	n/a	n/a
1995	n/a	n/a	303,166	n/a
1996	425,000	420,000	293,463	70 %
1997	425,000	445,000	310,295	70 %

Source: Kenai Peninsula United Way.

Local oil and gas industry employees sit on the 13-member Kenai Peninsula United Way board. Their expertise has been helpful and made fund-raising easier over the years. As liaisons to the firms, the board members make the United Way presentation to employees at the start of the annual campaign; payroll deductions have made employee contributions effortless.

The United Way is the largest agency on the Kenai Peninsula. Industry donations have allowed it to serve more Kenai nonprofits, some of which do not receive additional corporate dollars. While most of the nonprofits also get state funds, without oil contributions to United Way, the Kenai Peninsula "would have more domestic violence, more food bank recipients, more kids in trouble," Donahue said. All of the United Way agencies would be affected. As for the industry's overall impact on the Kenai: "They (oil and gas companies) bought houses, buy groceries, are Kenai's biggest employer. We would survive" but it would be tough in the Kenai without them.

4. Youth Development and Recreation

About 20 percent of total industry philanthropy on the Kenai went to Youth Development, including Boys and Girls Clubs, Cub and Boy Scouts, Brownie and Girl Scouts, Campfire Girls, 4-H clubs, and Junior Achievement. Ninety-five percent of that went to Boys and Girls Clubs, according to McDowell Group information. ARCO again led the pack, with Phillips Petroleum second. The Kenai clubs "would not have come into existence without the support of the oil companies," said Suzanne Little, the clubs' executive director. At one time 70 percent of the clubs' operating funds came from oil; in 1999, corporation dollars comprised 9.3 percent.

Most of the clubs' oil dollars were undesignated, which Little called "the best kind of money in a nonprofit world." The operating funds allowed the clubs to run after-school centers in Kenai and Seldovia for youth ages 6 to 18. The industry also maintained seats on the clubs' board of directors. Six percent of the clubs' revenue was from United Way, and other revenue

came from fund-raising activities, grants, and program fees. The club diverted a large portion of the oil dollars to scholarships for youth who could not afford the fees for the programs and sports leagues in which they wanted to participate. More than $14,000 in scholarships were provided each year.

Companies operating on the Kenai usually made contributions to youth development organizations that were close to home. As part of company policy, Unocal gave only to Kenai scout troops, 4-H, Junior Achievement and other clubs, and did not support those organizations in Anchorage where there were simply too many of them.[45] Phillips Petroleum likewise contributed only to local programs.

Recreation activities provide other examples of contributions that stay in the community. Little leagues, swim clubs, basketball camps, hockey, Special Olympics, and flyfishers, among others, drew about $38,000, or 3 percent of Kenai philanthropy, according to McDowell Group data. This category captured most support from BP Exploration, but none from ARCO. Some of BP's sponsorship appeared to be employee match gifts to favorite organizations. Unocal gave the most of the local companies, followed by Phillips and Marathon. Again, since so little data was available from Marathon before 1993, any comparison is problematic.

5. Education and Community

Six percent of industry contributions in the Kenai went toward education. Almost half the education contributions went to the Kenai Peninsula School District and individual schools. While the scales appear tipped toward ARCO and BP, due to one large ARCO gift to the University of Alaska at Kenai and some large BP contributions, Unocal's donations showed the commitment the company has made to keep its dollars on the Kenai Peninsula.

Community and civic organizations captured 5 percent of nonprofit gifts, nearly all from local companies. Chambers of commerce, salmon derbies, the Elks and other fraternal orders make up this category, among other groups. Just under $50,000 went to these nonprofits between 1989 and 1995, according to McDowell Group information.

6. Environment/Wildlife

One large $150,000 gift to the Kenai River Conservancy project so skewed the environment category that it ranked third on the philanthropy scale. All other donations to Kenai environmental organizations totaled $28,800 over a 10-year period. Land trusts, natural history societies, Trout and Ducks Unlimited, and Kenai River habitat projects rounded out the list. Though areas of the Kenai were affected by the Exxon Valdez oil spill, the McDowell study team found just one Exxon contribution to this category, a gift to the Homer Society of Natural History.

C. Summary

With about 8 percent of Alaska's population, the Kenai Peninsula Borough received an estimated 2 percent of the industry's contributions to Alaska nonprofits. ARCO and BP continued to be the largest givers, though neither had holdings in the region for the latter part of the study period. BP and ARCO employees who lived in the region were instrumental in diverting dollars to their favorite hometown nonprofits. Local companies – Unocal, Phillips Petroleum, and Marathon – supported Kenai nonprofits through cash and services. Their employees were also very active in the community, particularly the city of Kenai. Growth in the KPB nonprofit sector "would have to be as a result of oil, because a lot of people who support nonprofits work for oil or have some connection and their contributions have helped the expansion of services," said KPB Mayor Mike Navarre.

Soldotna Rep. Gary Davis believed that some Kenai nonprofits would not be in existence without seed money from oil and gas companies. "When it was realized that large donations might be available, people started working to get the programs off the ground," he said.

[45] Roxanne Sinz, public affair consultant, Unocal . Interview by author.

As in Anchorage, the Kenai companies are often the first to be asked by nonprofits for financial assistance and volunteers, but "they've been there for them," Davis said. If company contributions and services were to dry up, he said, most of the nonprofit agencies would not operate as well.

It's worked both ways. Giving money and time to nonprofits has been good public relations for the oil and gas companies operating in the region. "(P)eople realize they're part of the community and not here to take the oil and run," Davis said.

Navarre, a long-time Kenai legislator who was elected KPB mayor in 1996, put it this way: The oil and gas business is "not viewed as Big Oil in Kenai. The people who work for these companies live in the communities, they go to the churches, volunteer for the nonprofits, coach little league. (Oil company) employees are a big part of the community."

Chapter IV: Northwest Arctic Borough

A. Introduction

Cut by the Arctic Circle, the Northwest Arctic Borough is home to less than 7,000 people; most, Inupiat Eskimo.[46] Kotzebue is the regional center and the largest of 11 villages, with nearly 3,000 residents. About 10 people live in Candle, a remnant of a bygone mining days.

The Inupiat here were incorporated into the NANA Regional Corporation in 1971 under the Alaska Native Claims Settlement Act. Many of the Inupiat people straddle two cultures: the traditional, subsistence Eskimo culture that depends on the land and its bounty, and the Western consumer economy that depends on cash, commerce, and jobs. The Northwest Arctic is the second largest borough in the state, spread out over 36,000 square miles. State economists describe this vast region as "one of the most economically and culturally unified political subdivisions in the state."[47] No other borough has a larger concentration of Native Alaskans. The Northwest Arctic also has higher unemployment and lower incomes than most of the rest of the state. The public sector -- government and the school district -- is the largest employer in the region; Maniilaq Association, a regional nonprofit social service agency, is the second largest employer. NANA is the fastest growing private-sector employer, and accounts for one in five jobs in the borough.

Zinc, not oil and gas, leads the mining industry here. The Red Dog Mine, a joint venture between NANA and Cominco Alaska, Inc. is the world's largest zinc concentrate producer. The Red Dog is the single largest employer in the Northwest Arctic Borough; a majority of its employees are NANA shareholders. Most of the work force is on a two-week schedule at the mine, with one week off.

Three Northwest Arctic villages were included in this study of philanthropic giving: Kotzebue, Noorvik and Kiana. Noorvik, on the bluff of the Kobuk River, was incorporated as a second class city in 1964. Just under 600 people lived in Noorvik in 1998; its population was 531 in 1990. Kiana, incorporated in 1969, was smaller, having grown from 385 in 1990 to 402 in 1998. In communities outside Kotzebue, few opportunities exist for full-time employment. In Kiana and Noorvik, work was limited to a few jobs in the local school, city government, the local store, or Maniilaq Association. A few workers commuted to Red Dog.

Oil industry employment in the region was generally limited to support services run by NANA Regional Corporation's business ventures on the North Slope and in Anchorage. The corporation employed some shareholders from Northwest Arctic villages that travel to the Prudhoe Bay sites on a two-week on / off work schedule.

The private-sector economy in the Northwest Arctic Borough was growing, but the region's third-sector (nonprofit) economy was tiny compared to other parts of the state. Maniilaq Association was the largest nonprofit, providing services across the region that in urban communities would be the business of several nonprofits. Other nonprofits were connected to NANA.

If this philanthropic study included gifts from the entire mining industry, most contributions to the Northwest Arctic would come from the Red Dog Mine, according to McDowell Group interviews. Industry support in the NANA region comes from the Cominco-operated mine, and there is little from oil. But state oil revenue made it easier to build the Red Dog Mine. The State of Alaska, through the Alaska Industrial

[46] Alaska Department of Labor,*Alaska Economic Trends*, January 1998.
[47] Ibid.

Development and Export Authority, authorized the issuance of over $103 million in bonds to build a road and port facility at the mine site. A new fund was created within AIDEA to support the building of the road and port project. Due to Alaska's oil wealth and its excellent rating on the bond market, the bonds were relatively easy to issue.[48]

The oil industry reported $51,582 in contributions to the Northwest Arctic Borough for the years 1985 to 1995, about .1 percent of statewide total. While oil industry gifts to the region are likely under-represented due to limitations of the data collected for this study, interviews indicate very few oil dollars were channeled here. The borough simply was "not on their radar screen."[49]

B. Trends

When Maniilaq's Tiepelman was asked about oil industry giving in the Northwest Arctic, he said, "That's pretty easy. We didn't get anything."

Only 15 contributions appear in the McDowell Group's total of $51,582 philanthropy to the Northwest Arctic Borough. Exxon was the most consistent contributor to Maniilaq Association between 1989 and 1993. Maniilaq is the primary social service provider for the Northwest Arctic, conducting both in- and out-patient alcohol and drug abuse programs and public health nursing in Kotzebue and the villages. It also runs a facility for the developmentally disabled, a women's crisis center, and the Kotzebue Senior Center. Maniilaq operates the Kotzebue Regional Hospital on contract with the Indian Health Service. Primarily funded by state and federal grants, Maniilaq Association's annual budget is about $34 million.
Grants from Exxon were used to fill a gap in the Kotzebue Senior Center's state funds for elders' home care, including hot meals and other services that allow elders to live in their home as long as possible.[50] Both BP Exploration and Exxon contributed scholarship monies to the Robert 'Aqqaluq' Newlin Sr. Memorial Trust, a NANA Crop. nonprofit. Two contributions in the arts and culture category went to the NANA Museum of the Arctic in Kotzebue, and a third to KOTZ-FM public radio, which serves the region. Three donations went to community programs in Kotzebue. None of the grant money was directed at activities or programs in Kiana or Noorvik, although the villages could benefit from borough-wide grants to Maniilaq, the radio station, or for college scholarships.

[48] Valerie Walker, Deputy Director, Finance, AIDEA.
[49] Interview, Dennis Tiepelman, director, Maniilaq Association
[50] Marie Greene, former director, Maniilaq Association; currently NANA Regional Corp., interview by author.

TABLE IV.1

CONTRIBUTIONS TO NORTHWEST ARCTIC BOROUGH, 1990-1995*

Year	Organization	Category	Amount
1990	KOTZ-AM	Arts/Culture/Humanities	7,500
1995	Kotzebue Alumni Association	Community/Civic	500
1989	Kotzebue Trade Fair	Community/Civic	1,000
1990	Kotzebue Trade Fair	Community/Civic	1,000
1989	Maniilaq Association	Health/Human Services	4,000
1990	Maniilaq Association	Health/Human Services	4,000
1991	Maniilaq Association	Health/Human Services	4,000
1992	Maniilaq Association	Health/Human Services	2,000
1993	Maniilaq Association	Health/Human Services	2,000
1995	NANA Foundation	Education	15,000
1989	NANA Museum of the Arctic	Arts/Culture/Humanities	2,000
1990	NANA Museum of the Arctic	Arts/Culture/Humanities	2,000
1993	Robert 'Aqqaluq' Newlin Sr. Memorial Trust	Education	2,000
1994	Robert 'Aqqaluq' Newlin Sr. Memorial Trust	Education	2,000
1995	Robert 'Aqqaluq' Newlin Sr. Memorial Trust	Education	2,000

*Represents only contributions reported to McDowell Group by oil company sources.

Newspaper articles and key informants indicate other benefits to the Northwest Arctic from oil industry gifts. Key informants recalled that Exxon helped sponsor a reindeer research trip to Russia when the region was acquiring reindeer herds. In the 1970s, NANA held an oil and gas agreement with Chevron, which required Chevron to donate money to NANA scholarships. Since then, many of the agreements NANA has put together with industry were set up to require some sort of corporate donation.[51]

In the early 1980s, a statewide Alaska Public Radio Network program called "Neighbors" was underwritten by BP, with some segments produced at KOTZ. The station, however, never realized any contributions for its work. Northwest Arctic athletes realized some benefits from ARCO, when in 1984,it was a prime sponsor of Heartbeats of Alaska, the Eskimo game and dance competition. Northwest Arctic youth also participated in the ARCO Jesse Owens games held annually in Kotzebue, Anchorage, Fairbanks and Nome. Some athletes went on to compete in the national games in Los Angeles, for the national competition courtesy of ARCO Alaska. ARCO canceled the games indefinitely in 1994.

Northwest Arctic students attending the University of Alaska Fairbanks find the NANA House on campus a comfortable bit of home. One key informant recalled some contributions to NANA House, a place where students can go for Native food and camaraderie. Other educational dollars began flowing n the late-1990s from Alyeska Pipeline Service Co. to the Kotzebue IRA for scholarships to students wanting to study in oil-related fields. The NANA Corporation's Aqqaluq Trust also gets scholarship funds from Alyeska with the same caveat.

Since 1996, ARCO and Exxon have supported the Aqqaluq Trust's Camp Sivunniugvik – an Inupiaq culture summer camp for youth about 25 miles outside Kotzebue. Exxon also has contributed to the summer jobs program sponsored by the Aqqaluq Trust. BP

[51] Pete Schaeffer, president, Kotzebue IRA, interview by author.

Exploration has donated some funds, but the Trust has not been aggressive in finding corporate contributions. Only about 2 percent of the Trust's support comes from oil, and while the money is appreciated, it has had little effect on programs funded by the Trust, according to its director.

Community leaders say the major benefits from oil are indirect. The region benefits from state grants such as municipal assistance and revenue sharing, and NANA Corporation's partnerships with oil production and support companies that provide jobs and profits for shareholders. NANA shares its profits from these ventures in annual dividends.

Pete Schaeffer, president of the Kotzebue IRA, put it this way: "For the most part, we're a ways away from the pipeline."

Oil industry giving to rural nonprofit organizations has primarily been confined to the pipeline corridor, starting at the North Slope. Nonprofit associations closer to the wellhead were the recipients of nearly $700,000 in charitable giving, 1.3 percent of the statewide total. The actual amount that went to these North Slope Inupiat Eskimo villages was likely much larger than the data indicates.

Oil drilling in Prudhoe Bay was underway long before any contributions to the North Slope appear in the McDowell Group database. The first $45,000 went to the Alaska Anthropological Association in 1985 for an archeological dig on Pingok Island. But in the late '70s, statewide arts groups were touring the North Slope, courtesy of oil companies anxious for good relations with the Eskimo people most closely affected by exploration and extraction. Since that time, village Inupiat dance groups, choirs, North Slope schools, sports teams, public radio, the Mothers' Club of Barrow and many others have received annual donations.

Some contributions to North Slope nonprofits indirectly benefit the Northwest Arctic. Examples include grants to the Inuit Circumpolar Conference and the Alaska Eskimo Whaling Commission, with members from the Northwest Arctic. These Native organizations rally political advocacy throughout the Arctic region, lobbying on federal and state issues on subsistence, language, Native policy, and environmental issues stemming from oil company exploration and drilling in Native regions.

Other indirect contributions include the World Eskimo Indian Olympics. BP Exploration helped sponsor the games in Fairbanks from 1989 – 1995, in which Northwest Arctic athletes participated.

C. Noorvik and Kiana

Most of the money to the Northwest Arctic flows through NANA Corporation or other regional entities and filters down to the communities. There have been few or no direct contributions to Noorvik and Kiana. Key informants ranging from city managers to school secretaries recalled no oil industry contributions of any kind to these small communities. Money did not pass through the city or the schools. Even traveling basketball teams went without oil company sponsorship. But small rural Eskimo villages are not likely to have organized nonprofits clamoring for cash donations. Even where agencies do exist, sophisticated fund-raising activities do not.

The Noorvik Native Community, the only nonprofit in the village at the time of this research, received a grant from ARCO in 1998. The money was used to match funds from the Alaska Department of Commerce and Economic Development for a summer youth employment program. Council leaders applied for the funds when they received a letter from the company stating that tribal grants were available. Their success spurred them to try for a 1999 grant. Before the letter, the "tribe wasn't really given an opportunity" to apply for oil industry grants, according to its manager. In truth, the tribe didn't realize such funds were available.

The common reply when Kiana key informants were asked about oil company contributions: "I haven't heard of any." Villagers were not aware of the sophisticated world of grantsmanship. As Willie Hensley, former NANA Regional Corp. president, said: "It takes a lot of aggressiveness on the part of a village to go after it (oil money). They don't even know how."

Though the Kiana Traditional Council also ran a summer youth employment program, it received only a state grant; the possibility of corporate grants seemed farfetched. Some Kiana students may have received scholarships. A key informant recalled that at least one student won a college scholarship funded in part by an oil company.

D. Summary

The Northwest Arctic is not without its own oil production potential. Several companies bid for Chukchi Sea oil leases, but met with resistance from many Inupiats who did not want drilling in the region. Despite the economic impact oil production could have, they opposed drilling, concerned about the impact it would have on the environment, marine mammals, subsistence, and their culture. During this time a succession of public relations advertising appeared in the *Arctic Sounder*, the local newspaper. Most of the ads were paid for by the Alaska Oil and Gas Association. The study team, however, found no evidence of increased grant making.

Over the years several companies, including Chevron, Shell Western, and Texaco, explored the region. Some scholarship funds grew out of agreements between Chevron and local entities, and a few workers volunteered at KOTZ public radio. Shell Western reportedly did little to promote itself. According to key informants, the company leased office space but never used it, and hired a few people locally as expediters. Once company officials took a group of residents to the platform. Shell Western "was in and out of Kotzebue, and not around very long," said one informant. Long enough to gather opposition but not long enough to turn on the spigot of generosity.

The Northwest Arctic Borough is too far off the beaten path to attract many contributions. Most here believe oil companies "don't figure they're going to get any marketing or PR out of it," so they send their gifts to Alaska's urban centers and the North Slope, where more people are likely to see the effect of Big Oil.

Since the pipeline days, the NANA Corporation has actively pursued contracts with the oil industry. But these have not resulted in cash contributions to NANA villages or their nonprofits. Rather, the agreements have "translated into employment. It's provided a livelihood for a lot or people," Hensley said. NANA subsidiaries, the Red Dog Mine, and NANA partnerships accounted for about 2,000 direct jobs and another 1,000 secondary jobs in 1996, according to McDowell Group research. Some shareholders that live in the Northwest Arctic Borough have worked in these jobs, but the greatest benefit has probably been in shareholder dividends. Between 1990 and 1998, $12.4 million in dividends were distributed to shareholders living in the NANA region.[52]

While direct grants have been minimal, oil has improved the quality of life in the Northwest Arctic. Villages now have schools, thanks to the state's oil revenue. State and federal funds have helped build water and sewer systems in some communities. Electricity, telephone, even television were all brought to the villages when state government coffers were bulging. Village power rates are subsidized. Residents receive Permanent Fund Dividend checks and larger NANA dividends.

As production waned, profits fell and Alaska oil companies restructured, state funds to rural Alaska have decreased and the Northwest Arctic will feel some pinch. Key informants do not tie the Borough's economy to oil; they say the Red Dog Mine will have a greater effect. Like many Alaska Natives in rural Alaska, the residents of the Northwest Arctic were more concerned about the bounty of the land and survival of the subsistence lifestyle and culture, than the bounty that could come from oil industry philanthropy.

[52] McDowell Group, *The Economic Impacts of NANA Regional Corporation,* May 1998.

Summary: Oil Industry Philanthropy in Alaska

Despite extensive efforts to quantify oil company philanthropy throughout the 20-year study period, complete data was not obtainable for most years. Records supplied by the oil companies specifically reference $53 million in grants spread over the years of 1980 to 1995. A little more than half of this amount can be associated with specific grants. (See Appendix A). The remainder was reported by the companies in aggregated form, either grouped by type of grant (arts, education, etc.) or, in some cases, simply as a lump sum covering a period of years. Although these limitations are significant, the study team believes that the information available gives a good indication of the types, sizes and regional distribution of grants made by Alaska oil companies during the 20-year study period.

The State of Alaska reaped $62 billion in revenues from 1978 to 1995 from oil that was worth $300 billion in 1995 dollars. From 1975 to 1995, the oil and gas industry gave at least $60 million and perhaps as much as $80 million to the charities and nonprofit institutions that helped improve the humanitarian and cultural quality of Alaskans' lives.

During the period of oil development, oil company approaches to philanthropy in Alaska changed and evolved. Fluctuations in the overall amount of giving roughly follow the fortunes of the industry worldwide. However, trends also reflect evolving philanthropic strategies that saw less money distributed at the discretion of individuals and more to meet corporate priorities. Finally, growth in Alaska's nonprofit sector created pressure to stretch philanthropic dollars.

To an extent, corporate giving reflects corporate culture. Alaska's oil companies have been part of a national trend toward more and more sophisticated grant-making. While the desire to be a good neighbor remains a significant motivation for corporate donations, more and more companies recognize that philanthropy may also be a means to an end. Philanthropic strategies have implications for human resources, marketing, governmental affairs and other corporate operating departments. In the words of a Lockheed Corporation executive, "Giving money wisely is as hard as making it." Alaska's oil companies have been faced with thousands of requests over the years for a bit of their cash; their decisions have become big business. [53]

Oil company philanthropy looms particularly large in Alaska. Unlike many regions of the country, Alaska's industrial sector is primarily resource-based. Industries such as financial services, pharmaceuticals and consumer products, which have had a large charitable impact on other states, are relatively unknown here. Further, the large private foundations such as the Ford Foundation, the MacArthur Foundation and the Pew Charitable Trusts are not particularly active in Alaska. Elsewhere, private foundations have had more effect on the types of social programs undertaken by the nonprofit community.

Over the years, nonprofit organizations turned oil company donations into a huge range of social benefits. For many of these organizations, changes in support levels have created challenges, but most acknowledge that funding uncertainties are a fact of nonprofit life. While some organizations were unable to adapt to decreases in oil company support, many others were able to diversify their funding and become stronger.

Study data indicates that charitable contributions were likely lower for several years after the 1985 drop in world oil markets. However, data is too incomplete to draw firm conclusions. ARCO restructured its charitable foundation in 1984-85, reducing staff and cutting grant-making by approximately 50 percent nationally. During the same period, the number of ARCO employees fell by 46 percent. Some grant funds were not lost, but reallocated from the foundation to local corporate headquarters in ARCO's

[53] Shafer, "Giving in Alaska," p. 25.

major areas of business, including Alaska.[54] Alaska grants from the foundation dropped from $1.2 million in 1984 to $0.6 million in 1985. Unfortunately, the amount of grants made directly by the corporation is not available prior to 1989.

BP Exploration was also unable to supply grant data prior to 1989. However, a company spokesperson estimated that grants during the mid-1980s remained steady at approximately 1989 levels. Alyeska Pipeline grants fell slightly from 1984 to 1985, then began rising steadily until 1993, when they fell again.

It is possible that perceptions of a drop in oil company philanthropy are mainly a result of the ARCO restructuring. ARCO Alaska and the ARCO Foundation represent nearly 55 percent of the documented Alaska grants made between 1975 and 1995. BP Exploration added another 25 percent. So when we speak broadly of the impact of oil industry philanthropy, particularly in the second half of the study period, most of that impact comes from just two companies.

Social services, education, and the arts and humanities have been the most popular grant-supported causes. The most prominent institutions often got the biggest grants, and the state's urban centers received the most funding by far. Oil companies tended to give where their employees worked and lived. They actively encouraged those employees to leverage company dollars through their own donations and volunteerism. Those regions that were "a ways away from the pipeline" went largely unnoticed.[55]

As oil production declined, there was a movement to wean those organizations most dependent on industry support. This was particularly true in Anchorage. ARCO, the largest grant-maker, joined with the most successful recipient, United Way, to work with other nonprofits on ways to improve their support from all public and private sectors. As declining production and the current wave of oil industry mergers take us into the next century, community involvement strategies and budgets are likely to continue to change.

Ironically, the study team found some companies reluctant to talk about their good deeds. As noted, the team estimates that contributions documented during the study represent only about two-thirds of the amount actually given. In some cases this was due to lack of records and/or manpower to retrieve the information. In others, the study team suspects that companies preferred not to have their philanthropic activities tracked next to those of other companies, nor their various grantees comparing notes on who gets what. While foundations are legally required to make their grants public, corporations are not. The McDowell Group is grateful to all the companies that provided information for this study.

[54] Atlantic Richfield Foundation Annual Report, 1985.
[55] Schaeffer.

Appendix A

Nonprofit Agency Categories and Regions of Study

Nonprofit Agency Categories and Regions of Study

Each company used different categories for reporting their contributions, making it necessary to standardize the types of nonprofit agencies receiving the funds. To do that, McDowell Group adopted The Foundation Center's grants classification system. The Foundation Center is an independent nonprofit clearinghouse for information on foundations, corporate giving, and related subjects for grant-seekers, grant-makers, researchers, policymakers, the media and general public. The study team worked with the Center's San Francisco and New York libraries, its archive center at Indiana University library, as well as through the State of Alaska Library and the University of Alaska Anchorage consortium library.

Some classifications were combined in this analysis into seven broad categories. The following categories represent the majority of nonprofit agencies that received funds from the Alaska oil companies participating in this research.

Arts/Culture/Humanities:

- Alaska anthropological association
- Archeology digs
- Art and music festivals
- Arts councils
- Choirs
- Dance Groups
- Language
- Museums
- Native elders and youth programs
- Opera groups
- Public radio and TV
- Symphony, concert associations
- Theatres
- Writers' contests

Community/social action:

- Alumni Association parties
- American Veterans organizations
- Chambers of Commerce
- Community business programs
- Community Economic Development Councils
- Golf tournaments / salmon derbies
- Lions, Rotary, Junior League, etc.
- Low-income housing improvement projects
- Martin Luther King Jr. programs
- Non crisis women's programs
- Non-specific contributions to boroughs, communities
- Non-specific contributions to minority groups
- Non-specific contributions to Native groups
- Non-specific contributions to professional organizations, including Black Engineers, Women Engineers, Geophysicists, Petroleum Engineers
- Visitors bureaus
- Volunteer awards
- Volunteer programs
- Women's achievement awards

Education:

- Child development
- Community colleges
- Community schools
- Friends/ foundations for libraries
- Job and vocational training
- Libraries
- Literacy
- Public school contributions
- Scholarship programs
- Special education
- University contributions (unless designated for non-educational use)

Environment/Wildlife:

- Arctic data information center
- Arctic pollution conferences
- Bird care
- Bird research
- Community clean-ups
- Conservation groups, including Nature Conservancy, Trout and Ducks Unlimited
- Fish and game research
- Hazardous waste conferences
- Landscaping
- Litter-free programs / recycling
- Zoos

Health/Human Services:

- Children's advocates
- Crisis centers/ crisis hotlines
- Day care
- Family service programs
- Food banks
- Food kitchens/shelters for homeless
- Foster parent programs
- Health centers

Hospice/home cares
Mental health programs
Missions
Rape/Physical abuse counseling programs

Health/Human Services, cont'd:

Salvation Army
Search and rescue
Senior citizen programs
Special needs day care
Substance abuse programs
Toys for Tots
United Way
Volunteers of America
Women's shelters
YMCA/YWCA

Recreation:

Amateur sports leagues
Athletic associations
Athletic Booster Clubs
Camping
Chess clubs
Community recreation centers
Fairs, Fair associations
Parks and playgrounds
Public school athletic programs
Semi-professional sports
Sled Dog races
Special Olympics
Swimming pools
University athletic programs

Youth Development:

Big Brothers/Big Sisters
Boys and Girls Clubs
Boys and Girls scouting programs
Civil Air Patrol
Future Farmers/Future Homemakers
4-H programs
Junior Achievement /Youth business programs
Youth Centers
Youth for Christ

REGIONS OF STUDY

Most of the contributions were reported by recipient organization and geographic location. Where location was not available, attempts were made to distinguish the region. The regions of study were:

1. Statewide
2. Municipality of Anchorage
3. Kenai Peninsula Borough
4. Southeast Alaska
5. Western Alaska
6. Fairbanks and surrounding communities
7. Matanuska-Susitna Borough
8. Prince William Sound
9. North Slope
10. Interior
11. Northwest Arctic Borough

Appendix B

Nonprofit Recipients

REGIONAL CONTRIBUTIONS, 1980-1995
SUM OF AMOUNT ($)

Region	Total	Percent
Unspecified	$ 23,444,892	44.2 %
Statewide	6,032,836	11.4 %
Anchorage	17,384,591	32.8 %
Kenai Peninsula	1,098,501	2.1 %
Southeast Alaska	1,361,432	2.6 %
Western Alaska	302,382	0.6 %
Fairbanks	2,000,754	3.8 %
Matanuska-Susitna	350,503	0.7 %
Prince William Sound	288,495	0.5 %
North Slope Borough	696,332	1.3 %
Interior	43,332	0.1 %
Northwest Arctic	51,582	0.1 %
Grand Total	**$ 53,055,632**	**100.0 %**

ALL REGIONS, 1980-1995
SUM OF AMOUNT ($)

Organization/Type	Total	Percent
Arts/Culture/Humanities	$ 7,736,547	14.6 %
Community/Civic	6,612,395	12.5 %
Education	9,077,960	17.1 %
Environment/Wildlife	4,380,805	8.3 %
Health/Human Services	14,432,058	27.2 %
Recreation/Leisure Activities	1,576,127	3.0 %
Youth Development	3,096,320	5.8 %
Unspecified Type	6,143,421	11.6 %
Grand Total	**$ 53,055,632**	**100.0 %**

Appendix C

Key Informants

Key Informants

Adams, Al, member, Alaska State Senate, Kotzebue.

Alfred-Troiano, Julie, Director, Leadership Anchorage; former president, Alaska Association of Fundraising Executives, Alaska chapter, Anchorage.

Anderson, Scott, former Director of Development, Nature Conservancy of Alaska.

Athen, Linda, Alaska Cooperative Extension, University of Alaska Fairbanks, Kenai Peninsula District.

Atrops-Kimura, Joy, Development Director, Alaska Concert Association; president, National Society of Fundraising Executives.

Bird, Nancy, Vice President, Prince William Sound Science Center, Cordova.

Blair, Dick, Director of Personnel, Northwest Arctic School District.

Brower, Ronald, Inuit Circumpolar Conference, Barrow.

Cable, Chris, Executive Director, The Imaginarium, Anchorage.

Callahan, Barbara, Nature Center Coordinator, Bird Treatment and Learning Center, Anchorage.

Campbell, Janice, Exxon Company U.S.A., Anchorage.

Curtis, Mrs. Charlie, Kiana.

Davis, Gary, member, Alaska State House of Representatives, Soldotna.

Donahue, Helen, Executive Director, Kenai Peninsula United Way.

Ellefson, Merry, Producing Director, Perseverance Theatre, Juneau.

Fena, Janet, Director, Soldotna Senior Citizens, Inc.

Gallagher, Tom, Assistant Director, External Affairs, BP Amoco.

Greene, Marie, Executive Vice President of Administration, NANA Regional Corp.

Hale, Ann, Development Director, Alaska Center for the Performing Arts, Anchorage.

Harbor, Nancy, President, COO, Alaska Center for the Performing Arts, Anchorage; member, Arts Alaska Board of Directors.

Heard, Diane, Executive Director, Alaska Women's Resource Center, Anchorage.

Heckell, Kathi, Marathon Oil Company, Alaska Region, Anchorage.

Hensley, Willie, former president, NANA Regional Corp.; lobbyist, Alyeska Pipeline Service Co., Washington, D.C.

Hess, Hadley, Kotzebue Dog Musher's Association; Kotzebue Lion's Club.

Hildreth, Lara, Major Gift Coordinator, Nature Conservancy of Alaska.

Howarth, Helen, Executive Director, Alaska State Council on the Arts.

Jackson, Karlene, Executive Director, Catholic Social Services, Anchorage.

Johns, Jean, Librarian, The Foundation Center, San Francisco.

Jones, Jewel, manager, Department of Social Services, Municipality of Anchorage.

Joule, Reggie, member, Alaska State House of Representatives, Kotzebue.

Kelso, Kelly, Director, Kenai Senior Center, Kenai.

Leask, Janie, former president, Alaska Federation of Natives; community relations, Alyeska Pipeline Service Co.

Liebert, Colleen, Marketing Director, Alaska Public Radio Network.

Lindback, Steve, Executive Director, Alaska Humanities Forum.

Little, Suzanne, Executive Director, Boys and Girls Clubs of the Kenai Peninsula.

MacClarence, Jan, Executive Director, AWAKE, Anchorage.

McMillan, Dennis, Executive Director, Anchorage United Way.

Michaels, Beverly, former Corporate Communications Managers, Alyeska Pipeline Service Co.; Outreach Specialist for Division of Public Health, Denali Kid Care, Alaska Department of Health and Social Services.

Miller, Elizabeth, United Way of Anchorage.

Moore, Peggy, Director, Kenai Peninsula Food Bank.

Morris, Vera, Kiana IRA.

Navarre, Mike, Mayor, Kenai Peninsula Borough; former state representative, Alaska State House of Representatives.

O'Hair, Dean, Public Affairs Manager, Chevron Corporation.

Oswalt, Penny, Finance Director, Prince William Sound Science Center, Cordova.

Parker, Rebecca, former Director of Community Relations, ARCO Alaska, Inc.; President, Providence Alaska Medical Center, Anchorage.

Pharer, Deidre, Executive Director, Covenant House Alaska, Anchorage.

Porter, Larry, Kenai region, Phillips Petroleum Company.

Porter, Pat, former Director, Kenai Senior Center, Kenai.

Reeve, Brad, Kotzebue Electric Association; former member, KOTZ Board of Directors.

Richards, Sharon, Executive Director, YWCA, Anchorage.

Rothaus, Natalie, former Executive Director, Juneau Arts and Humanities Council.

Schaeffer, Mary, executive director, Kotzebue Senior Center.

Schaeffer, Pete, Kotzebue IRA.

Sinz, Roxanne, Public Relations Consultant, Unocal.

Skin, Glenn, City Manager, Noorvik.

Steward, Joy, Executive Director, Homer Arts Council.

Sturgelewski, Arliss, former member, Alaska State Senate; member, Board of Directors, Alaska Public Radio Network.

Taylor, Scott, Executive Director, University of Alaska Foundation, University of Alaska Fairbanks.

Tiepelman, Dennis, President, Maniilaq Association, Kotzebue.

Webber, Margaret, Executive Director, Alpine Alternatives, Anchorage.

Wells, Bobbie, Noorvik Tribal Community .

Westlake, Larry, former mayor, Kiana.

Whiting, Martha, Director, Robert Aqqaluq Newlin Trust, NANA Regional Corp.

Zibell, Donna, secretary, Noorvik High School.

Zibell, Mike, teacher and coach, Noorvik High School.

Economic and Social Effects of the Oil Industry in Alaska 1975 to 1995

Volume 2, Part 3

Employment and Earnings

Table of Contents

Appendix

List of Figures

Introduction

A. Scope of Work

This report, *Employment and Earnings*, provides detailed data on employment, unemployment, personal income, and payroll for Alaska and the six geographic areas cited above. This report also provides population and gross state product (GSP) data for Alaska for the 1975 to 1995 period. Key data sources include the Alaska Department of Labor (ADOL) and the Bureau of Economic Analysis, U.S. Department of Commerce (BEA).

The primary intent of Volume 2, Part 3 is to compile and present employment and earnings data for the study areas. This data has been supplemented with population and GSP in an effort to provide a clearer picture of the Alaska and local economies during the study period. The data is also supported with discussion of some of the key events in the oil industry, in state government spending, and other key elements of the economy during the 20-year study period.

While this report often references the oil industry and its impact of the economy, It should not be viewed in any way as an attempt to fully measure the economic impacts of the oil industry in Alaska. This report is first and foremost data compilation. The narrative includes a number of observations about structural change in the economy, how changing oil revenues and activity may have affected local and statewide employment, payroll, income and other economic activity. However, this study does not include the detailed econometric analysis required to fully understand all of the direct and indirect impacts of oil on Alaska's local and statewide economies

B. Report Organization

Chapter I provides an overview of the population in Alaska from 1975 to 1995. Chapter II is an overview of the labor force, employment payroll, product in Alaska, and Anchorage, KPB and the NWAB fro five-year periods from 1975 to 1995. Chapter III includes analysis of fourteen separate industry employment areas on a statewide and regional basis. A discussion on how the oil industry and its revenues affected employment in Alaska is provided. The impact of other economic activity on each sector's employment, payroll and income is included in the discussion. Appendices A-D contain BEA and ADOL employment statistics – number employed, labor force, payroll, personal income, and industry earnings – in nominal and real 1995 dollars, as well as gross state product figures.

Statewide population data was obtained from ADOL. Population figures for the Municipality of Anchorage, the Kenai Peninsula Borough, the Northwest Arctic Borough and the villages of Kotzebue, Noorvik and Kiana were also collected from ADOL. ADOL did not collect population for the Northwest Arctic Borough and its villages prior to 1980, so estimated population figures from the Alaska Department of Community and Regional Affairs were used. BEA statistics were used for employment, personal income, earnings, and wage disbursements. Alaska labor force statistics were compiled from ADOL. Gross state product figures, both nominal and real 1996 dollars from the University of Alaska Anchorage's Institute for Social and Economic Research (ISER) were used.

All data provided in this report is presented in both nominal and "real" 1995 dollars (with the exception of 1996 dollars used for GSP). Where possible, nominal and real dollar values are presented in the same table. However, in most cases, only the real values are presented in the body of the report. Nominal and real values are both provided in the appendices. Real values were calculated using the Anchorage CPI-U, All Items, All Urban Consumers, published by the US Department of Labor, Bureau of Labor Statistics.

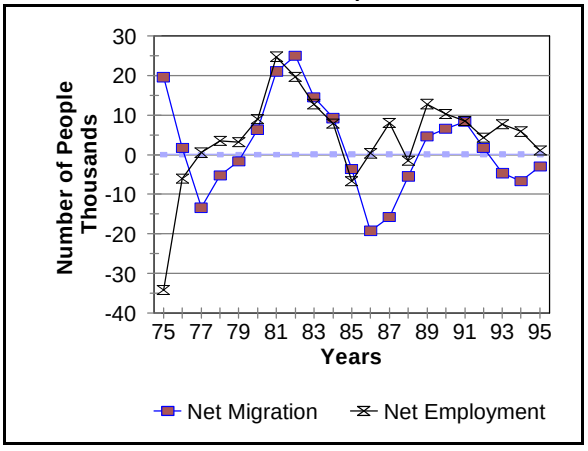
Chapter I: Population Trends 1975-1995

A. Introduction

Two key forces affect population growth, natural increase and migration. Natural increases (through birth) are not particularly susceptible to the state's economy, though economic recession tends to dampen birth rates as people delay having children. Migration is most affected by the relative health of the economy.[1] The net balance of migration is composed of separate trends of in-migration and out-migration. Employment-related migration to Alaska is fueled largely by the real and perceived health of the Alaska economy relative to the economies of neighboring states. Out-migration tends to lag behind changing economic events because people are generally reluctant to leave their communities even when economic conditions are bad. Figure I.1 shows how similar the trends are between Alaska's net migration and net employment between 1975 and 1995.

FIGURE I.1

ALASKA'S NET MIGRATION AND NET EMPLOYMENT, 1975-1995



Source: ADOL, *Alaska Population Overview, 1997 Estimates*
USDOC, Bureau of Economic Analysis

Further, since the state's economic situation tends to be counter-cyclical to the Lower 48 economy, Alaska's boom periods attracted large numbers of workers who sought to take advantage of available job opportunities.

The prosperity of Alaska remains heavily dependent upon the demand for its natural resources. Demand for Alaska's oil, gold, coal, fish, forests, and tourism resources is reflected in the population trends. Oil revenue is perhaps the single most important variable in the economic health of the state (Volume 1 provides a detailed accounting of Alaska oil revenue from 1975 to 1995). More accurately, government expenditures and policy surrounding oil revenue affect population growth in Alaska. More than one-third (38 percent) of Alaska's labor force is directly employed by either local, state or federal government. State government in Alaska is almost entirely dependent on oil revenue and, with state pass-through funding, local governments are also highly dependent on oil.

The migration to and from Alaska's urban areas in response to changing economic conditions tends to be more rapid than found nationwide. Alaska has the highest levels of in-and out-migration of any state, except the District of Columbia.[2] This is a symptom of Alaska's export-based economy. In addition to oil, Alaska's resource-based economy is built on commercial fishing and seafood processing, forest products, mining, and tourism. Changes in demand for these exports can significantly influence population change. Figure I.2 provides information on Alaska's population growth and net migration. The positive and negative growth patterns in Alaska's population are provided in Figure I.3. The population of Anchorage, the Kenai Peninsula Borough, Northwest Arctic Borough, Kotzebue, Noorvik and Kiana for the years of 1975 to 1995 are provided in

[1]ADOL, *Population Projections Alaska 1990-2010*. p. 9

[2]Ibid.

Figure I.4.

B. Population Trends: 1975 to 1995

1975-1980: The average annual growth rate over the five-year period was 3.2 percent. However, the period is marked by a population surge in 1975-76, during construction of the trans-Alaska oil pipeline. Alaska's population peaked in 1977 at 418,000, up 70,000 from the pre-pipeline construction level. The completion of the pipeline construction was followed by a decline in population. Between 1977 and 1980 20,000 Alaskans left the state, though natural increases pushed the state 2,000 residents to the good overall for the period.

1980-1985: In 1981, another boom began, primarily the result of construction and infrastructure development fueled by state spending, ongoing federal expenditures and private development based on oil revenues.[3] Alaska grew by 119,800 persons between 1980 and 1985, a phenomenal increase of 28.5 percent, making Alaska the most rapidly growing state in the US.[4] In this period, 88.4 percent of the growth occurred in the Municipality of Anchorage, Kenai Peninsula Borough, Matanuska-Susitna Borough, Fairbanks North Star Borough and Juneau Borough. The most substantial growth occurred in the 1981-1983 period, during which the annual rate of change averaged 5.5 percent. The pace of growth began to slow during 1983-84, with a rate of change of 4.9 percent, and declined further in 1984-85 as the rate of growth slowed to 3.7 percent. Even this growth was rapid by U.S. standards. The average annual rate of change for the U.S. as a whole during the 1980-1985 period was 1.0 percent per year.[5]

In 1985, there were about 23,073 military personnel in Alaska, slightly higher than in 1980. The proportion of military personnel within the state continued to decline from 5.5 percent of the 1980 population to 4.3 percent in 1984. Military dependents in 1985 were about 26,026 persons, making the proportion of military and dependents in Alaska approximately 9.1 percent of the state's population.[6]

Of all the people who moved to or from Alaska in the 1980s, about half moved from or to the states of Washington, California, Oregon, Texas, Colorado, Florida, Idaho, or Arizona.[7]

1985-1990: This period was marked by recession spurred by overbuilding in the commercial and residential sectors, as well as a sharp drop in public sector spending . Between 1986 and 1987, the state's population declined by 1.7 percent.[8] Between 1986 and 1989, 45,900 residents left the state.[9] This population loss was equal to about 8 percent of the state's peak population in 1986.

By 1990, there were approximately 24,645 military personnel in Alaska, slightly higher (8.6 percent) than in 1980.[10] The proportion of the military to the civilian population, however, continued to decline to 4.5 percent in 1990.

1990-1995: Net migration gain continued until 1993-94. During 1990-1991, Alaska grew at an average annual rate of 2.9 percent and 3.1 percent during 1991-1992. Economic growth from 1990-1992 contributed to a period of net in-migration to the state which, when combined with the natural increase (through birth), created a period of moderate population growth.

From 1993-1995, substantial declines in military and dependent population, due to base closures and reorganizations, contributed to net out-migration of 4,687 persons. These military movements were large enough to offset a pattern of in-migration among the civilian population.[11] In 1995, the number of military personnel had dropped to 19,633. The proportion of the military declined to its lowest level since World War II, 3.2 percent of the state's population.[12]

[3] Ibid., p. 11

[4] Ibid., p. 3

[5] Ibid.

[6] ADOL, *Alaska Population Overview, 1985 Estimates*. p. 4.

[7] ADOL, *Alaska Population Overview, September* 1985. p. 5

[8] ADOL, *Alaska Population Overview, 1990 Estimates*, p. 16

[9] Ibid.

[10] Ibid ., p. 49

[11] ADOL, *Alaska Population Overview, 1995 Estimates.* p. 15

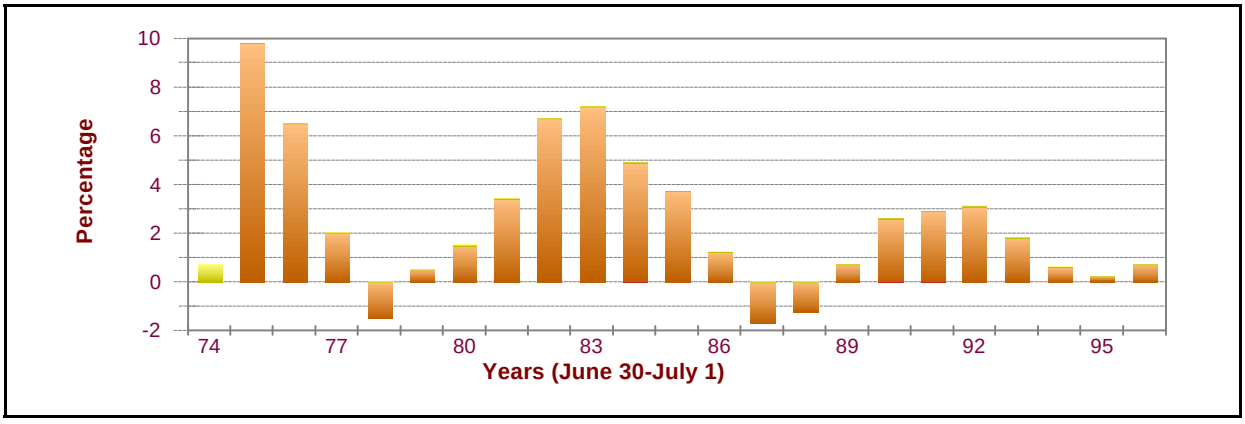
[12] Ibid., p. 83.

FIGURE I.2
ALASKA POPULATION TRENDS, 1975-1995

Fiscal Years	Population	Pop. Change	Ave. Annual Change Rate %	Net Migrants
74-75	384,100	36,000	9.8	30,222
75-76	409,800	25,700	6.5	19,576
76-77	418,000	8,200	2.0	1,637
77-78	411,600	-6,400	-1.5	-13,414
78-79	413,700	2,100	0.5	-5,289
79-80	419,800	6,100	1.5	-1,629
80-81	434,300	14,500	3.4	6,326
81-82	464,300	60,000	6.7	20,992
82-83	499,100	34,800	7.2	24,934
83-84	524,000	24,900	4.9	14,526
84-85	543,900	19,900	3.7	9,206
85-86	550,700	6,800	1.2	-3,646
86-87	541,300	-9,400	-1.7	-19,245
87-88	535,000	-6,300	-1.2	-15,710
88-89	538,900	3,900	0.7	-5,480
89-90	553,124	14,224	2.6	4,590
90-91	569,300	16,176	2.9	6,600
91-92	587,129	17,829	3.1	8,300
92-93	597,669	10,540	1.8	1,681
93-94	601,555	3,886	0.6	-4,687
94-95	602,897	1,342	0.2	-6,622
95-96	607,314	4,417	0.7	-2,972

Source: Alaska Department of Labor, *Alaska Population Overview, 1997 Estimates*, p.15

FIGURE I.3
ALASKA ANNUAL POPULATION CHANGE, FY 1975-1996, BY PERCENT



[12]Source: Alaska Department of Labor.

FIGURE I.4

STUDY AREA POPULATION TRENDS, 1975-1995

Year	Anchorage	KPB	NWAB	Kotzebue	Noorvik	Kiana
1975	73,600	21,300	na	2,125*	527*	300*
1976	187,400	22,500	na			
1977	189,700	23,900	na			
1978	183,600	24,500	na			
1979	180,200	25,800	na			
1980	174,431	25,282	4,831	2,054	492	345
1981	188,527	27,599	5,141			
1982	201,299	31,051	5,380			
1983	216,164	35,148	5,591	2,237	522	364
1984	226,195	38,275	5,691	2,503	517	402
1985	233,870	40,645	5,856	2,633	529	392
1986	235,133	41,653	5,885			
1987	227,974	40,871	6,048			
1988	222,950	39,949	6,077	2,660	532	414
1989	224,644	40,376	6,095			
1990	226,338	40,802	6,113	2,751	531	385
1991	235,893	42,171	6,195	2,709	513	401
1992	245,095	43,217	6,506	2,909	544	401
1993	251,805	43,361	6,504	2,944	527	394
1994	255,422	44,843	6,596	2,896	574	412
1995	253,614	46,092	6,603	2,888	582	416

Source: Alaska Population Overview, various issues, Alaska Department of Labor
na–not available
Note: Prior to 1990, ADOL population research was sporadically funded, therefore data for some years for smaller communities does not exist. ADOL did not publish population estimates at all for 1989 and for small communities prior to 1980. The population for 1989 is the average of 1988 and 1990 populations.
* These population estimates are from the Department of Community and Regional Affairs. Estimates are made for revenue sharing purposes and are less reliable than ADOL estimates. However, they may provide an indication of rates of change.

C. Municipality of Anchorage

During the 1975 to 1995 period, the Municipality of Anchorage accounted for more than 40 percent of Alaska's total population. Anchorage's population trends parallel the state's trends because Anchorage is Alaska's economic and population center, as well as its service and support center for the oil industry.

Between 1975 and 1995, Anchorage's population increased from 173,600 to 253,614 residents, an increase of 46 percent. Like the rest of Alaska, growth was not steady, however. During the 1975-1980 period, the population peaked in 1977 at 189,400 but dropped by 8 percent during the post-pipeline construction slow-down, to 174,431 in 1980. By 1980, the percentage of Alaskans living in Anchorage had dropped to 40.9 percent.

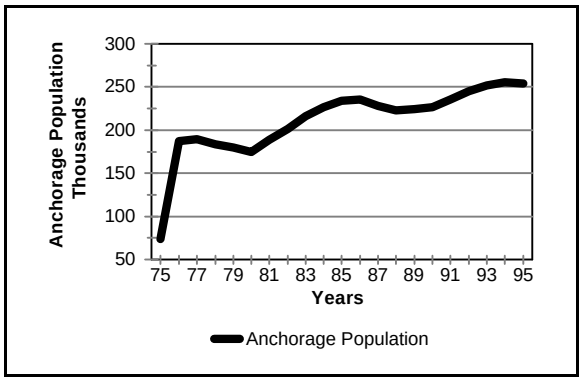
Between 1980 and 1985 period, Anchorage's population increased each year, however, growth started to slow from 8.1 percent in 1980 to 3.4 percent in 1985, reaching 233,870. By 1985, 43.6 percent of Alaska's population lived in Anchorage. During the 1985-1990 period, Alaska's population had an overall decline of 3.7 percent. The full effects of the 1986 recession on Anchorage's population did not show until 1988, when population dropped 5.2 percent to 222,950. However, by 1990, the population recovered to 226,338. By 1990 Anchorage was the 69th largest city in the US compared to 78th in 1980.

Anchorage enjoyed steady growth, averaging 2.8 percent, between 1990 and 1995. Anchorage's population reached 253,614 in 1995, a total increase of 12 percent from 1990.

Because of the rapid growth of the civilian population Anchorage in the 1980s, the relative influence of the military declined. In 1980, military and dependents accounted for 15.2 percent of the Anchorage population. By 1990, that military accounted for 11.5 percent and by 1995, 9.3 percent of Anchorage's population.[13]

FIGURE I.5

ANCHORAGE POPULATION TREND,



1975-1995

Source: ADOL

D. Kenai Peninsula Borough (KPB)

The Kenai Peninsula Borough's population also grew rapidly between 1975 and 1995. Between 1975 to 1995, the borough's population more than doubled (up 116 percent, from 21,300 in 1975 to 46,092 in 1995).

The Kenai Peninsula Borough did not experience losses of population of the same magnitude as Anchorage following pipeline construction or during the 1986-87 recession. In fact no post-pipeline construction decline occurred. Population decline during the 1986-87 recession totaled approximately 4 percent.

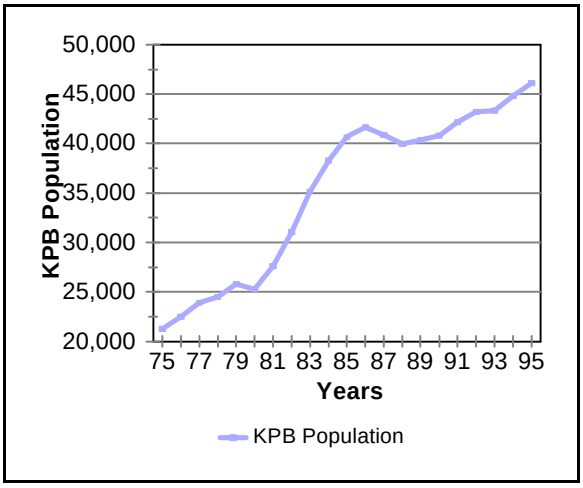
Between 1975-1980, the borough's population grew 18.7 percent. In 1975, 5.4 percent of Alaska's population lived in the Borough, by 1980 that percentage increased slightly to 5.9 percent. Between 1980 and 1985, the borough's population increased to 40,645, representing 7.4 percent of Alaska's total population. The population trend was flat over the next five-year period. By 1990, 7.3 percent of the state's population (40,802 residents) lived in the Kenai Peninsula Borough and 46,092 persons lived in the borough by 1995, an increase of 13 percent over 1990. Between 1975-1980, the Borough's population grew 18.7 percent. In 1975, 5.4 percent of Alaska's population lived in the borough; by 1980 that percentage increased slightly to 5.9 percent. Between 1980 and 1985, the Borough's population increased to 40,645, representing 7.4 percent of Alaska's total population.

The population trend was flat over the next five-year period. By 1990, 7.3 percent of the state's population (40,802 residents) lived in the Kenai Peninsula borough and 46,092 persons lived in the Borough by 1995, an increase of 13 percent over 1990. Figure I.6 charts KPB's population trends from 1975 to 1995.

[13] ADOL, *Alaska Population Overview, 1995 Estimates*. p. 84

FIGURE I.6

KPB POPULATION, 1975-1995



Source: ADOL

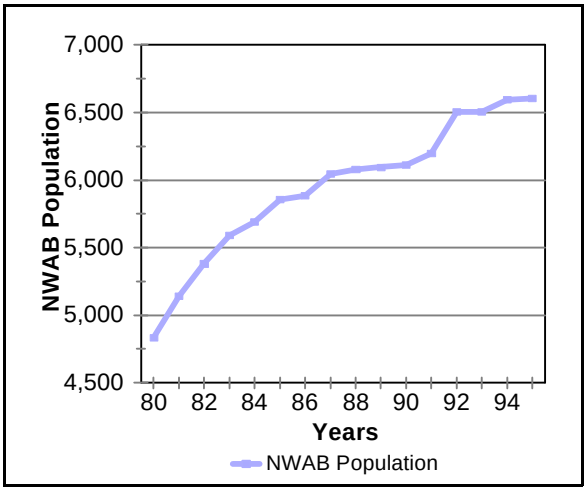
E. Northwest Arctic Borough (NWAB)

The Northwest Arctic Borough is the second largest borough in Alaska geographically. It is one of the most economically and culturally unified political subdivisions in the state. More than 80 percent of its population is Inupiat Eskimo. Population data for the Northwest Arctic Borough is not available prior to 1980, however, since 1980, the population of the Borough has slowly increased with an average annual growth rate of 2.4 percent. The Northwest Arctic Borough has grown more slowly than Alaska as a whole. This is because the region had much lower in-migration rates over this time period than the state experienced. Total percentage growth over the 15 years was 36.6 percent, rising from 4,831 in 1980 to 6,603 in 1995. Figure I.7 shows the population growth trend for NWAB from 1980 to 1995.

Kotzebue, the economic and transportation center, is the only community larger than 750 within the Northwest Arctic Borough. Based on Alaska Department of Community and Regional Affairs (ADCRA) figures, Kotzebue's growth paralleled that of the Northwest Arctic Borough over the 20 years, largely because 43.7 percent of the Borough's population resides in Kotzebue. Total percentage growth from 1975 to 1995 equaled 35.9 percent, reaching an estimated population of 2,888 in 1995.

FIGURE I.7

NWAB POPULATION, 1980-1995



Source: ADOL

Kotzebue has the third-highest population of Alaska Natives outside Anchorage (behind Bethel and Barrow). Noorvik's population has apparently been static over the 20 years, estimated at 527 in 1975 and 582 in 1995 (though there is uncertainty about the 1975 population). Total growth over the 20 years is estimated at 10.4 percent. Kiana's population has apparently grown 38.7 percent between 1975 (300) and 1995 (416).

Chapter II: State and Regional Economic Activity, Employment and Earnings 1975-1995

A. Introduction

Many forces shaped Alaska's economy over the 20 year study period, though none more than the oil industry. For example, during the study period Alaska went from a bit player to the largest oil producer in the U.S. State capital spending went from $90 million to nearly $4 billion ($200 million to nearly $6 billion in 1995 dollars).

To set the stage for this discussion of employment impacts, these and other key events in Alaska's oil industry development are listed in Figure II.1. Also, oil production and revenue received and spent by the State of Alaska is presented in Figure II.2.

FIGURE II.1

OIL INDUSTRY TIMELINE 1975-1995

1975

- Construction begins on the Trans-Alaska Pipeline System (Pipeline)

1977

- Construction of The pipeline is completed
- Alaska's population decreases by 6,400 people
- Prudhoe Bay oil production begins

1978

- BP Exploration Alaska discovers Endicott oil field

1979

- Revolution in Iran causes a second oil embargo and oil supply shortage
- The state budget exceeds $1 billion for the first time

1980

- The one-billionth barrel of oil through The pipeline arrives in Valdez
- Alaska's personal income tax is repealed
- The Alaska Legislature creates the Permanent Fund Corporation
- State petroleum revenues total $2.6 billion ($4.3 billion in 1995$)
- State spends $2.2 billion ($3.7 billion in 1995$)

1981

- The Kuparuk field begins production
- North Slope oil price peaks at $34.10/barrel ($52.18/barrel in 1995$)

1982

- Alaskans receive $1,000 Permanent Fund Dividend
- Total state petroleum revenues peak at $4.0 billion ($5.7 billion 1995$)

1983

- Alaska's population exceeds 500,000

1985

- Milne Point field begins production

1986

- Saudi Arabia increases oil exports–wellhead price of US crude falls from $24 to $12/barrel
- The 5 billionth barrel of oil from the North Slope arrives in Valdez
- The Lisburne field on Alaska's North Slope begins production

1987

- North Slope oil price drops to $13.43/barrel from $21.52/barrel in 1986 ($16.98/barrel from $27.24/barrel in 1995$)
- Production at Milne Point is suspended due to the collapse of oil prices
- Endicott field begins production
- Total state petroleum revenues fall to $1.6 billion ($2 billion in 1995$)
- Alaska's population drops 17,700 people and dips to 1983 population level

1988

- North Slope production peaks at two billion barrels per day

1989

- North Slope production begins to decline
- Exxon Valdez oil spill occurs in Prince William Sound
- Production resumes at Milne Point

1990

- GHX I facility installed at Prudhoe Bay, increases production by 100,000 bbl
- Lisburne production peaks at 45,000 barrels per day
- Iraq invades Kuwait–U.S. oil prices increase to more than $20/barrel

1991

- The sixth North Slope field, Sag Delta North, begins production
- North Slope oil price is $20.93, highest price since 1986

1992

- Oil production from the Endicott field peaks at 115,000 barrels per day
- Oil production from the Kuparuk field peaks at 322,000 barrels per day

1993

- Total state petroleum revenues exceed $4 billion (FY95$) (or $3.8 B nominal $), the highest since 1986
- Alaska's population exceeds 600,000
- Total US production falls below 6.9 million barrels per day, its lowest level since 1958
- Two North Slope fields, Port McIntyre and West Beach, begin production

1 9 9 4 •

Alaska becomes nation's top producer of oil for a period in 1994, out producing Texas for the first and only time

- The tenth North Slope oilfield, the Niakuk field begins production
- North Slope oil prices drops 22 percent from 1993 prices to $14/barrel (1995$)
- Total state petroleum revenues drops to lowest level since 1987 at $1.9 billion (1995$)
- Total oil revenues spent drops to lowest level since 1979 at $1.3 billion (1995$)

1995

- Permanent Fund balance exceeds $15 billion
- Congress ends ban on export of Alaska North Slope crude oil
- GHX II facility is installed at Prudhoe Bay, increasing production by 100,000 barrels/day
- Total state petroleum revenues increases 81 percent in one year to $3.4 billion

Source: Alaska Department of Revenue, ADOL, Alaska Oil & Gas Association. Compiled by McDowell Group.

FIGURE II.2

SUMMARY OF ALASKA OIL PRODUCTION, REVENUES AND STATE GOVERNMENT (SOA) EXPENDITURES, FY 1975-1995

Fiscal Year	Oil Production			Oil Prices		Total Oil Revenue Spent by SOA millions FY 1995 $
	North Slope millions, barrels/day	Cook Inlet millions, barrels/day	Total millions, barrels/day	Nominal	FY 1995 $	
1978	0.702	0.144	0.846	13.12	26.51	892.2
1979	1.197	0.131	1.328	14.35	26.45	1,514.2
1980	1.422	0.109	1.531	26.29	43.83	3,761.8
1981	1.511	0.093	1.604	34.10	52.18	3,679.4
1982	1.570	0.080	1.650	30.28	43.14	3,953.2
1983	1.627	0.073	1.700	28.04	39.05	3,657.9
1984	1.657	0.065	1.722	26.77	35.89	3,434.0
1985	1.694	0.055	1.749	26.27	34.34	3,193.9
1986	1.802	0.045	1.847	21.52	27.24	3,364.4
1987	1.849	0.047	1.896	13.43	16.98	1,763.5
1988	2.005	0.043	2.048	16.15	20.33	2,454.1
1989	1.960	0.043	2.003	14.36	17.88	2,291.2
1990	1.853	0.033	1.886	17.01	20.41	2,545.7
1991	1.799	0.040	1.839	20.93	23.66	2,932.6
1992	1.791	0.042	1.833	16.33	17.76	2,297.2
1993	1.687	0.041	1.728	17.58	18.50	3,668.6
1994	1.601	0.038	1.639	13.99	14.33	1,323.9
1995	1.576	0.042	1.615	16.39	16.39	1,822.6

Source: Alaska Department of Revenue

B. Statewide Economic Activity

1. Employment Trends

Between 1975 and 1995, the number of Alaska's full and part-time employment grew 62.2 percent, from 198,759 jobs in 1975 to 291,845 in 1995.[14] This growth trend included periods of decline; the 1976-1978 post-pipeline construction period, and the 1986-1987 recession. Recovery from the first decline - largely the result of out-migration of migrant construction workers - was rapid. Though employment declined in Alaska, the economy was fundamentally strong. And the prospect (and reality) of billions of dollars of oil revenue flowing into state coffers painted as rosy investment picture. Recovery from the second recession (post-1986) was much slower, however. Low oil prices only compounded the recession, oil prices did not create it. Over-building in the commercial and residential sectors during 1982 and 1983, in particular, all but guaranteed Alaska was in for trouble. Declining oil prices and state revenues added 800 oil company jobs and 1,600 state government jobs to the tally of over 8,000 construction-sector jobs lost before oil prices started to

[14] For greater detail, refer to Appendix A, BEA Alaska Employment (1975-1995).

slide in 1986. The construction sector would lose another 3,000 jobs before the recession ended - all told the construction industry lost 11,000 jobs between 1983 and 1988.

Following are more detailed discussions of employment trends during the study period. Figure II.3 breaks out employment by sector in five-year increments starting in 1975.

1975-1980: The milestone event during this period was construction of the Trans-Alaska Pipeline. Construction employment in Alaska climbed from around 9,000 in 1974 to 26,600 jobs during the first year of pipeline construction to 31,000 jobs in 1976 (construction employment actually peaked at near 40,000 jobs during the summer of 1976).

The 1975 to 1980 period was marked by rapid growth in the service and trade sectors, also the result of pipeline construction. In 1976, per capita income in Alaska was 74 percent above the national average, a reflection of the top-dollar wages for pipeline construction workers.[15] Demand for labor in Alaska pushed wages and income higher and increased demand for consumer goods and services, leading to expansion of the trade and service industries. Retail trade employment increased by 19 percent (up 4,000 jobs) while the service sector jumped 12 percent (3,500 new jobs). Meanwhile Alaska's population increased by 8 percent.

Local government employment also expanded in response to increased demand for public services by Alaska's growing population. Increased tax bases, higher property values, and the municipal assistance program that started in 1978 (as discussed in the Volume 1 report), boosted local government employment by 12 percent over 1977 local government employment.[16]

As indicated above, pipeline construction activity peaked in 1976. Total employment in Alaska declined by 2.5 percent (a drop of about 6,000 jobs). The construction industry accounted for nearly all of the job loss (the industry suffered a 12-month decline of 67 percent). Only the transportation sector also reported job losses, though the loss amounted to less than 2 percent. The manufacturing, retail trade, services, finance and government sectors all reported employment gains between 1976 and 1977, when employment in Alaska was down overall.

1980-1985: As the next decade arrived, oil revenue began to flow in earnest. State spending cracked the construction employment whip once again. Construction employment climbed from 10,500 jobs in 1980 to 21,800 jobs in1983. Most of the employment growth was with general building and special trade contractors, rather than with the heavy construction contractors that dominated the employment scene during pipeline construction.

Free-flowing oil revenue also spurred growth in state government employment. State employment jumped from 15,200 jobs in 1980 to 20,200 jobs in 1985, a 33 percent increase. Local government employment (strongly influenced by State pass-through funding) recorded even more dramatic growth, climbing from 20,100 jobs in 1980 to 227,800 jobs in 1985, a 37 percent increase.

Overall, employment in Alaska increased by nearly one-third between 1980 and 1985 (up 30 percent). This growth included a phenomenal 10 percent jump between 1981 and 1982 (25,000 new jobs in a single year), and an equally remarkable 7 percent rise between 1982 and 1983 (another 20,000 new jobs).

State spending on government operations and capital projects directly accounted for impressive employment growth, but by no means all of Alaska's growth during the 1980 to 1985 period. In the support sector, the retail trade sector experienced incredible growth, rising from 24,800 jobs in 1980 to 38,500 jobs in 1985, a 55 percent increase. This included an amazing 14 percent jump (3,800 new jobs) between 1981 and 1982 alone.

Similarly, Alaska's service sector surged during this period, adding 13,300 new jobs, a 39 percent increase.

[15] ADOL, *Alaska Economic Trends July 1991* p. 9

[16] Based on ADOL figures.

Service sector jobs jumped 12.4 percent between 1981 and 1982.

Based on population growth, expansion of the retail and service sectors of about 30 percent would have been expected during the 1980 to 1985 period.

FIGURE II.3

ALASKA EMPLOYMENT, 1975, 1980, 1985, 1990 & 1995, BY SECTOR

	1975	1980	1985	1990	1995
Total Full- and Part-time Employment	227,177	244,126	318,073	341,079	368,376
Wage and Salary Employment	198,759	203,167	260,887	271,082	291,814
Construction	28,550	13,423	25,590	15,789	19,156
Manufacturing	10,052	14,948	13,131	18,932	19,469
Transportation, Communication & Utilities	17,431	18,624	20,583	24,580	27,418
Wholesale and Retail Trade	30,202	34,366	52,354	55,732	68,046
Financial, Insurance and Real Estate	16,515	21,487	23,331	20,321	18,500
Agriculture, Forestry, Fishing	5,548	9,288	13,608	13,894	13,184
Services	36,789	43,832	65,178	79,757	95,960
Mining	3,954	7,530	11,174	12,543	11,429
Federal Government	18,921	17,621	17,270	18,580	17,309
Military	30,008	26,555	26,953	30,274	24,811
State & Local Government	28,706				
State Government	n/a	15,231	20,247	21,231	21,516
Local Government	n/a	20,487	27,839	28,683	30,928

Source: USDOC Bureau of Economic Analysis

1985-1990: The commonly held view is that declining oil prices caused the recession that hit Alaska so hard in 1986 and 1987. Declining oil prices certainly played a key role. Oil prices did drop sharply in 1986 (see Volume 1 Report, Table I.A.2, pushing revenue from $3.1 billion in FY 1985 to $1.6 billion in FY 1987. State government employment fell by 1,600 jobs and state spending on capital projects dropped from $2.5 billion in FY 1984 to $600 million in FY 1987.

Reduced state revenue and spending hurt the economy badly, but it only kicked an economy that was already on its way down. Rapid (in fact, unsustainable) growth in the economy, coupled with liberal lending polices by the State and private sector, stimulated record levels of speculative construction in Alaska. The result was overbuilding in Alaska's urban areas, and even if oil prices had not declined, Alaska's economy was in for a slow-down.

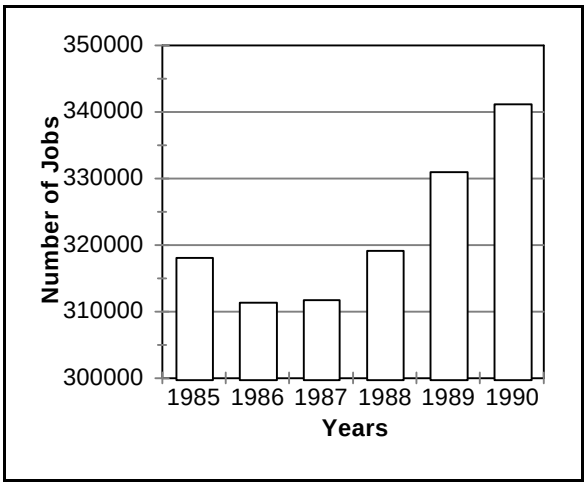
As shown in Figure II.4, in 1986, wage and salary employment dropped by 3.7 percent from 1985, the loss of 9,600 jobs. Nearly all sectors of the Alaska economy experienced employment decline between 1985 and 1986. Retail trade employment declined by 1,500 jobs between 1995 and 1997, a 4 percent drop. Employment in the service sector dropped by 2,600 jobs, a 5.5 percent decline. The finance, insurance and real estate sector took the biggest hit, dropping 2,600 jobs (a 21 percent drop) before bottoming out in 1990.

Statewide wage and salary employment hit the low-point in 1987, falling from 260,900 jobs in 1985 to 241,800, a 7 percent drop.

By 1988, employment growth in manufacturing and federal government (both the military and civilian) were largely responsible for the turn around in the statewide employment picture. Losses continued in the construction and financial industries, but that was offset by growth in other industries. Unemployment in Alaska during 1989 was at its lowest ebb since the height of the pipeline construction boom in 1975, posting a 6.7 percent. The recession appeared to be over.

FIGURE II.4

ALASKA EMPLOYMENT, 1985-1990



Source: USDOC, Bureau of Economic Analysis

1990-1995: This five-year period saw slow, steady growth in Alaska's employment picture. Between 1990 and 1995, employment increased at an annual rate of 1.6 percent. Total wage and salary employment grew by 20,700 workers during this five-year period. By 1993, the construction sector was perking up (9.3 percent increase in employment over 1992), the services industry and retail industry continued their expansion, the financial sector was adding jobs (though total employment was still 1,400 jobs below the peak).

Pushed by a service sector and retail boom, Alaska's economy grew for the eighth straight year in 1995. Between 1990 and 1995, the service sector added 11,300 jobs, up 21 percent. Alaska's retail sector expanded by 7,900 jobs, a 20 percent increase during the same five-year period. This service and retail sector growth more than offset employment declines in federal government (down 1,200 civilian jobs and 5,200 uniformed military) and the oil and gas industry (down approximately 2,000 jobs between 1990 and 1995).

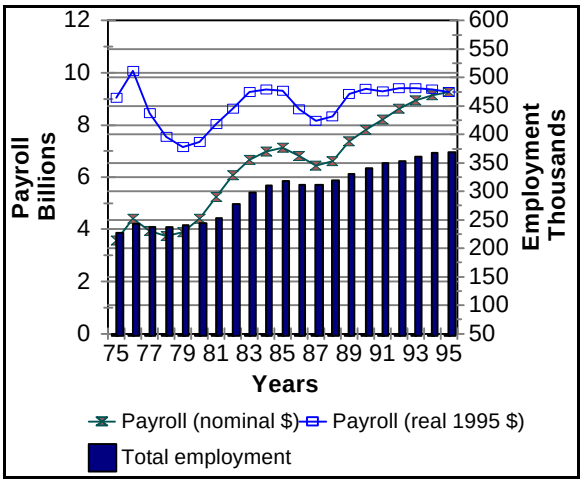
2. Payroll

Total wage disbursements for Alaska for all sectors are provided in Appendix B. In nominal dollars, total payroll increased 160 percent from $3.6 billion in 1975 to $9.3 billion in 1995. In constant dollars, there has been almost no growth in payroll. In 1995 dollars, total payroll was $9 billion in 1975. Twenty years later, payroll totaled $9.3 billion, a meager 3 percent increase. Total full- and part-time employment for the same period grew 62.2 percent. Figure II.5 shows the overall employment and payroll trends for the 20-year study period.[17]

FIGURE II.5

ALASKA'S EMPLOYMENT AND PAYROLL, 1975-1995, IN NOMINAL AND REAL 1995 DOLLARS

[17]Unless otherwise noted, all payroll figures are represented in "real" 1995 dollars.



Source: USDOC, Bureau of Economic Analysis

1975-1980: Between 1975 and 1980, total state payroll increased 24 percent, rising from $3.6 billion to $4.4 billion. Construction of the Pipeline accounted for the payroll surge of $842 million (a 24 percent jump) in payroll between 1975 and 1976. Completion of the pipeline lead to a drop-off in total payroll of 11 percent. It took only three years for total payroll to recover to the pipeline construction peak of $4.4 billion.

In 1975, construction and the public sector represented 30 percent ($2.7 billion) and 29 percent ($2.6 billion), respectively, of total Alaska payroll. These two sectors combined made up 58 percent of total payroll. By 1980, the public sector contributed 36 percent while construction contributed 10 percent of total payroll. Figure II.6 demonstrates the shifting importance of various industries in terms of employment and real payroll for 1975, 1985 and 1995.

In 1995 dollars, total state payroll actually decreased 19 percent over the 1975 to 1980 period. In fact, the pipeline construction-supported 1976 payroll of $10.1 billion, in 1995 dollars, was never reached again in the 20-year study period.

FIGURE II.6

ALASKA'S REAL PAYROLL AND EMPLOYMENT, 1975, 1985, 1995 BY SECTOR, BY PERCENT

	Employment (%)	Payroll (%)

	1975	1985	1995	1975	1985	1995
Agriculture, Forestry, Fishing	2.4	4.3	3.6	0.5	0.2	0.4
Mining	1.7	3.5	3.1	3.0	8.0	8.2
Construction	12.6	8.0	5.2	29.5	11.3	6.7
Manufacturing	4.4	4.1	5.3	4.1	4.2	5.5
Transportation and Public Utilities	7.7	6.5	7.4	10.2	9.2	9.9
Wholesale and Retail Trade	13.3	16.5	18.5	9.7	13.1	12.5
Finance, insurance, and real estate	7.3	7.3	5.0	2.4	4.5	3.7
Services	16.2	20.5	26.0	12.1	14.3	17.2
Federal Government, civilian	8.3	5.4	4.7	8.0	6.7	7.6
Military	13.2	8.5	6.7	7.6	6.5	6.9
State Government	*12.6	6.4	5.8	*12.8	9.7	9.2
Local Government		8.8	8.4		12.3	12.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: USDOC, Bureau of Economic Analysis.

*Includes local government.

1980-1985: Over this five year period, Alaska's payroll increased from $4.4 billion to $7.1 billion, a 62 percent increase. The lion's share of this growth occurred in 1981 and 1982, with $800 million payroll increases in each of these years.

From 1980, total real payroll (1995 dollars) in the state increased 27 percent, peaking at $9.4 billion in 1984, then declining slightly in 1985.

1985-1990: Recession in 1986 brought with it a sharp drop in payroll. Total payroll fell 8 percent in 1986 and another 5 percent in 1987. Payroll dropped by slightly under $700 million before bottoming-out in 1987. During this two-year period, all industries except fishing, manufacturing and federal government – both civilian and military – saw declines in payroll. The construction sector experienced the most dramatic losses, over 54percent between 1985and 1988. Retail payroll dropped by 23 percent between 1985 and 1988, while service sector payroll dropped by 12 percent before bottoming-out in 1987.

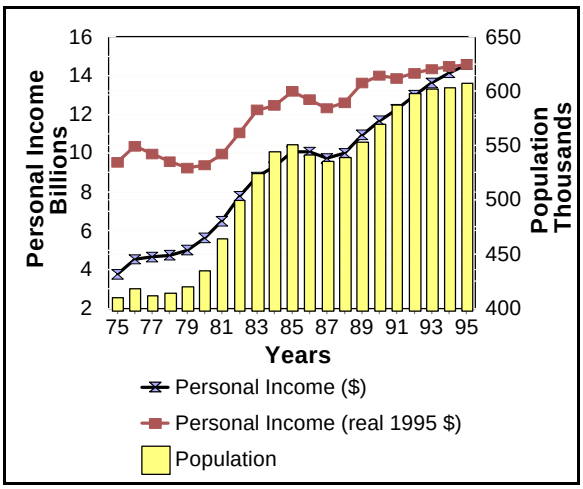
1990-1995: Between 1990 and 1995, Alaska's payroll grew at an annual rate of 3.5 percent, reaching $9.3 billion in 1995. In 1995 dollars, payroll actually declined slightly, slipping 0.2 percent.

3. Personal Income

Personal income data from the U.S. Department of Commerce's Bureau of Economic Analysis includes all legal sources of income. Three main components make up personal income: 1) earnings, 2) dividends, interest, and rent, 3) transfer payments. Earnings, the largest component, is the sum of wages and salaries, other labor income (like contract work or tips) and proprietors' income. Noncash sources of goods and services, which are important in many Alaska rural areas, are not included in personal income data. Alaska's total real and nominal personal income for 1975-1995 are presented in Figure II.7.

FIGURE II.7

ALASKA'S POPULATION AND PERSONAL INCOME, 1975-1995, IN NOMINAL AND REAL 1995 DOLLARS



Source: USDOC, Bureau of Economic Analysis

Nominal and real total personal income, per capita personal income, earnings, dividends, interest, rent and transfer payments are presented in Appendix C. Alaska's per capita income figures for 1975-1995 are presented in Figure II.8.

1975-1980: Personal income for Alaska residents totaled $3.8 billion in 1975. Pipeline construction pushed the total up 20 percent in a single year, to $4.5 billion in 1976. However, rapid population growth at the same time meant that per capita personal income grew at a much slower rate, only 2.4 percent between 1975-1976.

During 1976, the peak of the pipeline construction, per capita income in Alaska was 74 percent above the national average.[18]

Nominal growth in personal income continued through 1980, reaching $5.6 billion that year. In inflation adjusted dollars, however, total personal income peaked in 1976 and declined each year until 1979. In 1995 dollars, total personal income in 1979 was 11 percent below the 1976 level.

1980-85: Personal income growth accelerated in the early 1980s. In fact, between 1980 and 1985, personal income in Alaska almost doubled, jumping from $5.6 billion to $10.1 billion. During the five-year period, personal income grew at an annual rate of 12 percent.

For the same years, nominal per capita personal income had an average annual growth rate of 6.5 percent. Nominal per capita personal income grew from $13,875 in 1980 to $18,946 in 1985, an increase of 37 percent. In inflation adjusted dollars, total personal income in Alaska increased by 41 percent between 1980 and 1985 (an average annual growth rate of 7 percent). Real per capita personal income grew at a slower average annual growth rate of 1.4 percent.

[18] ADOL, *Alaska Economic Trends July 1991* p. 9

FIGURE II.8

ALASKA'S PER CAPITA INCOME, 1975-1995 IN REAL 1995 AND NOMINAL DOLLARS

Year	Per Capita Personal Income $	Nominal % Change	Per Capita Income Real $	Real % Change
1975	10,133	13.5	25,700	2.4
1976	11,500	1.8	26,324	(4.8)
1977	11,705	0.6	25,066	(5.1)
1978	11,777	5.3	23,799	(3.9)
1979	12,405	11.9	22,863	1.2
1980	13,875	12.0	23,131	2.8
1981	15,543	11.4	23,786	3.3
1982	17,309	3.9	24,583	1.9
1983	17,989	0.6	25,052	(3.1)
1984	18,103	4.7	24,268	2.0
1985	18,946	(2.3)	24,764	(5.4)
1986	18,513	(2.5)	23,434	(2.6)
1987	18,052	2.3	22,829	1.8
1988	18,462	8.2	23,240	7.0
1989	19,982	5.6	24,877	1.8
1990	21,097	2.1	25,316	(3.8)
1991	21,540	2.7	24,346	(1.1)
1992	22,131	3.1	24,075	(0.2)
1993	22,819	3.1	24,018	0.3
1994	23,521	2.9	24,087	0.5
1995	24,214		24,214	

Source: USDOC, Bureau of Economic Analysis

Personal income data shows that wage and salary earnings accounted for 94 percent of total personal income in 1980. By 1985 that proportion had fallen to 88 percent. During this period dividends, interest and rent, and transfer payments grew faster than earnings. The large increase in transfer payments in 1982 (up a whopping 50 percent over 1981) was primarily a result of the first annual Permanent Fund dividend payment to Alaskans.

1985-90: The recession brought with it a 3 percent decline in nominal personal income (a loss of about $300 million). Nominal per capita income showed a larger decline, falling a total of 4.7 percent between 1985 and 1987. This decline totaled about $900 per person.

In 1988, a boost in manufacturing, oil and gas (mining), services, federal and state government earnings income, combined with an 8 percent increase in transfer payments, produced a moderate gain of 2 percent in Alaska's total personal income over 1987. Income earned from the Exxon Valdez oil spill in 1989, helped solidify a strong economic recovery, bringing back Alaska's personal income to 1985 levels.

1990-95: Over the 1990-1995 period, the nominal average annual rate of growth in personal income slowed to 5 percent. In real terms, the average annual growth rate was less than inspiring at 1 percent. The impact of the oil spill continued to contribute to an improved income level in Alaska in 1990 and 1991.

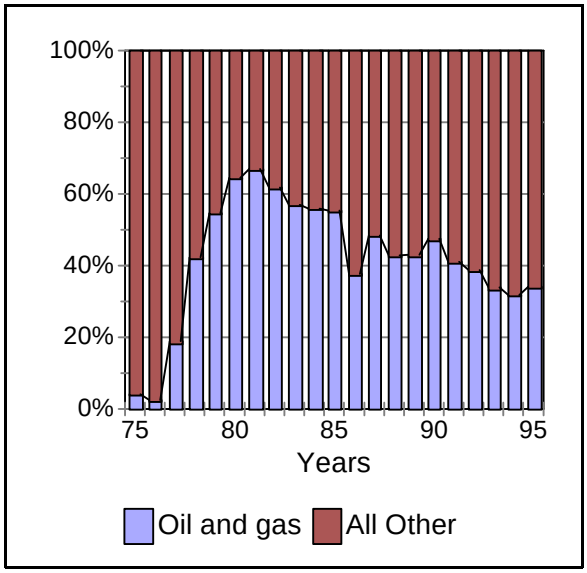
Real per capita income declined during the 1990 to 1995 period, slipping from $25,316 in 1990 to $24,214 in 1995, a 4 percent decline. Over the 20-year period considered in this study (1975 to 1995) real per capita income in Alaska declined by 6 percent.

4. Gross State Product (GSP)

GSP is the total value added in the production of all the goods and services produced in Alaska. It does not account for a subsistence economy. The University of Alaska Anchorage's Institute for Social and Economic Research (ISER) has generated historical GSP estimates in nominal and real 1996 dollars. Detailed Alaska GSP data is included in Appendix D.[19]

Because Alaska's GSP is dominated by petroleum production and oil prices, GSP is not a good indicator of the overall health of the economy. Depending largely on oil prices, the oil industry can account for 40 percent or more of GSP, yet the oil industry directly accounts for only three or four percent of employment in the state. Gyrations in oil prices can cause significant shifts in GSP, with relatively little short-run impact on the state's economy. Figure II.9 demonstrates the relationship between total GSP and the oil industry in Alaska.

FIGURE II.9
OIL INDUSTRY CONTRIBUTION TO ALASKA GSP 1975-1995



Source: ISER, *Alaska Gross State Product: 1963 to 1996*

1975-1980: In 1975, oil accounted for only 4 percent of Alaska's GSP (this output was generated by the oil industry in the Cook Inlet region). Pipeline construction pushed GSP from $5.9 billion in 1975 to $7.4 billion in 1976, a 26 percent jump. Start-up of North Slope oil production in 1978 pushed GSP into the stratosphere (by Alaska standards). By 1980, oil production, transportation, and processing accounted for 64 percent of Alaska's $19.9 billion GSP.

1980-1985: Alaska GSP increased another 26 percent between 1980 and 1981, rising to $25 billion. Nominal GSP growth was slow over the next several years, rising to $26 billion by 1985. That year oil accounted for 55 percent of GSP.

1985-1990: Alaska's GSP dropped 31 percent in 1986 as a result of falling oil prices. Alaska was one of only five states in the nation to see a decline in GSP in1986. All five losers were energy-producing states

[19]All GSP figures are taken from ISER, *Alaska's Gross State Product: 1963 to 1996,* May 1997

.[20] GSP climbed back to $25.2 billion by 1990. By then, the role of oil had declined to 48 percent of total GSP.

1990-1995: Between 1990 and 1995, nominal Alaska GSP declined from $25.2 billion to $23.7 billion. The oil industries contribution to GSP declined sharply, falling from $12 billion in 1990 to $8.1 billion in 1995. In percentage terms, oil's share of GSP dropped from 48 percent to 32 percent.

In real 1996 dollars, Alaska GSP fell at an average annual rate of 1.6 percent between 1990 and 1995.

C. Regional Trends

1. Municipality of Anchorage

Anchorage labor force data is presented in Figure II.11. Anchorage's total employment, by sector, for 1975, 1980, 1985, 1990 and 1995 is presented in Figure II.10. Figure II.12 shows the relationship between Alaska and Anchorages population over the 20-year study period.

1975-1980: In 1975, 45 percent of all full- and part-time jobs in Alaska were located in Anchorage (103,100 jobs). Approximately 86 percent of these jobs were wage and salary jobs while the self-employed represented 14 percent of total employment. The private sector accounted for 66 percent of the jobs, the public sector 34 percent (35,393 jobs, including federal, military, state and local government).

Total employment grew an average annual rate of 2 percent over the next five years, with the addition of 11,243 jobs.

[20] ADOL, *Alaska Economic Trends October 1988* p. 12

FIGURE II.10:

ANCHORAGE'S TOTAL EMPLOYMENT 1975, 1980, 1985, 1990 & 1995 BY SECTOR

Anchorage	Years 1975	1980	1985	1990	1995
Total Employment	**103,100**	**114,349**	**153,386**	**155,536**	**166,550**
Agricultural Services, Forestry, Fishing	640	947	2,203	2,197	2,243
Mining	1,347	3,143	4,978	5,914	4,500
Construction	8,223	7,611	12,084	7,877	9,106
Manufacturing	1,779	2,466	2,933	2,854	3,057
Transportation and Public Utilities	7,882	9,159	10,419	12,511	13,898
Wholesale and Retail Trade	16,588	19,324	30,207	29,911	35,335
Finance, Insurance, and Real Estate	11,207	14,432	15,754	12,449	10,926
Services	20,041	24,396	36,600	42,069	48,369
Federal Government, civilian	10,728	9,537	9,697	10,472	10,309
Military	13,873	12,755	12,644	13,392	11,673
State and Local Government	10,792				
State Government	na	4,908	7,201	7,514	8,269
Local Government	na	7,137	8,666	8,376	8,865

Source: USDOC, Bureau of Economic Analysis
na–not available

FIGURE II.11

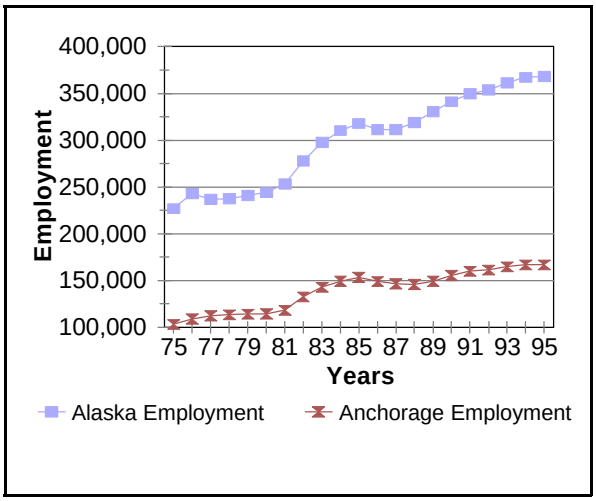
ANCHORAGE'S LABOR FORCE
EMPLOYED AND UNEMPLOYED, 1975-1995

	Annual Average				
Year	Labor Force	Employed	Unemployed	Rate (%)	Peak Month Rate (%)
1975	65,938	62,041	3,897	5.9	7.4
1976	68,053	63,184	4,869	7.2	9.1
1977	77,648	72,065	5,583	7.2	8.6
1978	82,184	75,435	6,749	8.2	9.5
1979	82,756	76,741	6,015	7.3	8.4
1980	83,610	77,755	5,855	7.0	8.3
1981	89,783	83,831	5,952	6.6	7.6
1982	98,588	91,383	7,205	7.3	8.3
1983	109,265	101,239	8,026	7.3	9.0
1984	114,999	106,347	8,652	7.5	8.5
1985	118,968	110,381	8,587	7.2	8.0
1986	121,488	111,314	10,174	8.4	9.2
1987	116,501	106,670	9,831	8.4	9.9
1988	114,356	105,918	8,438	7.4	8.6
1989	114,257	108,454	5,803	5.1	6.6
1990	122,979	116,734	6,245	5.1	5.6
1991	122,988	114,569	8,409	6.8	7.5
1992	127,850	118,454	9,396	7.3	8.7
1993	133,442	125,527	7,915	5.9	7.2
1994	135,228	127,617	7,611	5.6	6.7
1995	133,215	126,229	6,986	5.2	6.1

Source: Alaska Department of Labor

FIGURE II.12:

ALASKA AND ANCHORAGE TOTAL EMPLOYMENT, 1975-1995



Source: USDOC, Bureau of Economic Analysis

Prior to development of Prudhoe Bay, the oil and gas industry accounted for just over 1 percent of the jobs in Anchorage, about 1,300 jobs. Between 1975 and 1980, the oil and gas sector more than doubled in size in Anchorage, reaching 2,900 total jobs, or about 3 percent of all employment in the municipality.

The construction sector grew from about 8,200 jobs in 1975 to a peak of 9,000 jobs in 1977, before dropping back to 7,800 jobs a year later. Only one other sector of the private sector economy experienced a post-pipeline construction dip in employment; the service sector (down 700 jobs, most likely in the professional services related to pipeline construction).

Pipeline construction pushed Anchorage unemployment to a low 5.9 percent in 1975. Completion of the pipeline pushed unemployment to 8.2 percent. The unemployment rate fell to 7.3 percent in 1979 and 7.0 percent in 1980 due to a combination of job growth and out-migration of unemployed workers.

Total nominal personal income for Anchorage grew 57 percent between 1975 and 1980, rising from $1.7 billion to $2.7 billion. (see Appendix C). Per capita nominal personal income increased 48 percent, from $10,310 in 1975 to $15,228 in 1980. In 1975, Anchorage accounted for 45 percent of personal income for the whole state. By 1980, Anchorage's share increased to 48 percent.

Total real personal income for Anchorage grew by a three percent between 1975 and 1980. However, real per capita income actually decreased three percent (see Appendix C).

1980-1985: This five-year period was marked by surging commercial and residential construction in Anchorage. From 1980 to 1984, residential construction contributed to more than 60 percent of permits and valuation. Over these four years, construction employment grew at an average annual growth rate of 19 percent. Growth rate peaked in 1982 with a single year jump of 36 percent, or 2,730 new jobs.

Construction industry activity in Anchorage began to slow in 1984 and construction employment declined eight percent in 1985, dropping 1,100 jobs.

Between 1980 to 1985, all sectors of the local economy experienced growth. Total employment grew in Anchorage at an average annual rate of 6 percent. There were 39,000 more jobs in Anchorage in 1985 than in 1980. The fastest growing sector was the retail trade, rising at an annual rate of 9 percent between 1980 and 1985. Anchorage's retail sector added 8,400 new jobs in just five years, including 3,000 new jobs in 1982 alone.

Rapid growth in the private sector reduced the relative importance of government. Government accounted for 30 percent of all Anchorage employment in 1980 and 25 percent of all employment in 1985.

Nominal personal income in Anchorage increased 90 percent from $2.7 billion from $5.1 billion between 1980 and 1985. Real personal income growth was also impressive at 48 percent over the five year period.

By 1985, just more than 50 percent of all personal income earned in the state was made in Anchorage.

The unemployment rate over the five-year period dropped to 6.6 percent in 1981 then increased slowly to 7.2 percent by 1985.

1985-1990: As dramatic as the growth in employment was in the prior five year period, so was the decline from 1985. By 1987, every employment sector, with the exception of the civilian federal government, experienced losses. All told, Anchorage lost 12,400 wage and salary jobs between 1985 and 1988, a 10 percent drop. The construction industry was the biggest loser, with employment slipping from 12,100 jobs in 1985 to 6,500 jobs in 1988. The retail sector lost 1,700 jobs between 1985 and 1987, a 7 percent drop. The service sector lost 1,200 jobs, a modest 3 percent. Employment in the finance, insurance and real estate sector actually peaked in 1986, then declined steadily until 1992. This long term decline, set off by the 1986-87 recession, resulted in the loss of 4,600 jobs and, in fact, employment in this sector has still not returned to its pre-recession peak.

Employment in mining (95 percent of which is oil and gas related) declined by just more than 300 jobs between 1986 and 1987. The majority of the jobs that were lost were among the oil field service firms, i.e., those providing drilling or geophysical services. These components of the oil and gas industry were always the most sensitive to radical oil price fluctuations such as seen in 1986. The recovery that took place in 1988/1989 could be largely attributed to increased production of North Slope crude (See Volume 1, Part 1 Report, Table I.A.1).

State government employment in Anchorage fell by 600 jobs between 1985 and 1987, a 9 percent hit. Local government employment was down 900 jobs before bottoming out in 1989 (an 11 percent drop).

Anchorage's unemployment rate fell to 7.4 percent in 1988, the lowest it had been in three years. The Anchorage economy started to rebound in 1989, with the addition of 4,500 new jobs. The service sector accounted for the lion's share of this growth. Actually, the service sector suffered only one year of employment decline during the recession. From 1986 to 1990, service sector employment in Anchorage increased by 6,700 jobs, a 19 percent overall increase. Population growth, maturation of the service sector, and growth in the tourism industry all spurred growth in this sector.

In real terms, personal income dipped to its lowest level since 1982 in 1988, but recovered very quickly in 1989 to reach pre-recession 1985 levels. Real per capita income dipped in 1987, down 9 percent from 1985. By 1990, per capita income reached its highest point in the 20 years considered in this study, at $29,471.

1990-1995: Between 1990 and 1994, Anchorage enjoyed steady employment growth. During this period, 11,000 jobs were added. Employment dipped slightly in 1995 (falling less than one-tenth of one percent). The average annual growth rate in full- and part-time employment in Anchorage for the five-year period was 1.4 percent. This growth lagged slightly behind the Alaska average of 1.6 percent.

Continuing the trend set in the late '80s, the retail and service sectors led the employment gain. Retail employment jumped from 23,900 jobs in 1990 to 28,400 jobs in 1995, a 19 percent increase. In the service sector, employment increased from 42,100 jobs to 48,400 jobs, a 14 percent rise.

By 1995, nominal personal income for Anchorage had reached $7.1 billion, a 26 percent increase, and nominal per capita personal income had grown to $28,129, an increase of 15 percent over 1990 levels. In real terms, personal income increased at an average annual rate of 1 percent over the five-year period, and real per capita personal income had dropped five percent over the period.

At the end of the 20-year study period, the Anchorage economy continued to dominate the Alaska employment picture. By 1995, Anchorage accounted for 45 percent of all Alaska full- and part-time jobs and 47 percent of all Alaska wage and salary employment. Anchorage employment accounted for 39 percent of the oil and gas employment, 48 percent of the construction industry, 51 percent of the transportation and public utilities sector, 49 percent of the retail sector, 59 percent of the finance, insurance and real estate employment, 50 percent of the service

sector, and 41 percent of Alaska's public sector.

2. Kenai Peninsula Borough (KPB)

Cook Inlet was an oil-producing basin before Prudhoe Bay construction began. The oil and gas industry not only provided jobs in the KPB, but also contributed to Anchorage's economy by providing gasoline and natural gas at prices that encouraged business development. The KPB's economy was (and remains) diversified, with fishing, tourism, oil and gas, petroleum manufacturing, transportation, and government. Figure II.13 shows KPB's employment by sector in five-year intervals starting in 1980. Figure II.14 presents labor force and employment rate data.

1975-1980: The BEA does not have employment data for the Kenai Peninsula Borough until 1979. Comparable statistics from ADOL do not exist pre-1977. Labor force statistics from the ADOL are available. In 1975, the KPB's labor force consisted of 8,576 people, with 7,827 people employed and 749 unemployed. During 1975-1980, the five-year average annual unemployment rate was 11.5 percent (as seen in Figure II.14). The relationship between change in population in Alaska and KPB are found in figure II.15.

1980-1985: In 1980, total full- and part-time employment in the KPB was 13,113, 5 percent of total Alaska employment. Total wage and salary employment was 9,138. Total real personal income for the KPB was $580 million. Real per capita personal income was $22,620.

KPB was among the fastest growing economies during this oil revenue boom years of the early 80s.The average annual growth rate in full- and part-time employment in the KPB for the five-year period was an impressive 8.5 percent, higher than the Alaska average of 5.5 percent.

In 1980, the oil and gas industry employed approximately 865 people in the KPB, roughly 12 percent of total Alaska oil and gas employment. By 1985, the industry employed approximately 950 people in the borough. The sector's employment had an average annual growth rate of 2.5 percent.

Construction was certainly the fastest growing sector of the borough economy. Construction employment jumped from 900 jobs in 1980 to nearly 2,200 jobs in 1985, an impressive average annual rate of 20 percent. Major construction projects included new ports, a prison in Seward, an Olympic-size ice arena, airport upgrades, schools, and water and sewer projects.

Other rapidly expanding sectors of the borough economy included retail (up 12 percent per year, for a total of 1,100 new jobs between 1980 and 1985) and services (up 11 percent per year, 1,400 new jobs total).

By 1985, nominal personal income for the KPB doubled, reaching $696 million, and nominal per capita personal income had grown to $18,418, an increase of 36 percent over 1980 levels. In real terms, KPB's personal income had grown faster than Anchorage's; 57 percent between 1980 and 1985.

FIGURE II.13:

KPB'S TOTAL EMPLOYMENT, 1980, 1985, 1990 AND 1995, BY SECTOR

Kenai Peninsula Borough	Years			
	1980	1985	1990	1995
Total Employment	13,113	19,663	22,414	25,422
Wage and Salary Employment	9,138	12,968	14,790	17,117
Agriculture, Forestry, Fishing	1,471	2,926	2,494	2,083
Mining	865	950	1,189	1,273
Construction	897	2,156	1,318	1,562
Manufacturing	1,892	1,588	2,182	2,184
Transportation and Public Utilities	821	973	1,340	1,492
Wholesale and Retail Trade	1,717	2,996	3,549	4,869
Finance, Insurance, and Real estate	1,123	1,156	1,053	952
Services	2,104	3,512	5,293	6,396
Federal Government, civilian	177	205	288	369
Military	224	383	483	472
State Government	527	834	1,080	1,065
Local Government	1,162	1,820	2,016	2,604

Source: USDOC, Bureau of Economic Analysis

FIGURE II.14:

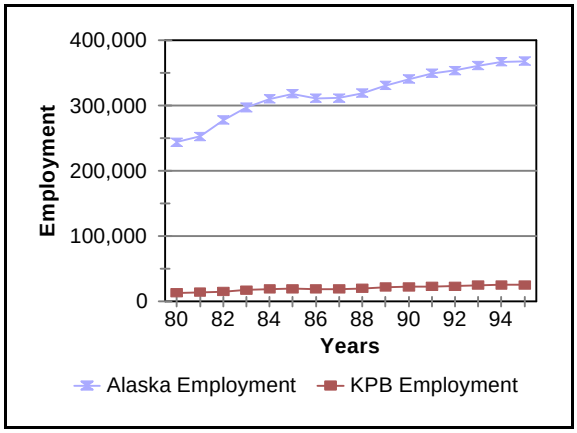
KPB'S LABOR FORCE, EMPLOYED AND UNEMPLOYED, 1975-1995

Year	Annual Average				Peak Month Rate (%)
	Labor Force	Employed	Unemployed	Rate (%)	
1975	8,576	7,827	749	8.7	13.9
1976	10,635	9,629	1,006	9.5	12.3
1977	9,734	8,747	987	10.1	12.5
1978	9,585	8,111	1,474	15.4	18.8
1979	10,017	8,642	1,375	13.7	17.6
1980	12,736	10,913	1,823	14.3	19.0
1981	13,079	11,351	1,728	13.2	18.3
1982	14,150	11,985	2,165	15.3	19.8
1983	15,604	13,225	2,379	15.2	22.2
1984	16,393	14,116	2,277	13.9	19.3
1985	16,543	14,261	2,282	13.8	16.7
1986	17,825	14,780	3,045	17.1	18.9
1987	16,968	14,123	2,845	16.8	21.4
1988	17,222	14,816	2,406	14.0	19.2
1989	19,191	17,411	1,780	9.3	16.1
1990	18,903	16,691	2,212	11.7	15.4
1991	19,703	17,014	2,689	13.6	19.0
1992	20,281	17,143	3,138	15.5	22.5
1993	20,725	18,045	2,680	12.9	16.9
1994	21,350	18,642	2,708	12.7	17.3
1995	21,524	18,871	2,653	12.3	17.4

Source: Alaska Department of Labor

FIGURE II.15

ALASKA AND KPB TOTAL EMPLOYMENT, 1980-1995



Source: USDOC, Bureau of Economic Analysis

1985-1990: The recession resulted in the loss of 600 jobs in the KPB, a decline of only three percent. Of course, construction was the hardest hit, losing nearly 900 jobs between 1985 and 1988, or about 40 percent of the construction workforce. The retail trade sector suffered a modest loss of 140 jobs, a 5 percent dip from 1985 to 1986. Employment in the service sector actually increased, enjoying five consecutive years of growth between 1985 and 1990.

The borough's oil industry lost 178 jobs between 1986 and 1987, falling by 17 percent. A number of oil industry service companies were based out of Kenai and this segment of the state's oil industry was particularly hard hit when the oil industry contracted after the fall in oil prices. Many of the oil companies tightened their budgets and tried to retain their employees by using them to do the servicing work that previously had been done by independent contractors.

The borough's already high unemployment rate climbed even higher during the recession, jumping from 13.8 percent in 1985 to 17.1 percent in 1986, the highest rate in urban Alaska.

By 1988, the Peninsula's oil industry rebounded from its low of 866 jobs in 1987. An increase in exploration activity on the Peninsula was responsible for this recovery. Employment in the refining/manufacturing side of the oil and gas industry remained relatively stable from 1987 to 1989. Also, oil spill cleanup activity contributed to the recovery.

The average annual growth rate in full- and part-time employment in the KPB for the 1985 to 1990 period was 3.3 percent. This rate of growth was higher than the Alaska average of 1.4 percent.

By 1990, nominal personal income for the KPB reached $862 million, a 24 percent increase, and nominal per capita personal income had grown to $21,110, an increase of 15 percent over 1985 levels. Real per capita income increased 4.5 percent between 1985 and 1990.

1990-1995: The average annual growth rate in full- and part-time employment in the KPB for this five-year period (1990-1995) was 2.6 percent, higher than the Alaska average of 1.6 percent. From 1990-1995, an average net gain of about 600 new jobs was created each year in the KPB.

By 1995, nominal personal income for the KPB reached $1.1 billion, a 23 percent increase, and nominal per capita personal income had grown to $22,990, an increase of 9 percent over 1990 levels. In real terms, personal income trended down, declining at an average annual rate of -1.8 percent.

The early 1990s saw an overall decline in unemployment dropping to a five-year annual average of 13.1 percent. The average annual unemployment rate for the 20-year study period was 13.3 percent.

3. Northwest Arctic Borough

The NWAB is the second largest borough geographically in the state, yet the population is less than 7,000 people. As discussed in the Volume 1 report, the state made considerable investments in education and utilities in rural areas. It also built homes, airstrips and other infrastructure. However,

despite this investment, the Northwest Arctic Borough's villages of Noorvik and Kiana experienced minimal increases in self-sustaining economic growth. Many of the region's residents practice a subsistence lifestyle.

Kotzebue was by far the largest community, with nearly half the borough population. As the economic center of the borough, Kotzebue had the most developed private sector and cash economy, with commercial fishing and processing operations federal, state and local government, school district, NANA Regional Corporation, and health service jobs. Kotzebue also is the transportation center for air, ocean and river transport.

The villages of Kiana and Noorvik are much smaller and have economies based primarily upon subsistence activities. There are few private sector jobs in either Kiana or Noorvik. Some residents found summer work at the Red Dog Mine, in Kotzebue Sound commercial fisheries, or as firefighters for the Bureau of Land Management/Alaska Department of Natural Resources. Construction projects offered another, yet limited, source of seasonal work. Opportunities to earn income with a wage and salary job were limited. Figure II.16 shows NWAB's employment by sector in five-year increments starting in 1975. NWAB labor force and employment rates are found in Figure II.17.

FIGURE II.16

NWAB'S TOTAL EMPLOYMENT 1975, 1980, 1985, 1990 AND 1995, BY SECTOR

Northwest Arctic Borough	1975	1980	1985	1990	1995
Total full- and part-time employment	**1,450**	**1,609**	**2,023**	**2,560**	**2,873**
Wage and salary employment	1,389	1,511	1,851	2,299	2,604
Agriculture, Forestry and Fishing	(L)	38	(D)	(D)	81
Mining	(D)	(D)	(D)	(D)	(D)
Construction	22	92	22	46	(D)
Manufacturing	11	(L)	0	(L)	(L)
Transportation and Public Utilities	173	134	130	221	263
Wholesale and Retail Trade	124	157	221	198	309
Wholesale trade	(L)	(L)	(L)	(L)	(L)
Retail trade	124	157	221	198	309
Finance, insurance, and real estate	66	31	94	115	97
Services	(D)	(D)	316	552	(D)
Federal Government, civilian	396	216	134	79	62
Military	165	63	40	59	52
State and Local Government	323	639	945	900	746
State Government	na	59	92	83	63
Local Government	na	580	853	817	683

Source: USDOC, Bureau of Economic Analysis
(D)–not shown to avoid disclosure of confidential information.
(L)–less than 10 employed
na–not available

1975-1980: The public sector dominated the job market in the NWAB. In 1975, the public sector employed 884 people, or 61 percent of total full- and part-time employment. The federal government employed 386 civilians, the military employed 165 people, and the state and local government employed 323 people, 22 percent of total borough employment. Government accounted for 61 percent of all employment in the borough. Using available BEA statistics, the transportation industry ranked as the second largest employer in the NWAB. In 1975, 12 percent of the jobs were in the transportation industry. The retail trade ranked third with 9 percent of the employed. The unemployment rate was only 9.5 percent.

Nominal personal income for the NWAB for 1975 was $27 million. On a per capita basis, this meant each person had an average annual income of $5,536. Real personal income declined 3 percent from 1975 to 1980.

FIGURE II.17

NWAB'S LABOR FORCE, EMPLOYED AND UNEMPLOYED, 1975-1995

Year	Annual Average				Peak Month
	Labor Force	Employed	Unemployed	Rate (%)	Rate (%)
1975	1,984,000	1,796,000	188,000	9.5	13.4
1976	2,096,000	1,848,000	248,000	11.8	13.7
1977	1,999,000	1,788,000	211,000	10.6	13.0
1978	2,516,000	2,190,000	326,000	13.0	14.7
1979	2,417,000	2,147,000	270,000	11.2	13.3
1980	1,918,000	1,599,000	319,000	16.6	21.2
1981	2,107,000	1,830,000	277,000	13.1	19.9
1982	2,346,000	2,071,000	275,000	11.7	14.1
1983	2,610,000	2,274,000	336,000	12.9	15.3
1984	2,638,000	2,277,000	361,000	13.7	18.6
1985	2,045,000	1,769,000	276,000	13.5	19.4
1986	2,194,000	1,856,000	338,000	15.4	19.9
1987	2,193,000	1,853,000	340,000	15.5	21.1
1988	2,195,000	1,910,000	285,000	13.0	16.8
1989	2,113,000	1,902,000	211,000	10.0	11.2
1990	2,112,000	1,806,000	306,000	14.5	20.0
1991	2,175,000	1,819,000	356,000	16.4	18.5
1992	2,184,000	1,729,000	455,000	20.8	23.5
1993	2,198,000	1,828,000	370,000	16.8	19.7
1994	2,296,000	1,936,000	360,000	15.7	18.4
1995	2,205,000	1,849,000	356,000	16.1	20.2

Source: Alaska Department of Labor

Between 1975 and 1980, only 158 new jobs (11 percent growth) were created in the NWAB. The growth largely took place in the construction (+315 percent), retail (+26.6 percent) and government (+3.9 percent) sectors. By 1980, the unemployment rate rose to a new high of 16.6 percent (as seen in Figure II.17).

As the economic center for the NWAB, Kotzebue's's economy is more diversified than the small villages of Kiana and Noorvik. Figure II.18 shows the employment trends for NWAB, Kotzebue, Kiana and Noorvik. ADOL figures, for 1980, show 1,204 wage and salary jobs in Kotzebue.[21] Local government employment was 40 percent (see Appendix A for ADOL labor statistics for Kotzebue and Kiana/Noorvik). The next highest sector of employment was the federal government at 17 percent. When adding in state government, total public sector employment in Kotzebue was 62 percent of total employed.

Again using ADOL figures, Kiana and Noorvik together employed 78 people, of which 80 percent worked for the federal or local government. Year-round jobs were limited to the school district, the city, and the local store.

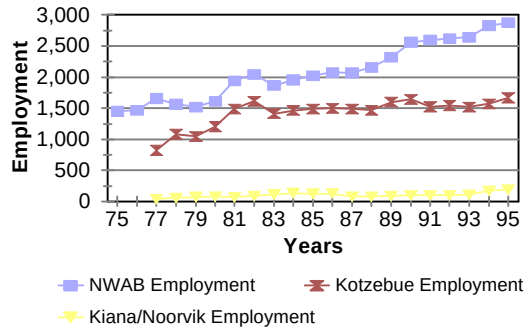
1980-1985: Between 1980 and 1985, 414 new jobs were created in the NWAB, 26 percent growth. During this period, population increased 21 percent suggesting some general improvement in economic conditions in the borough. Still, in 1985, only about half (52 percent) of the adult population of the NWAB was in the labor force.

The public sector dominated the workforce, accounting for 55 percent of all employment, or 1,119 jobs. The service sector included 316 jobs, or 16 percent of all employment. The retail sector grew by 64 jobs, or 41 percent growth, over the five year period.

[21]The U.S. Department of Commerce BEA does not provide employment figures for Kotzebue, Kiana, or Noorvik. ADOL figures are used for Kotzebue, Kiana and Noorvik employment. Kiana and Noorvik employment numbers are combined by ADOL. ADOL did not have comparable employment figures for the years 1975 and 1976.

FIGURE II.18

NWAB, KOTZEBUE AND KIANA/NOORVIK TOTAL EMPLOYMENT, 1975-1995



Source: USDOC, Bureau of Economic Analysis
Alaska Department of Labor

By 1985, nominal personal income for the NWAB rose to $68 million, up 72 percent over the five-year period. Likewise, nominal per capita income jumped 44 percent. Over the same time period, real personal income grew 35 percent. For the five-year period, the unemployment rate averaged 12.9 percent. This clearly understates actual employment because many adults are not in the labor force and therefore are not included in unemployment statistics.

Kotzebue's 24 percent growth in full- and part-time employment paralleled growth in the borough overall. From 1980 to 1985, 69 percent of the new jobs in the borough (286 jobs), were located in Kotzebue. Growth occurred mostly in the service (90 new jobs) and local government (161 new jobs) sectors. Employment actually fell in the transportation sector and federal government.

Kiana and Noorvik also experienced growth in employment. Most of these jobs, 92 percent of all full- and part-time jobs, however, remained in local government sector. Jobs in local government doubled by 1985. Whereas, the NWAB overall and Kotzebue were becoming less reliant on public sector jobs, Kiana

and Noorvik became more.

1985-1990: Relative to the other areas of study, the NWAB was, to a large degree, removed from the frantic growth in the early 1980s, and the subsequent recession. This is not to say, however, that there was no effect on the local economy. The local government employment remained dependent on funding through the state's programs (see discussions in Volume 2, Part 1). These assistance programs and capital expenditures slowed as state government reduced funding. In 1986, the unemployment rate reached 15.4 percent. The peak month unemployment rate was 19.9 percent. The NWAB was the first region in the state to be designated as an economically distressed zone under the new local hire law provisions enacted in 1987 because of the area's high unemployment.

Events within the region helped to expand the private sector for and lessen its dependence on the public sector. For instance, the Maniilaq Association, a Native-owned nonprofit organization, took over the Indian Health Service facility from the federal government in 1987, resulting in 25 percent growth in the service sector from 1986 (federal government employment fell 26 percent at the same time).

A key economic development event in the borough's history was construction of Red Dog Mine. The mine was developed during 1987-1989 at a total cost of $415 million. During this period it was the second largest private employer in NWAB. The mine opened late in 1989, with 279 permanent mining jobs. In addition to private sector job opportunities for local residents, the mine provided a desperately needed tax base for the borough (as discussed in Volume 2, Part 1 Report). By 1990, public sector dominance waned to only 40 percent of total employment.

The mine's impact on personal income for the region was substantial. By 1990, total nominal personal income was $89.8 million, a 33 percent increase over the past five years. Real personal income was up 21 percent. In one year (from 1989 to 1990), real per capita personal income jumped 11 percent.

The shifts in the NWAB employment picture are reflected in the employment picture in Kotzebue. By 1990, its reliance on the public sector to employ its residents had also dropped to 50 percent.

Local government continued to dominate employment in Noorvik and Kiana. Local government accounted for 81 percent (79 jobs) of the total employment. The only other two sectors that registered any employment were services (12 jobs or 12 percent) and retail (six jobs or 6 percent).

1990-1995: The Red Dog Mine became fully operational in 1990. Co-owned by the regional Native corporation, NANA, and Cominco Mining Co., the Red Dog provided stable, year-round mining jobs for many residents of the borough. Real personal income continued to rise, climbing another 7 percent between 1990 and 1995.

The borough's dependence on government continued to decline. In 1995, only 30 percent of all jobs were in the public sector. The largest public sector employer was the NWAB school district, with more than 400 employees. In the private sector, the largest employer was Maniilaq Association, followed by Cominco (Red Dog Mine).

The community of Kotzebue benefitted the most from the new developments in the NWAB's economy. For example, in 1993 the $35 million Alaska Native Health Service hospital was constructed.

An oddity in the ADOL figures show that a major shift occurred in Kiana and Noorvik's private sector employment in 1994. There were 47 new positions created in the service sector. For the first time, employment in the private sector (50.2 percent) surpassed employment in the public sector (49.7 percent).

The key trend in the NWAB over the 20-year period was the shift from public sector dominance to a greater private sector role. These shifts were a result of several factors: 1) the establishment and growth of the Native regional and village corporations, 2) improvements to the social, economic and industrial infrastructure funded by the federal and state

government, 3) transfer of federal and state government services to private nonprofit services, and 4) the development of the world-class Red Dog Mine.

Chapter III: Sector Analysis

A. Introduction

Chapter III focuses on employment in sectors of the economy directly or indirectly affected by oil industry activity and revenues. This includes the oil and gas industry, the construction industry, transportation, state government and local government. It also includes brief overviews of other important components of the Alaska economy, such as the federal government and military.

B. Oil and Gas Sector

Oil and gas-related jobs fall into one of three sectors, oil and gas extraction and production (i.e., firms engaged in the general operation of properties), oil and gas manufacturing (i.e., value-added activities), and oil and gas service industries (i.e., firms providing services to companies operating oil properties). However, in ADOL and BEA data, oil and gas industry-related employment is spread among the mining, construction, manufacturing, transportation and service sectors. This section addresses oil and gas extraction and production employment (classified under "mining" in BEA and ADOL statistics) as well as oil and gas-related manufacturing.

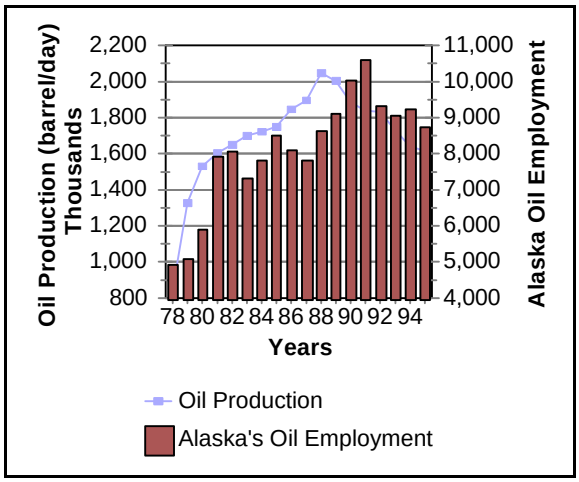
Oil industry employment in Anchorage includes primarily support staff (e.g., managers, accountants, technicians, clerical) and professional staff (e.g., geologists, engineers) for the field operations located in Cook Inlet and the North Slope. Oil and gas employment in KPB comprises production, manufacturing and service operations. There is no oil and gas industry employment in the NWAB.

Following completion of the $9 billion trans-Alaska oil pipeline in 1977, Alaska's oil industry grew rapidly. Employment in the industry followed production trends, rising through the 1980s then trending down through the 90s, though employment began to decline a few years in advance of production decline (See Figure III.1).

Figure III.2 shows how the price in oil affected Alaska's oil industry employment. Short-term price changes had little impact on oil industry employment in Alaska.

Employment in Alaska oil extraction industries grew 78 percent between 1975 and 1980, from 3,300 jobs to 5,900 jobs in 1980.[22]

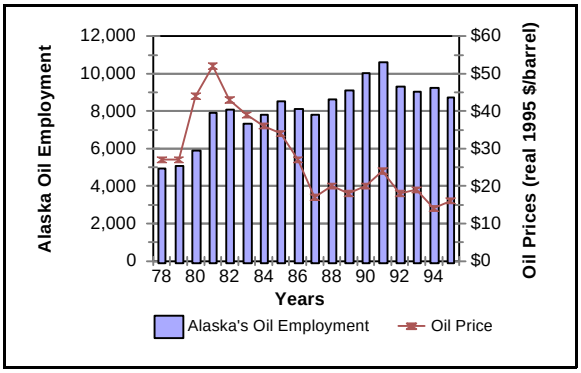
FIGURE III.1
ALASKA'S OIL EMPLOYMENT AND PRODUCTION, 1975-1995



Source: USDOC, Bureau of Economic Analysis
Alaska Department of Revenue

[22] For privacy reasons, the US Department of Commerce does not provide oil and gas extraction employment figures for 1975-1987, and 1989-1990. Estimates of Alaska oil and gas extraction employment for these years are 88.0 percent of total mining jobs. This percent was selected based on the average percent of 89.1 of oil and gas jobs to total mining jobs for the years of 1988, and 1991-1995.

FIGURE III.2
ALASKA'S OIL EMPLOYMENT AND OIL PRICES, 1975-1995 IN REAL 1995 DOLLARS



Source: USDOC, Bureau of Economic Analysis Alaska Department of Revenue

Between 1980 and 1982, employment in the sector grew 37 percent to peak at 8,100 jobs in 1982.

Employment fell 9 percent in 1983 (to 7,300 jobs) but turned around in 1984, rising 7 percent (to 7,800 jobs), then peaking in 1985 (at 8,500 jobs).

Like elsewhere in the economy, oil sector jobs fell in 1986 and 1987. The industry lost approximately 450 jobs in 1986 and another 300 jobs in 1987. The number of working oil rigs dropped from 23 working rigs in 1985 to eight in 1986.

The number of active drilling rigs grew from nine in 1987 to twelve in 1988. This rise in activity occurred despite oil prices having declined by 20 percent in 1988, the result of a surplus of drilling equipment which pushed down drilling costs by about 30 percent.[23]

Oil industry employment increased 11 percent in 1988 in Alaska, rising to 8,600 jobs. This represented 4 percent of the state's total wage and salary employment. Payroll for the oil and gas extraction sector was $687.3 million, or 8 percent of total payroll in Alaska.

The *Exxon Valdez* oil spill and its cleanup effort pumped hundreds of millions of dollars into the Alaska economy.

There were three components of employment impact: 1) the direct *Exxon/Veco/Norcon* employment (peaking at 2,830 jobs); 2) the subcontractor-vessel employment (peak of 1,685 jobs); and, 3) the accompanying support sector employment (peak of 2,260 jobs).[24]

By 1989, *ARCO Alaska* announced plans to spend $375 million on production and exploration in 1989, an increase of 70 percent more than 1988. *BP Exploration* also spent $425 million on various capital expenditures, representing a 31 percent increase more than 1988 expenditures. Oil and gas extraction employment continued to grow to 9,100 jobs (up 6 percent between 1988 and 1989). A key reason for this increase was that oil production became more labor intensive as production declined – companies at the Prudhoe Bay field increased employment for reservoir maintenance, infill drilling and other enhanced recovery operations.[25] By 1990, oil prices also started to show recovery and employment grew another 10 percent reaching 10,000 jobs.

For the 20-year study period, the oil and gas extraction sector jobs had reached its peak in 1991 at 10,600 jobs, representing 4 percent of Alaska total wage and salary jobs.

Alaska's oil and gas sector contracted in 1992. *BP Exploration* announced cuts of 425 jobs out of its total 1,600 jobs. *ARCO Alaska* also trimmed their workforce. Oil companies pointed to declining production at Prudhoe for the need to downsize in Alaska. Between 1991 and 1992, 1,300 jobs were lost in the oil and gas industry. These 1992 employment drops were more severe in this industry than

[23] ADOL, *Alaska Economic Trends, March 1989* p. 5

[24] ADCED, *Alaska Economy Performance Report, 1988-89.* , p. 13.

[25] Ibid., p. 13.

experienced during the oil price crash of 1986. There were further cuts in employment (3 percent) in 1993.

Cook Inlet Oil and Gas Industry: Prior to the discovery of Prudhoe Bay, Alaska did have an established oil industry in Cook Inlet. Oil was first discovered at Swanson River in 1957. Oil production peaked in 1970 at 82 million barrels per year.[26] After 1970, the amount of oil produced dropped dramatically, but stabilized after 1991.

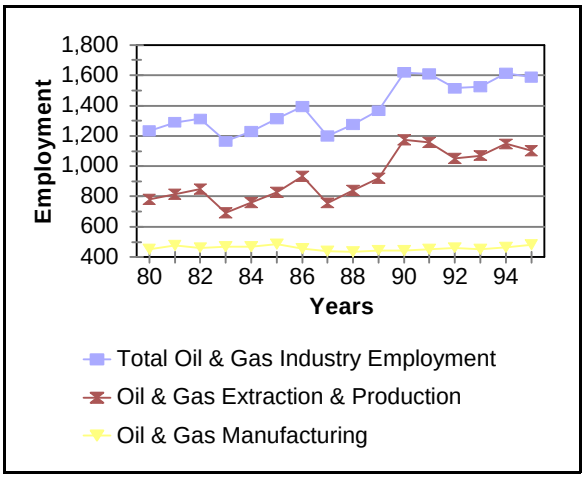
Figure III.3 shows KPB's oil and gas industry employment. Figure III.4 shows KPB's oil-related wage and salary earnings. According to ADOL, there were 783 jobs in the oil extraction and production sector in 1980. By 1985, there were 827 jobs in the extraction and production category, about 15 percent of total borough employment. During this time, Marathon Oil built a new drilling platform in the Cook Inlet which provided 60 full-time jobs for the Kenai area.

The number of jobs peaked in 1986 (935 jobs), but fell 19 percent in 1987. By 1989, most of these lost jobs had been recovered.

The period from 1990 to 1995 was marked by industrial consolidation and very slow decline in oil and gas industry employment. Unocal trimmed its workforce in 1992. About 40 oil and gas industry jobs were eliminated on the Kenai Peninsula in 1994 when Marathon acquired gas field interests from Unocal in exchange for the operation of two Cook Inlet platforms and a storage facility.

FIGURE III.3

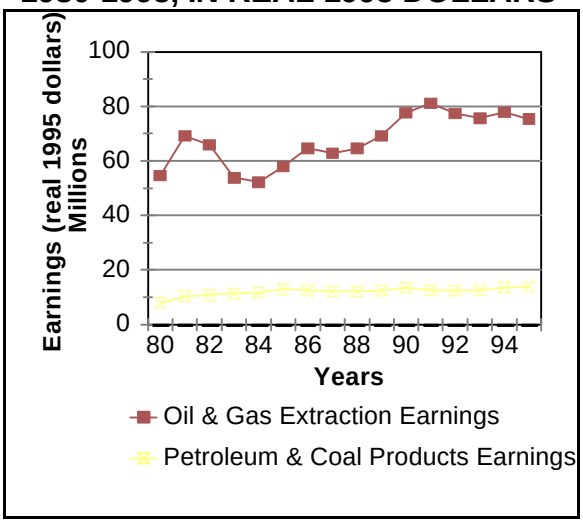
KPB'S OIL AND GAS EMPLOYMENT, 1980-1995



Source: Alaska Department of Labor

FIGURE III.4

KPB'S OIL AND GAS EARNINGS, 1980-1995, IN REAL 1995 DOLLARS



Source: USDOC, Bureau of Economic Analysis

[26]Kenai Peninsula Borough Economic Development District, Inc. *Oil and Gas Industry Report*, p. 1

The KPB hosts most of Alaska's oil and gas manufacturing infrastructure. Tesoro-Alaska Refinery Corporation built a refinery in 1969. This refinery produces propane, motor gasoline, jet fuel, heating fuel, diesel fuel, and asphalt. Unocal Agricultural Products first built a plant in 1968, and expanded in 1977 to produce ammonia fertilizer, and in 1979 to produce urea. At that time Unocal operated the largest complex of this type on the West Coast. Phillips Petroleum Company owns the only base-load liquefied natural gas (LNG) plant in North America (built in 1969). Before closing its doors in 1991, Standard Oil produced asphalt, jet fuel and diesel fuel.

According to ADOL data in 1980, there were 450 oil manufacturing jobs in the KPB, which dropped to 437 jobs in 1988. By 1995, employment reached 482 jobs.

C. Infrastructure Sectors

1. Construction

In 1975, construction of the pipeline, had pushed construction industry employment to just over 26,000 jobs, representing 13 percent of total wage and salary employment. Construction employment continued to climb in 1976 and peaked at 31,250 jobs (15 percent of total state employment). Construction payroll of $1 billion represented a third of total Alaska payroll.

Over the next three years, construction employment declined to its pre-pipeline level of 10,500 jobs. Payroll dropped to $366 million before bottoming-out in 1979.

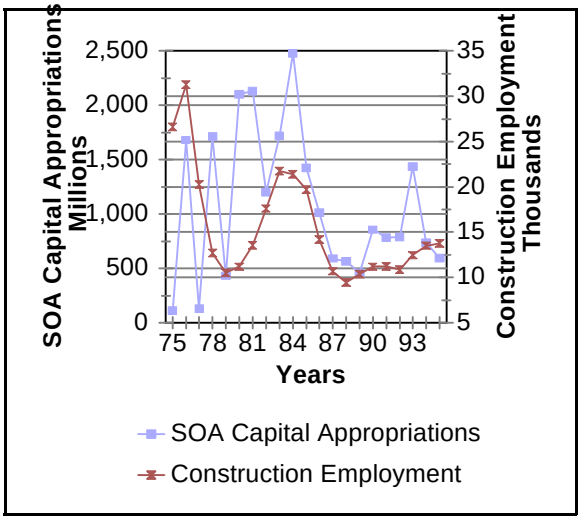
Expenditure of oil revenues by the State of Alaska, coupled with dramatic residential and commercial expansion in urban Alaska, spurred the next boom in construction in the early 1980s. During the 1980-1983 period, construction employment grew at a average rate of 25 percent per year. Employment peaked at 21,800 jobs, or 9 percent of the state's total wage and salary employment, in 1983. Nominal payroll peaked in 1983 at $1.4 billion (the highest amount since pipeline construction and for the remaining study period),

Figure III.5 shows the relationship between Alaska's construction employment and the State of Alaska's capital appropriations. For four years the state spent more than a billion dollars a year on capital construction projects (see Volume 1 Report).

Construction employment began dropping in 1984. A decline in state spending resulting from the rapid drop in oil prices compounded the deceleration already started by commercial and residential over-development. Construction employment dropped from 21,800 jobs in 1983 to a low-point of 9,500 jobs in 1988. Nominal payroll dropped from $1 billion in 1983 to $385 million in 1988.

FIGURE III.5

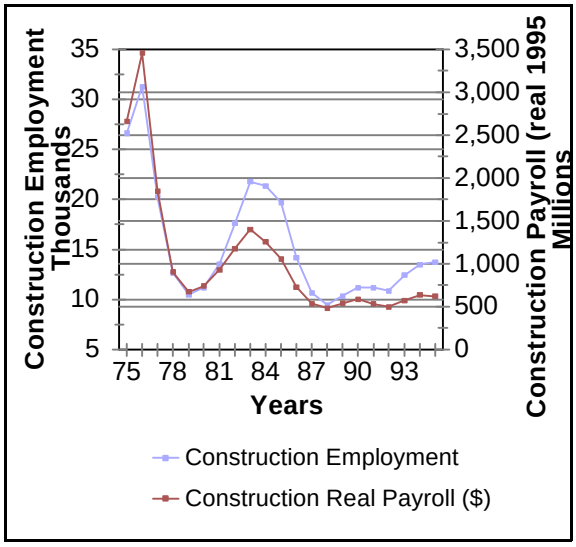
CONSTRUCTION EMPLOYMENT AND STATE OF ALASKA CAPITAL APPROPRIATIONS, 1975-1995 IN REAL 1995 DOLLARS



Source: USDOC, Bureau of Economic Analysis

FIGURE III.6

CONSTRUCTION EMPLOYMENT AND PAYROLL, 1975-1995 IN REAL 1995 DOLLARS



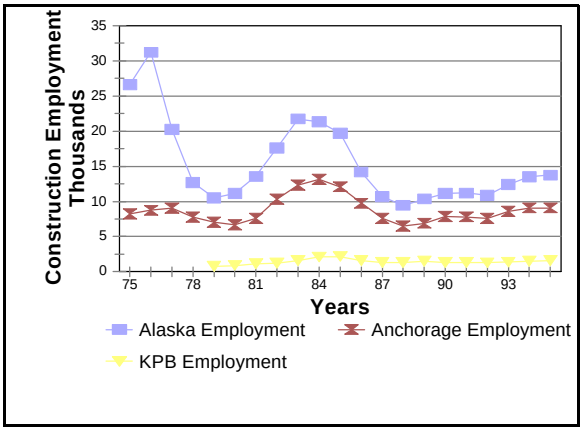
Source: USDOC, Bureau of Economic Analysis

The construction industry rebounded in the late 1980s' the result of several factors, including a healthy economy, lower interest rates, and retail expansion. Construction employment climbed from 10,400 jobs in 1989 to 13,800 jobs in 1995.

Anchorage: In 1975, 31 percent of the state's construction employment was Anchorage-based. Construction comprised 8 percent of Anchorage's total employment. During the 1970s Anchorage construction employment peaked in 1977 at 9,000 jobs. Employment declined at an annual rate of 9 percent for the next three years. In the early 1980s, as oil revenues were pumping into the Anchorage economy and consumer and investor confidence soared, the Anchorage construction industry jumped from 6,700 jobs in 1980 to 13,200 jobs in 1984.

FIGURE III.7

ALASKA, ANCHORAGE AND KPB CONSTRUCTION EMPLOYMENT 1975-1995



Source: USDOC, Bureau of Economic Analysis

From 1984 to 1988 just over half of Anchorage's construction employment was lost (6,700 jobs).

The average annual employment growth rate between 1990 and 1995 was 3 percent, with total employment reaching 9,100 jobs in 1995.

KPB: Data is not available on construction employment trends in the KPB prior to 1979, though it is likely that the borough followed the same trend as other urban Alaska communities. As new schools, roads, sewer systems, and recreational facilities were built in the boom period of the 1980s, KPB's construction employment ballooned 140 percent, or an average annual growth rate of 20 percent, to 2,200 jobs by 1985. Like everywhere in Alaska, the construction sector contracted with the 1986 recession. Between 1985 and 1988, 865 construction jobs were lost. Between 1990 and 1995, KPB's construction employment grew at an average annual rate of 7 percent, climbing to 1,600 jobs in 1995.

NWAB: The construction sector in the NWAB had 22 jobs, representing 2 percent of total NWAB employment in 1975. Employment peaked in 1981 at 183 jobs, or 10 percent of all NWAB jobs. This was the highest number of jobs recorded in the NWAB's construction sector for the study period. The sector's employment and earnings fell below 1975 levels by

1987 when 19 jobs were counted. By 1988, there was a jump to 73 construction jobs, largely attributed to Red Dog Mine development. Mine construction jobs were temporary and, by 1989, construction employment dropped to 52 jobs. Employment fell to 12 jobs by 1992 and rose to 25 jobs by 1994 (no BEA figures are available for 1995). By 1994, the construction sector employed 1 percent of all NWAB employment, and representing 2 percent of total NWAB industry earnings.

Using ADOL figures, construction employment in Kotzebue represented 3 percent of total Kotzebue employed in 1980. Like in the NWAB, Kotzebue's construction employment peaked in 1981 at 59 jobs. This number dropped off significantly and by 1985, less than 1 percent of Kotzebue's employed were in the construction sector (0.5 percent, or eight jobs). By 1990s, there were 35 construction jobs and five years later, there were 41 jobs registered, making up 3 percent of total employed.

In the communities of Kiana and Noorvik, the only construction employment accounted for was one job in 1981-1982, 1992-1993 and 1995. There were two jobs reported in 1994. For the remainder of the years, there were no construction jobs reported.

2. Transportation, Communication & Utilities

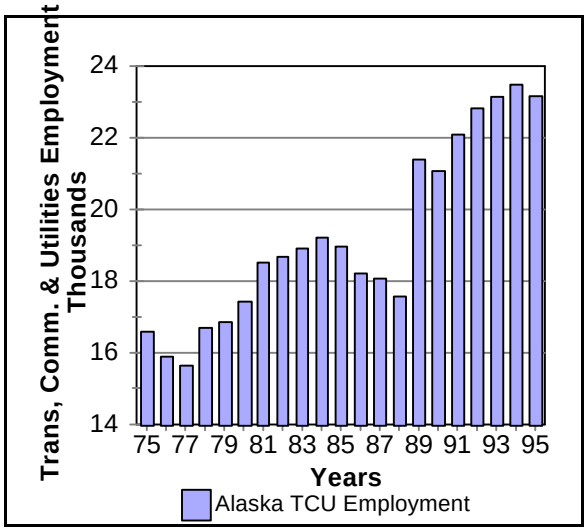
Transportation, communications and utilities (TCU) is a broad industrial sector that is directly and indirectly affected by the oil industry.

Most directly related to the oil industry is the pipeline sector including maintenance and operation of the pipeline by Alyeska Pipeline Service Company. Between 1975 and 1978, pipeline employment in Alaska jumped from 76 jobs to 1,400 jobs. After a year of operation, pipeline employment dropped 22 percent to 1,090 jobs in 1979. Employment slowly declined to 900 jobs in 1986 but then climbed back to 1,400 jobs in 1992. Employment data after 1993 was not disclosed, however, Alyeska Pipeline Service Company reportedly downsized by 60 jobs in 1994.

TCU employment overall in Alaska averaged 16,600 jobs in 1975. Employed dipped to 15,600 jobs over the next two years but then began a string of seven consecutive years of growth. By 1984, TCU employment in Alaska totaled 19,200 jobs. The recession brought four straight years of decline with employment bottoming-out at 17,600 jobs in 1988. The oil spill pushed employment in this sector up to 21,400 jobs in 1989, a single year increase of 22 percent. In fact, a large share of spill clean-up employment was reported in the utilities sector (sanitary services, specifically) which saw employment jump from 1,900 jobs in 1988 to 4,500 jobs in 1989.

FIGURE III.8

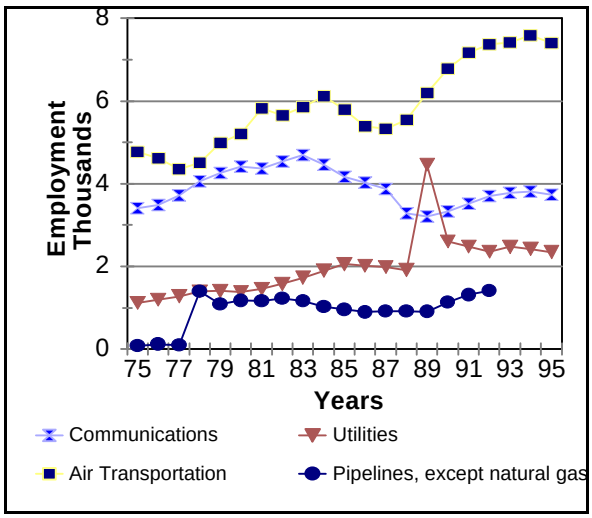
ALASKA'S TRANSPORTATION, COMMUNICATIONS AND UTILITIES EMPLOYMENT, 1975-1995



Source: USDOC, Bureau of Economic Analysis

FIGURE III.9

ALASKA'S AIR TRANSPORTATION, PIPELINE, COMMUNICATION AND UTILITY EMPLOYMENT, 1975-1995



Source: USDOC, Bureau of Economic Analysis

Anchorage: TCU employment in Anchorage in 1975 averaged 7,900 jobs. Employment in this sector grew steadily, with a minor down-tick after pipeline construction, to 8,700 jobs in 1980. Growth continued in the early 80s, with employment rising to 10,400 jobs in 1985. Recession pushed employment down to 9,900 jobs in 1986, but only temporarily. The sector added 800 jobs in 1997 alone, dipped slightly in 1988, then entered a longer term growth period. Between 1988 and 1994, TCU employment in Anchorage climbed from 10,600 jobs to 14,500 jobs in 1994. TCU employment dropped in 1995, mostly the result of the demise of MarkAir which resulted in the loss of 700-800 air transportation workers in Anchorage.

The oil spill had a positive impact on the transportation sector in Anchorage. Air cargo traffic went up 60 percent in 1989, much of which was related to oil spill equipment. Additionally, Anchorage began to gear up for a boom in the air cargo handling business with Federal Express's expansion plans and its acquisition of the Flying Tigers in 1989. By the early 1990s, Anchorage International Airport topped the nation for international transit cargo (measured by landed weight), beating out New York and Dallas.

KPB: KPB's employment in this sector was 821 jobs, (6 percent of KPB's total employment) in 1980. TCU jobs started to drop off in 1985 and continued through 1986. The Exxon Valdez oil spill benefitted the KPB's transportation, communication and utilities sector in 1989. Between 1988 and 1989, employment increased 70 percent to 1,577 jobs. In 1990, the sector had 1,340 jobs (representing 6 percent of KPB's employment, and 6 percent of total sector employment). Over the next five years, the sector's employment had an average annual growth rate of 2 percent with a net increase of 152 jobs.

NWAB: Transportation employment represented an important source of cash-paying employment in NWAB. In 1975, there were 173 sector jobs in NWAB, representing 12 percent of total NWAB employment. Almost all, if not all, of these jobs were located in Kotzebue.

The lowest number of jobs in this sector was recorded in 1986 with only 109 jobs. Thanks to the Red Dog Mine development in 1987, this sector's employment recovered to pre-1985 levels. By 1990, the TCU sector employed 221 jobs, or 9 percent of total NWAB employment. Five years later, employment had grown to 263 jobs, representing 9 percent of total NWAB employed. According to ADOL, Kotzebue had 235 jobs in the sector, making up 14 percent of Kotzebue's employed. Noorvik and Kiana only had one job reported from 1983 to 1985, and from 1992 to 1995.

D. Support Sectors

1. Trade (Wholesale and Retail)

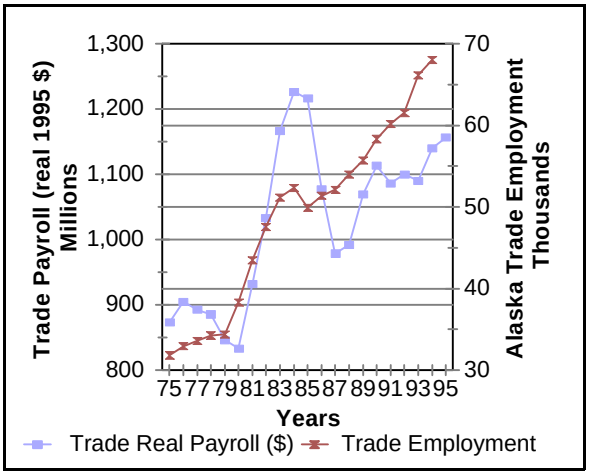
In 1975, Alaska had a relatively underdeveloped retail sector. There were 30,200 jobs in the sector in 1975, accounting for 5 percent of total state employment. By 1985, there was 52,400 jobs, or 17 percent of total state employment. By 1995, when there were 68,000 jobs in the sector. Proportionately, the sector crept up to 19 percent of total state employment.

The trade sector was not immune, however, from the effects of the 1986-1988 recession. Employment

dropped 9 percent between 1985 and 1987, the loss of 3,500 jobs. However, by 1990 the sector had surpassed 1985 employment levels, reaching total employment of 39,100. Since 1990, Alaska's economy has added 6,900 jobs.

FIGURE III.10

ALASKA'S RETAIL AND WHOLESALE TRADE EMPLOYMENT AND PAYROLL, 1975-1995 IN REAL 1995 DOLLARS



Source: USDOC, Bureau of Economic Analysis

The average real wage for a retail worker has fallen significantly over time. In 1975, the average trade employee made $28,899; in 1980 the average was $24,237. Wages fell, $23,232 in 1985, then 14 percent to $19,975 in 1990 and another 15 percent to $16,994 in 1995.

The trend in Anchorage's retail sector closely followed statewide trends. The retail sector accounted for 12,300 jobs in Anchorage in 1975, 14 percent of all wage and salary employment. By 1980, there were 15,000 jobs in the local retail sector, representing 16 percent of total employment. Retail's share increased to 18 percent in 1985 (23,400 jobs) and 21 percent in 1995 (28,400 jobs).

The 1986-87 recession brought the only measurable down-tick in retail employment, when Anchorage lost 2,389 trade sector jobs.

The same story was repeated in the Kenai Peninsula Borough. Retail employment accounted for 17 percent of total wage and salary employment in 1979 (the year data is available), 20 percent in 1985, and 25 percent in 1995. From the 1979 to 1995, retail employment in the KPB grew from 1,500 jobs to 4,300 jobs.

Recession impacts were comparatively modest in the KPB retail sector. Only 139 jobs were lost in 1986, a 5 percent hit.

The retail sector in NWAB accounted for 124 jobs in 1975, 9 percent of local employment. With an average annual growth rate of 6 percent, the retail sector reached 309 jobs by 1995, 12 percent of all jobs.

Kotzebue's retail and wholesale trade sector employment fluctuated significantly year-to-year. Kotzebue had 113 retail jobs in 1980, or 9 percent of all Kotzebue jobs. By 1990, the retail and wholesale trade sector included 126 jobs and by 1995, totaled 167 jobs, or 10 percent of all Kotzebue employment.

2. Finance, Insurance & Real Estate (FIRE)

In 1975,the FIRE sectors employed 16,500 workers in Alaska, 7 percent of total employment in the state. Like other components of the support sector, FIRE employment expanded rapidly as money from the pipeline construction project started to flow into the state. Employment in banks jumped from 3,000 jobs in 1975 to 3,900 jobs in 1978. Insurance employment jumped from 750 jobs in 1975 to 1,200 jobs in 1978. Overall, by 1980, FIRE accounted for 21,500 jobs.

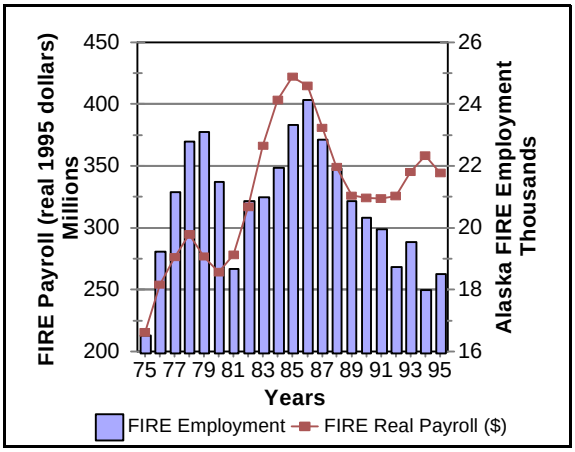
The financial industry was one of the primary beneficiaries of the 1980-1985 boom. Bank assets in the state more than doubled from less than $3.3 billion in 1980 to almost $7 billion in 1985.[27] Total bank deposits grew almost as rapidly as assets, from $2 billion to $4.2 billion.[28] Banking employment climbed from 3,700 jobs in 1980 to 5,800 jobs in 1985. Real estate employment was more modest, rising from 1,400 jobs to 1,900 jobs during the same period.

[27] ADCED, Division of Banking

[28] ADOL, *Alaska Economic Trends, November 1988*, p. 6

FIGURE III.11

ALASKA'S FIRE EMPLOYMENT AND PAYROLL, 1975-1995 IN REAL 1995 DOLLARS



Source: USDOC, Bureau of Economic Analysis

1985 brought signs of weakness in the real estate market. For example, there was a 58 percent increase in the value of Other Real Estate Owned (OREOs) held by banks.[29] Soon OREOs basically translated into real estate loans gone bad, with the banks left holding the property.

1986 became a turning point for the state's financial institutions. This combination of nonperforming loans and declining real estate values brought trauma to many of the state's financial institutions. By 1986, more than half of the banks and all of the service and loan companies were losing money. Between 1985 and 1990, banking sector employment declined by 1,700 jobs, falling to 4,100 jobs total.

While the retail and service sectors had almost fully recovered from the recession by 1988 or 1989, the FIRE sector continued to struggle. However, as interest rates declined in the early 1990s, and mortgage rates made commercial and residential real estate more attractive, the financial sector's position improved. Banking employment climbed from 4,100 jobs in 1990 to 4,700 jobs in 1994.

[29]Ibid., p. 6

Employment in the real estate sector also increased in the early 1990s, rising from a recession-low of 1,75 jobs to 2,400 jobs by 1995. Only the insurance sector has never fully recovered from the recession. Insurance sector employment hovered between 1,900 and 2,100 jobs between 1989 and 1995, well below the pre-recession peak of 2,700 jobs.

As Alaska's financial center, most FIRE employment is based in Anchorage. In 1975, 68 percent of FIRE sector jobs were based in Anchorage. FIRE employment in Anchorage jumped from 11,200 jobs in 1975 to 15,500 jobs by 1979. Employment dipped by 2,100 jobs in 1980 and 1981 before rising to 15,700 jobs in 1985. Recession resulted in six consecutive years of employment decline, finally bottoming-out in 1992 at 11,100 jobs. After rebounding in 1993 to 11,700 jobs, FIRE employment continued to slide through 1995, when employment totaled 10,900 jobs. By 1995, the proportion of Anchorage FIRE employment to the state's FIRE employment had slipped to 59 percent.

Between 1979 and 1985, employment in the KPB's FIRE sector was steady at around 1,100 jobs. Employment in the sector peaked in 1986 at 11,200 jobs, then declined slowly and steadily to 870 jobs in 1994. In 1995, there were 950 jobs, making up 4 percent of all employment.

FIRE employment in the NWAB was generally a very small and erratic component of the borough economy. In 1975, there were 66 FIRE jobs in the borough,5 percent of total employment. Fire employment jumped to 102 jobs in 1977, then fell to 31 jobs in 1980. Within four years FIRE employment had climbed to 92 jobs. It climbed slightly throughout the recession years, peaking in 1990 at 115 jobs. NWAB FIRE employment stood at 97 jobs in 1995.

3. Services

The service sector comprises a diverse group of businesses, e.g., hotels, personal and business services, auto repair and servicing, recreation, motion pictures, health, legal, educational, social and engineering services, as well as museums and membership organizations.

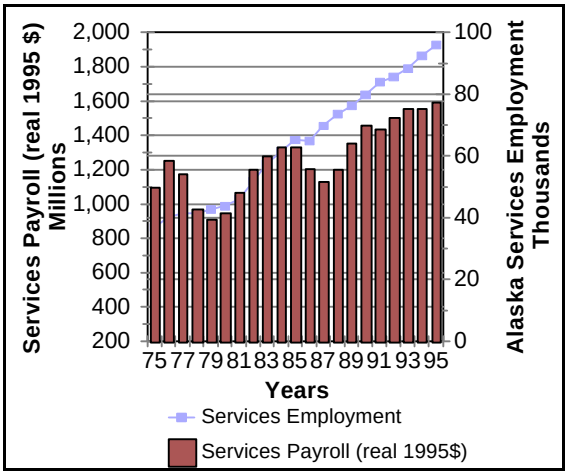
With the exception of 1978, and 1986-87, the service sector increased employment every year of the 20-year study period. The average annual growth rate was 4 percent, and over the 20 years, the sector's employment grew from 28,900 jobs in 1975 to reach 64,600 jobs in 1995 (a 117 percent increase).

Proportionately, the service sector grew from 16 percent of total employment in 1975 to 21 percent in 1985 and reaching 26 percent in 1995. In 1975, payroll for the service sector was 12 percent of total payroll. In 1985, it was 14 percent, and by 1995, it had grown to 17 percent of total payroll.

The fastest-growing components of the service sector over the 20-year period include: 1) health services (9,300 new jobs, +210 percent), 2) social services (4,300 new jobs, +192 percent) 3) membership organizations) 3,300 new jobs, +90 percent).

FIGURE III.12

ALASKA'S SERVICES EMPLOYMENT AND PAYROLL, 1975-1995 IN REAL 1995 DOLLARS



Source: USDOC, Bureau of Economic Analysis

In 1975, there were 20,000 service sector jobs located in Anchorage, 19 percent of total Anchorage employment. By 1985, service sector employment had climbed to 36,600 jobs, or 24 percent of all Anchorage jobs. Finally, by 1995, employment had reached 48,400 jobs, or 29 percent of total employment in Anchorage.

Almost 16 percent of KPB's total employment in 1980

was in the services sector (2,100 jobs). By 1995,services comprised 25 percent of all jobs in the KPB (6,400 jobs). Unlike other areas of urban Alaska, KBP's service sector actually grew during the 1986-87 period, jumping by 14 percent between 1986 and 1987 and another 11 percent in 1988. Tourism-related growth in the borough may have saved the borough from the service sector decline that hit other communities in Alaska during the recession.

Employment statistics for the service sector in the NWAB are not available prior to 1982 or post 1990, because too few companies reported employment (making the data nondisclosable). Starting in 1982, there were 253 service sector jobs in the NWAB, or 12 percent of all NWAB jobs. There was a slight contraction in the sector's employment in 1984, however, every other year, where figures are available, the sector expanded. Similar to the KPB's experience, the NWAB service sector increased through urban recession of the mid-1980s. By 1990, there were 552 service sector jobs in the borough, up 118 percent from 1982 with an annual average growth rate of 11 percent. Almost 22 percent of all NWAB jobs were in the service sector. Data is not available after 1990.

The service sector in Kotzebue grew from 128 jobs in 1977, to 177 jobs in 1982, and to 394 jobs in 1990. By 1995, there were 514 service sector jobs in Kotzebue, or 31 percent of total employment. Kiana's and Noorvik's service sectors were quite small, registering one job in 1977 and 1985. Eight jobs were created in 1989, and by 1993, there were 19 jobs. Employment in the service sector jumped in 1994 and 1995, when 63 new jobs were created. This expansion made the service sector responsible for 43 percent of Kiana's and Noorvik's total employment.

4. State Government

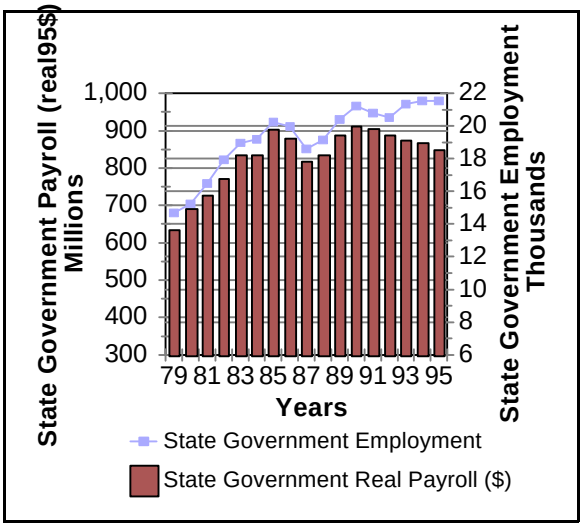
Figure III.13 graphs Alaska's state government employment and real payroll for the 1979-1995 period (BEA does not break out employment statistics for state government prior to 1979). In 1979, the State of Alaska had 14,700 jobs (including University of Alaska employees). State government employment jumped to 15,200 jobs in 1980. Between 1980 and 1985, state government employment grew at an average annual rate of 6 percent, reaching 20,200 jobs. By 1985, the state payroll represented 6 percent of employment and 10 percent of Alaska's total payroll.

Declining oil prices and state government revenues in 1986 resulted in the lay-off of 284 state workers in 1986 and another 1,357 workers in 1987. All told, the state government labor force was cut by 8 percent in 1986 and 1987.

As drastic were the cuts, it is noteworthy how quickly the job losses were recaptured. By 1989, state government employment had surpassed 1985 levels (reaching 20,400 jobs). Employment levels dipped in 1991 and 1992, but grew again in 1993 and 1994. In 1995, state government accounted for 21,500 jobs in Alaska.

FIGURE III.13

ALASKA'S STATE GOVERNMENT EMPLOYMENT AND PAYROLL 1979-1995, IN REAL 1995 DOLLARS



Source: USDOC, Bureau of Economic Analysis

In 1980, state government accounted for 4,900 jobs in Anchorage. For the next five years, Anchorage's state government employment grew 47, almost 14 percent faster than it did statewide. State employment grew 13 percent in 1981, 10 percent in 1982, and 7 percent in 1983. By 1985, there were 7,200 state government jobs in Anchorage, or 5 percent of all jobs.

Similar to the cuts realized at the statewide level,

Anchorage also lost 9 percent of its state jobs in 1986 and 1987 (617 jobs lost). Recovery started in 1988 and by 1990, Anchorage reached a new high in state government employment with 7,500 jobs.

In the last five years of the study period, state government employment continued to grow, increasingat an average annual rate of 2 percent. The number of
state government jobs peaked in 1994 at 8,300 jobs.

In 1980, 4 percent of the state government work force was employed in the KPB, where 5 percent of Alaska's population resided. Over the 1980-1985 period, state government employment grew at an average annual rate of 10 percent, a higher rate than the 6 percent rate for state government employment as a whole.

Along with other areas on the state, KPB also lost state government employees after the 1986 oil price bust. The jobs lost, however, were relatively minor, only 42 jobs, and by 1988, the KPB had reached an all-time high for state government jobs (914 jobs). Almost half of the growth (70 new jobs) was attributed to new positions at the Spring Creek Correctional Center in Seward. 1990 marked the peak year for state government employment in KPB for the study period with 1,080 jobs. The last five years of state government employment wavered, but by 1995, it leveled out between 1,000 and 1,100 jobs.

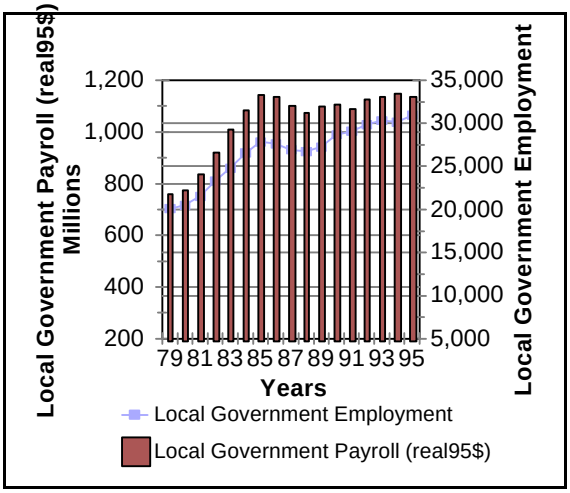
In 1980, the NWAB economy included 69 state government jobs. Thirty-six jobs were created over the next five years, at an annual growth rate of 11 percent. NWAB did not see any dramatic loss of jobs in 1986-87. In fact, only one job was lost in 1986 ,and two jobs were added in 1987. Also, unlike Anchorage's and KPB's experience, state government employment did not expand in the late 1980s and early 1990s. In fact, from 1988 on, there was a downward trend. By 1995, there were only 63 state government jobs, comprising 2 percent of the total employment in NWAB. Comparing BEA employment figures with ADOL, it appears that most if not all of the state government employment was located in Kotzebue. ADOL accounts for only one to two jobs in Kiana and Noorvik from 1991 to 1995.

5. Local Government

In 1979, Alaska's economy included 20,100 local government jobs. Between 1980 and 1985, local government employment grew by 36 percent, adding 7,700 jobs (totaling 27,800 jobs), an average 6 percent growth each year.

FIGURE III.14

ALASKA'S LOCAL GOVERNMENT EMPLOYMENT AND PAYROLL 1979-1995, IN REAL 1995 DOLLARS



Source: USDOC, Bureau of Economic Analysis

Local government grew mostly in response to increased education needs fed by population growth and other demographic changes, as well as higher expectations of local residents for government services (see Volume 2, Part 1 Report). The ability to expand employment to meet the service needs of a rapidly increasing population was a result of a sharp increase in state financial assistance in the form of revenue sharing, and municipal assistance, and school foundation monies (see Volume 1, Part 1 Report, Table III.A.2, Table III.B.1). Those communities without a tax base, largely in rural parts of the state, were able to provide more services to their population as a result of the additional state support.

These forms of assistance resulted in local governments becoming dependent on state disbursements for financing their operations. As an example, 18 percent of the Municipality of Anchorage's operating budget came from the state in

1977. By 1987, state support increased to 23 percent.

Because of this dependence on state revenue, declining oil prices brought hardship to local governments as well. Statewide, local government employment declined 4 percent from 1985 to 1988. Two years later, local government employment had recovered to the all-time high of 28,700 jobs.

During the 1990 to 1995 time period, local government employment grew at an average annual rate of 2 percent, reaching a total of 31,000 jobs in 1995.

In Anchorage, local government employment in 1980 totaled 7,100 jobs, representing 6 percent of total Anchorage employment. By 1985, local government employment increased to 8,700 jobs. With the bust of 1986, the Municipality of Anchorage laid off city workers, closed fire stations and libraries and sold city-owned utilities. Also, with real estate values plunging, the city was forced to cut its budget by 3 percent. Local government employment fell by about 950 jobs between 1985 and 1988, an 11 percent drop.

By 1990, local government employment had nearly recovered to 1985 pre-oil crash levels, totaling 8,400 jobs. Between 1990 and 1995, employment in Anchorage's local government sector varied from 8,400 jobs (1990) to 8,900 jobs (1992) and ended the period at 8,700 jobs.

The employment experience in KPB's local government sector differed from Anchorage. While, KPB's local government also had a rapid growth rate in the late 1970s and early 1980s (climbing from 1,050 jobs in 1979 to 1,820 jobs in 1985), its reaction to a decrease in state funding differed than in Anchorage. As mentioned in the Volume 2, Part 1 Report, the KPB avoided some of the jobs losses that Anchorage felt by changing the local government workweek from five days to four days. While affecting overall efficiency, this approach prevented heavy job losses. For the 1986 to 1988 period, KPB had a net loss of only 22 local government jobs. By 1990, there were 2,000 local government jobs in the borough. Between 1990 and 1995, KPB's local government grew at an average annual rate of 5 percent and by 1995, there were 2,600 jobs in local government.

Local government jobs in rural areas were a vitally important source of cash income in the NWAB. In 1980, there were 580 jobs in NWAB local government, or 36 percent of total employment. By 1985, local government jobs had increased by 273 jobs, or 42 percent of NWAB employment. Local government employment in NWAB also suffered during the 1986-87 period, cutting 23 percent of its total local government employment (the loss of 198 jobs - 10 percent of total borough employment). Over the last five years of the study, the NWAB lost a further 16 percent of its local government employment. By 1995, local government has fallen to represent 24 percent of total employment in the NWAB.

Kotzebue housed most of the local government employees for the NWAB. The peak year for local government employment was 1982, when 756 jobs were in the local government, or 47 percent of total Kotzebue employment. By 1985, employment dropped to 639, or 43 percent of total employment. While dipping in 1987 and 1988, by 1990, local government jobs had recovered to 666 jobs. The early 1990s saw further local government declines (166 jobs lost over the five years) to a total of 500 local government jobs, or 30 percent of total Kotzebue employment.

In 1980, there were 56 jobs in local government in Noorvik and Kiana (or 72 percent of total employment). These jobs grew to 112 jobs by 1985, or 91 percent of total employment. By 1987, Kiana and Noorvik lost half of its local government employment with only 65 jobs surviving the cuts. Local government has yet to return to pre-recession levels and as of 1995 totaled 94 jobs, 49 percent of all local employment.

E. Other Basic and Support Sectors

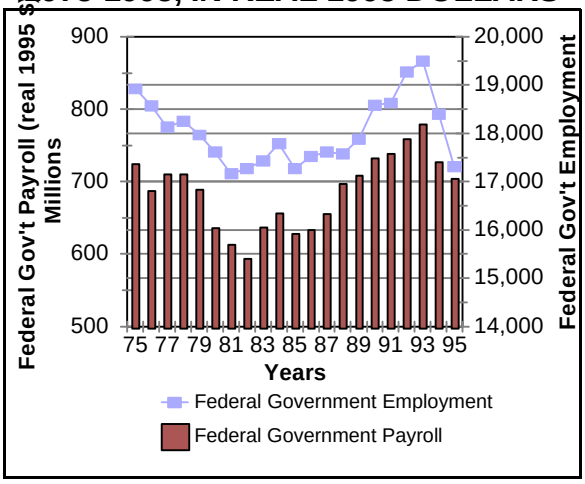
1. Federal Government (excluding the Military)

Figure III.16 shows the trends in Alaska's federal government employment (not including uniformed military personnel) and real payroll from 1975 to 1995. In 1975, the federal government represented 10 percent (18,900 jobs) of the state's total wage and salary employment. Over the next 15 years (1975-1990) federal employment declined slightly (0.1

percent). Declines in most federal agencies were offset by growth in the Postal Service.

FIGURE III.15

ALASKA FEDERAL GOVERNMENT EMPLOYMENT AND PAYROLL 1975-1995, IN REAL 1995 DOLLARS



Source: USDOC, Bureau of Economic Analysis

Much of the decline in federal government employment in Alaska occurred as a result of shifting responsibilities to state government and private non-profit organizations. For example, the Alaska Railroad was transferred from federal to state ownership. With the transfer came a loss of 700 jobs for the federal government. Some, but not all of these jobs, were retained by the state government. Employment adjustments were also realized in the US Department of Health and Human Services when a combination of federal budget constraints and privatization of health care services (into the hands of regional Native health corporations) occurred. The U.S. Department of Interior's Bureau of Indian Affairs (BIA) gradually turned over their responsibility for rural/Native schools to the State of Alaska. In 1981, an average of 630 employees were in schools operated by the BIA. By the end of 1986, the BIA had no employees in BIA operated schools.

By 1985, the federal government accounted for 17,300 jobs in Alaska, 7 percent of Alaska's total wage and salary employment. Employment inched up to 18,580 jobs in 1990. In the 1990s, federal agencies suffered from a national agenda to address the growing budget deficit by reducing federal spending. By 1995, federal government employment had fallen to 17,300 jobs, 6 percent of total wage and salary employment in

Alaska.
In 1975, the federal government employed 10,700 workers in Anchorage, 10 percent of total Anchorage employment. By 1995, federal government employment had dropped to 10,300 jobs, 6 percent of Anchorage employment.

In KPB, the federal government accounted for 177 jobs, or only 1 percent of total KPB employment. By 1995, there were 369 federal jobs in the KPB.

Proportionately, federal government employment in the NWAB was vitally important in the 1970s, but declined to much less prominence by 1995. In 1975, 396 jobs, or 27 percent, of total employment were in the federal government. By 1995, only 62 jobs, or 2 percent of total employment, remained. All of the 1995 federal government positions in NWAB were located in Kotzebue. Kiana and Noorvik had eight federal government positions in 1977. However, by 1982, there was no federal government employment in these villages.

2. The Military

The economic benefits from the military's presence have been great in Alaska, providing a solid, albeit eroding, economic foundation. The military in Alaska is represented by the Air Force, Army, and Navy. The two largest military installations, Elmendorf Air Force Base (AFB) and Fort Richardson Army Base, are located in Anchorage, and the third and fourth largest, Eielson AFB and Fort Wainwright, are located in Fairbanks. In 1980, the Air Force was Alaska's largest military service, representing more than 41 percent of the military's active duty and civil service personnel. This share increased to more than 44 percent by 1986.[30]

In 1975, there were 30,008 jobs in the military. Over the next 20 years, the average annual growth rate was -1 percent. The periods of most rapid decline were in the late 1970s, and more recently, from 1993 to 1995. Most of the recent decline occurred at Fort Richardson in Anchorage, when it downsized by 2,000 troops between 1993 and 1994. By 1995, total troop strength had reduced to 24,860 jobs, its lowest level in 30 years, with the closure of four sizable installations and downsizing of other bases. Between 1992 and 1995, military employment in Alaska dropped 19 percent. Military employment had fallen from 15 percent of the total wage and salary employment in 1975 to 9 percent of total employment in 1995.

The largest and most direct economic benefit Alaska receives from the military was through its payroll. In 1975, the military's payroll was $690.1 million, or 8 percent of total wage and salary disbursements in Alaska. By 1995, the military payroll was $634.7 million, or 7 percent of total payroll. The military earnings in Alaska were the same as its payroll. The military effects other sectors' employment, such as construction and services. For instance, military construction projects have an impact on the Alaska economy in a variety of ways depending upon the type of construction, but it is estimated by the military that 50 percent of its total construction budget is spent in Alaska.[31]

Additionally, military expenditures for operations and maintenance at their facilities have a greater impact on the local economy than construction expenditures. Not only was the budget larger, but a higher proportion of the money was distributed into the local economy. Generally, the purchase of services by the military has a greater impact on the local economy than does the purchase of goods. Services were more likely to be provided locally whereas goods were usually produced and/or purchased outside of Alaska.

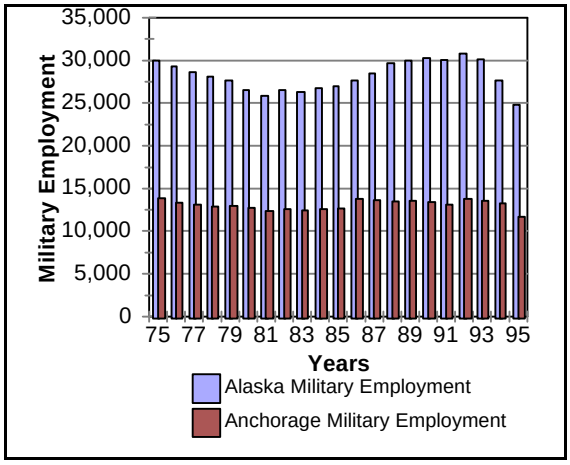
In 1975, the military accounted for 14 percent of Anchorage's employment. By 1995, the military only accounted for 7 percent of the total Anchorage employment. The decline was due to cuts in the number of uniformed military in Anchorage coupled with growth in other sectors of the economy. The military dropped from the second largest employment sector in 1975 to the fifth largest in 1995. Over the 20-year study period, Anchorage remained home to an average of 46 percent of the military in Alaska.

[30] Ibid., p. 8

[31] Ibid., p. 9

FIGURE III.16

ALASKA AND ANCHORAGE MILITARY EMPLOYMENT, 1975-1995



Source: USDOC, Bureau of Economic Analysis

The KPB relied significantly less on the military than Anchorage. In KPB, the military averaged around 2 percent of its total full- and part-time employment. In 1979, there were 237 military jobs in the KPB. The employment peaked in 1992 at 502 jobs, but fell to 472 jobs in 1995.

In 1975, there were 165 military jobs in the NWAB, representing 11 percent of the total full- and part-time employment. The sector ranked fourth in employment, after the federal and local governments and the transportation sector. The military's employment steadily declined to an all-time low of 36 jobs in 1986, then increased and stabilized in the late 1980s. However, the NWAB experienced further declines in the 1990s. By 1995, there were only 52 military jobs in the NWAB.

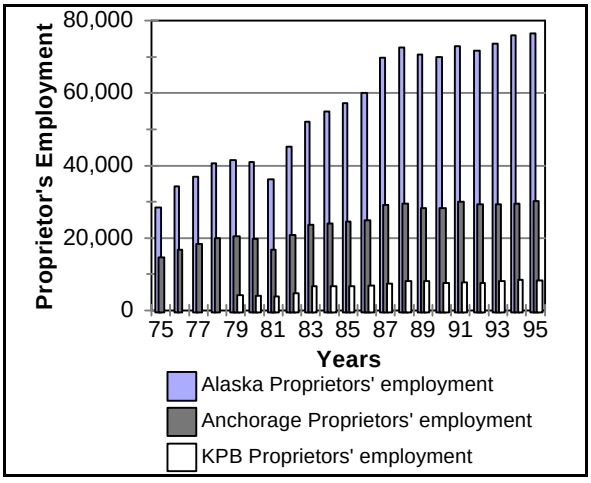
3. Self-Employed

Proprietor employment (self-employed persons) in Alaska in 1975 totaled 28,418 jobs, or 13 percent of total full- and part-time employment in Alaska. Proprietor income in 1975 was $708.3 million, representing 8 percent of total payroll. For the most part, entrepreneurship was healthy, and jobs in this sector increased each year. One significant exception was in 1981 when proprietor employment fell 12 percent from 40,959 jobs in 1980 to 36,135 jobs in 1981. The sector quickly rebounded by 1982, growing 25 percent to reach a new high of 45,185 jobs. Growth continued in the sector until 1989. Interestingly, 1987 saw a 16 percent growth rate over 1986. While most sectors in the economy were shrinking during this time, an expansion in proprietorship may be explained by those people losing their jobs, becoming their own boss instead. By 1995, proprietors totaled 76,562 jobs. This equated to 21 percent of the total full- and part-time jobs in Alaska. The proprietor income reached $1.3 billion in 1995, or 14 percent of total payroll. A statewide average income for proprietors was $17,007 (1995).

In 1975, proprietor employment represented 14 percent, or 14,600 jobs, of total Anchorage employment, with a total income of $331.2 million. By 1995, this value increased to 18 percent, or 30,200 jobs, of total employment.

FIGURE III.17

ALASKA, ANCHORAGE AND KPB PROPRIETORS' EMPLOYMENT 1975-1995



Source: USDOC, Bureau of Economic Analysis

There are a higher proportion of proprietors in the KPB than in Anchorage. In 1975, 30 percent, or 3,975, of the jobs were proprietor employment. The number of residents involved with the fishing industry may account for this higher proportionate percentage. By 1995, this percentage grew to 33 percent. KPB proprietors accounted for 11 percent of the state's self-employed. Proprietor success is reflected in their income of $131.6 million, or 26 percent of total KPB

wage and salary disbursements. An average income for proprietors was $15,844 (1995), falling below the state average.

The entrepreneur class in NWAB started small in 1975, representing only 4 percent of total employment, but it grew and by 1995, it represented 9 percent of total employment, or 269 jobs.

APPENDIX A

EMPLOYMENT AND LABOR FORCE

ALASKA – STATEWIDE
ANCHORAGE
KENAI PENINSULA BOROUGH
NORTHWEST ARCTIC BOROUGH
KOTZEBUE
KIANA/NOORVIK

Appendix A: Alaska – Statewide Employment

Years	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Total full- and part-time employment	227,177	242,947	236,918	237,418	240,914	244,126	253,145	277,888	297,505	310,225
Wage and salary employment by place of work	198,759	208,752	199,957	196,880	199,490	203,167	217,010	232,703	245,349	255,331
Farm wage and salary employment	205	205	205	300	300	300	285	260	282	253
Nonfarm wage and salary employment	198,554	208,547	199,752	196,580	199,190	202,867	216,725	232,443	245,067	255,078
Private wage and salary employment	120,919	131,426	122,493	118,014	118,777	122,973	135,674	147,369	157,534	164,833
Industry Employment										
Ag. services, forestry, fishing & other 2/	1,176	1,366	548	390	432	451	535	554	568	638
Agricultural services	128	135	155	178	171	173	237	305	337	413
Forestry, fishing, and other 2/	1,048	1,231	393	212	261	278	298	249	231	225
Forestry	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	36	56
Fishing	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	195	169
Other 2/	0	0	0	0	0	0	0	0	0	0
Mining	3,760	3,934	4,450	5,597	5,778	6,695	8,995	9,154	8,307	8,868
Metal mining	210	225	198	186	232	317	547	578	(D)	(D)
Coal mining	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Oil and gas extraction	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Nonmetallic minerals, except fuels	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Construction	26,636	31,250	20,232	12,687	10,486	11,186	13,566	17,602	21,766	21,366
General building contractors	4,189	3,936	3,577	3,720	2,892	2,625	4,060	4,921	6,098	6,439
Heavy construction contractors	16,640	21,176	10,326	3,464	2,924	3,852	4,582	5,617	7,330	5,881
Special trade contractors	5,807	6,138	6,329	5,503	4,670	4,709	4,924	7,064	8,338	9,046
Manufacturing	9,703	10,382	10,903	11,655	12,910	14,340	14,147	12,887	12,098	11,491
Durable goods	3,059	2,860	2,847	2,727	3,186	3,531	3,080	3,000	2,710	2,603
Lumber and wood products	2,216	2,084	2,210	1,877	2,190	2,574	2,247	2,130	1,899	1,762
Furniture and fixtures	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	30
Stone, clay, and glass products	399	368	277	260	227	219	291	288	291	349
Primary metal industries	(D)	(D)	(D)	(D)	(D)	(D)	(D)	15	23	(D)
Fabricated metal products	171	132	129	163	163	170	229	249	174	162
Industrial machinery and equipment	108	115	85	240	405	362	85	92	87	83
Electronic and other electric equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	15	12
Motor vehicles and equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other transportation equipment	49	41	39	72	82	93	101	97	98	94
Instruments and related products	(L)	11	11	(L)	(L)	(L)	0	0	0	(D)
Miscellaneous manufacturing industries	65	76	66	74	83	80	90	101	102	89
Ordnance 3/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Nondurable goods	6,644	7,522	8,056	8,928	9,724	10,809	11,067	9,887	9,388	8,888
Food and kindred products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	7,052	6,423	5,836
Tobacco products	0	0	0	0	0	0	0	0	0	0
Textile mill products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	14
Apparel and other textile products	21	26	24	25	26	32	42	43	44	45
Paper and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Printing and publishing	768	814	840	903	987	1,083	1,278	1,416	1,572	1,786
Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Petroleum and coal products	70	81	113	186	175	225	190	168	186	202
Rubber and misc. plastics products	73	46	60	40	30	33	45	43	50	(D)
Leather and leather products	(L)	(L)	(L)	(L)	0	0	0	(D)	(D)	(D)
Transportation and public utilities	16,592	15,890	15,631	16,697	16,843	17,416	18,512	18,663	18,909	19,201
Railroad transportation	282	270	269	248	234	235	231	113	(L)	(L)
Trucking and warehousing	3,974	3,302	2,785	2,492	2,087	2,087	2,466	2,498	2,254	2,344
Water transportation	1,370	1,314	1,763	1,295	1,232	1,399	1,419	1,348	1,364	1,374
Other transportation	6,431	6,320	5,822	7,205	7,617	7,902	8,567	8,584	8,866	9,123
Local and interurban passenger transit	1,159	1,132	959	846	1,077	1,007	972	1,028	961	949
Transportation by air	4,766	4,623	4,362	4,509	4,984	5,209	5,815	5,647	5,861	6,118
Pipelines, except natural gas	76	122	95	1,397	1,090	1,174	1,169	1,223	1,167	1,034
Transportation services	430	443	406	453	466	512	611	686	877	1,022
Communications	3,414	3,482	3,710	4,057	4,265	4,414	4,369	4,545	4,692	4,461
Electric, gas, and sanitary services	1,121	1,202	1,282	1,400	1,408	1,379	1,460	1,575	1,729	1,897
Wholesale trade	5,952	6,143	5,959	5,786	5,575	5,624	6,606	7,384	8,165	8,890
Retail trade	20,698	21,939	23,088	23,756	24,662	24,767	27,668	31,507	34,681	37,314
Building materials and garden equipment	981	1,080	1,203	1,273	1,179	1,082	1,297	1,711	1,950	2,124
General merchandise stores	3,404	3,439	3,420	3,249	3,161	3,352	3,197	3,171	3,340	3,711
Food stores	2,663	3,072	3,206	3,548	3,717	3,930	4,527	5,148	5,519	5,962
Automotive dealers and service stations	2,936	2,971	2,816	2,591	2,591	2,629	2,877	3,150	3,579	3,831
Apparel and accessory stores	791	906	1,011	1,081	1,085	1,126	1,214	1,484	1,506	1,546
Home furniture and furnishings stores	578	633	698	729	733	668	834	1,040	1,388	1,580
Eating and drinking places	6,352	6,555	7,203	7,586	8,437	8,180	9,524	11,212	12,396	13,372
Miscellaneous retail	2,993	3,283	3,531	3,699	3,759	3,800	4,198	4,591	5,003	5,188
Finance, insurance, and real estate	6,648	7,809	8,473	8,986	8,800	8,507	9,055	9,726	10,910	11,923
Depository and nondepository institutions	2,972	3,460	3,771	3,910	3,772	3,661	4,098	4,506	5,128	5,597
Other finance, insurance, and real estate	3,676	4,349	4,702	5,076	5,028	4,846	4,957	5,220	5,782	6,326
Security and commodity brokers	84	103	115	124	110	121	159	186	(D)	(D)
Insurance carriers	748	986	1,130	1,245	1,120	1,036	985	1,045	1,143	1,246
Insurance agents, brokers, and services	540	608	666	740	726	795	939	1,020	1,099	1,246
Real estate	1,316	1,458	1,398	1,619	1,582	1,425	1,344	1,497	1,710	1,870
Combined real estate, insurance, etc. 4/	18	18	37	51	60	80	63	59	(D)	(D)
Holding and other investment offices	970	1,176	1,356	1,297	1,430	1,389	1,467	1,413	1,546	1,665
Services	29,754	32,713	33,209	32,460	33,291	33,987	36,590	39,892	42,130	45,142
Hotels and other lodging places	3,202	3,331	3,347	3,249	3,457	3,464	3,877	4,573	4,601	4,929
Personal services	982	978	1,037	1,265	1,229	1,283	1,298	1,481	1,713	2,043
Private households	1,756	1,781	1,854	1,841	1,721	1,593	1,645	1,722	1,756	1,788
Business services	7,407	8,788	8,133	5,265	4,861	5,176	6,082	7,096	7,450	8,018
Auto repair, services, and parking	779	853	942	904	853	948	1,118	1,247	1,469	1,662
Miscellaneous repair services	462	513	497	476	472	522	631	712	727	813
Amusement and recreation services	284	290	319	462	507	498	635	758	834	1,002
Motion pictures	357	360	415	390	344	290	289	288	326	339
Health services	4,415	5,187	5,408	5,744	5,954	6,081	6,584	7,061	7,755	8,679
Legal services	888	1,065	1,170	1,338	1,402	1,467	1,593	1,743	1,830	1,920
Educational services	832	827	824	903	984	997	972	888	910	1,023
Social services 5/	2,357	2,607	2,943	3,887	4,577	4,841	4,913	4,583	4,624	4,598
Museums, botanical, zoological gardens	(L)	(L)	12	23	30	25	34	30	28	34
Membership organizations	3,632	3,788	3,922	4,136	4,330	3,905	3,245	3,300	3,497	3,337
Engineering and management services 6/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Miscellaneous services	2,397	2,341	2,386	2,577	2,570	2,897	3,674	4,410	4,610	4,957
Government and government enterprises	77,635	77,121	77,259	78,566	80,413	79,894	81,051	85,074	87,533	90,245
Federal, civilian	18,921	18,567	18,134	18,257	17,966	17,621	17,170	17,276	17,424	17,789
Military	30,008	29,270	28,611	28,107	27,662	26,555	25,847	26,544	26,320	26,721
State and local	28,706	29,284	30,514	32,202	34,785	35,718	38,034	41,254	43,789	45,735
State	(N)	(N)	(N)	(N)	14,686	15,231	16,480	17,932	18,969	19,177
Local	(N)	(N)	(N)	(N)	20,099	20,487	21,554	23,322	24,820	26,558

Source: USDC, Bureau of Economic Analysis, May 1998

Appendix A: Alaska – Statewide Employment (Continued)

Years	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Total full- and part-time employment	318,073	311,337	311,664	319,133	330,885	341,079	349,576	353,788	361,495	367,315	368,376
Wage and salary employment by place of work	260,887	251,261	241,755	246,553	260,211	271,082	276,595	281,949	287,872	291,359	291,845
Farm wage and salary employment	135	125	140	147	168	189	198	215	192	171	150
Nonfarm wage and salary employment	260,752	251,136	241,615	246,406	260,043	270,893	276,397	281,734	287,680	291,188	291,695
Private wage and salary employment	168,443	158,373	149,979	153,302	164,558	172,125	177,853	181,250	186,426	193,483	197,035
Industry Employment											
Ag. services, forestry, fishing & other 2/	700	749	795	910	1,098	1,079	1,214	1,484	1,632	1,390	1,419
Agricultural services	428	457	450	495	485	553	615	684	788	872	913
Forestry, fishing, and other 2/	272	292	345	415	613	526	599	800	844	518	506
Forestry	64	43	51	(D)	(D)	(D)	66	65	73	70	81
Fishing	208	249	294	(D)	(D)	(D)	533	735	771	448	425
Other 2/	0	0	0	0	0	0	0	0	0	0	0
Mining	9,666	9,201	8,870	9,604	10,346	11,393	11,793	10,582	10,140	10,364	9,868
Metal mining	397	(D)	500	732	871	1,053	1,016	1,024	857	888	849
Coal mining	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Oil and gas extraction	(D)	(D)	(D)	8,628	(D)	(D)	10,593	9,315	9,049	9,237	8,733
Nonmetallic minerals, except fuels	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Construction	19,709	14,203	10,691	9,451	10,385	11,165	11,206	10,859	12,454	13,518	13,751
General building contractors	5,656	3,876	3,129	2,727	2,658	2,767	2,944	2,889	3,370	3,544	3,791
Heavy construction contractors	5,272	4,335	3,016	2,875	3,626	3,753	3,478	2,820	3,186	3,423	3,281
Special trade contractors	8,781	5,992	4,546	3,849	4,101	4,645	4,784	5,150	5,898	6,551	6,679
Manufacturing	12,287	12,817	13,268	15,531	16,115	17,321	18,041	18,257	17,287	16,783	17,189
Durable goods	2,626	2,648	3,128	3,469	3,796	3,971	3,476	3,137	3,138	3,187	3,315
Lumber and wood products	1,753	1,913	2,445	2,753	2,988	3,158	2,683	2,435	2,420	2,316	2,299
Furniture and fixtures	30	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	42	28
Stone, clay, and glass products	330	308	307	262	258	262	275	249	263	300	293
Primary metal industries	(D)	13	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Fabricated metal products	162	150	126	127	126	118	101	98	101	104	239
Industrial machinery and equipment	80	65	35	35	57	54	59	50	67	82	86
Electronic and other electric equipment	12	14	(D)	(D)	(D)	(D)	(D)	(D)	11	18	18
Motor vehicles and equipment	(D)	(D)	0	(D)	(D)	(D)	10	(D)	(D)	(D)	(D)
Other transportation equipment	132	84	116	173	249	243	229	185	160	190	210
Instruments and related products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Miscellaneous manufacturing industries	99	73	55	56	52	52	47	38	44	70	77
Ordnance 3/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Nondurable goods	9,661	10,169	10,140	12,062	12,319	13,350	14,565	15,120	14,149	13,596	13,874
Food and kindred products	6,444	6,889	6,960	8,709	8,906	9,872	10,914	11,724	11,034	10,717	10,968
Tobacco products	0	0	0	0	0	0	0	0	0	0	0
Textile mill products	(D)	(D)	18	19	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Apparel and other textile products	53	44	40	48	48	47	45	49	55	53	45
Paper and allied products	(D)	833	(D)	(D)	984	909	913	912	775	(D)	(D)
Printing and publishing	1,892	1,787	1,623	1,718	1,707	1,817	1,948	1,682	1,538	1,550	1,566
Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Petroleum and coal products	232	250	260	279	301	305	314	323	332	324	338
Rubber and misc. plastics products	(D)	45	50	49	52	69	53	43	42	50	37
Leather and leather products	(D)	0	0	0	(D)	(D)	(D)	17	(D)	(D)	(D)
Transportation and public utilities	18,953	18,215	18,058	17,573	21,390	21,066	22,078	22,824	23,144	23,485	23,152
Railroad transportation	(L)	0	0	0	0	0	0	0	0	0	0
Trucking and warehousing	2,316	2,331	2,468	2,232	2,443	2,726	2,922	3,078	(D)	(D)	(D)
Water transportation	1,401	1,211	1,118	1,143	1,416	1,395	1,485	1,678	1,830	1,952	1,982
Other transportation	9,010	8,634	8,621	8,984	9,849	11,002	11,670	12,013	(D)	(D)	(D)
Local and interurban passenger transit	1,124	1,242	1,286	1,407	1,517	1,647	1,623	1,652	1,712	1,708	1,817
Transportation by air	5,791	5,390	5,323	5,535	6,191	6,782	7,160	7,377	7,423	7,583	7,408
Pipelines, except natural gas	957	898	914	913	912	1,134	1,314	1,415	(D)	(D)	(D)
Transportation services	1,138	1,104	1,098	1,129	1,229	1,439	1,573	1,569	1,557	1,633	1,553
Communications	4,166	4,022	3,868	3,295	3,217	3,338	3,523	3,701	3,784	3,815	3,737
Electric, gas, and sanitary services	2,059	2,017	1,983	1,919	4,465	2,605	2,478	2,354	2,472	2,425	2,345
Wholesale trade	8,895	8,242	7,536	7,533	7,686	7,783	7,905	7,968	8,077	8,389	8,764
Retail trade	38,502	36,882	34,999	35,709	37,571	39,107	40,347	41,451	42,601	45,851	46,988
Building materials and garden equipment	1,923	1,511	1,182	1,160	1,287	1,378	1,411	1,465	1,614	1,747	1,794
General merchandise stores	3,960	3,891	3,549	3,676	3,973	4,346	4,635	5,201	5,777	7,581	7,921
Food stores	6,256	6,059	6,067	6,374	6,645	6,762	7,203	7,386	7,333	7,396	7,430
Automotive dealers and service stations	3,945	3,667	3,471	3,540	3,952	4,305	4,335	4,262	4,365	4,718	4,881
Apparel and accessory stores	1,608	1,478	1,523	1,538	1,587	1,719	1,765	1,701	1,629	1,538	1,492
Home furniture and furnishings stores	1,470	1,265	1,015	979	1,048	1,181	1,236	1,247	1,266	1,463	1,540
Eating and drinking places	13,952	13,666	12,919	13,069	13,475	13,632	13,781	14,085	14,451	15,156	15,574
Miscellaneous retail	5,388	5,345	5,273	5,373	5,604	5,784	5,981	6,104	6,166	6,252	6,356
Finance, insurance, and real estate	12,454	12,147	11,078	10,422	10,007	9,964	10,338	10,385	10,878	11,651	11,333
Depository and nondepository institutions	5,754	(D)	5,093	4,535	4,324	4,072	4,127	4,139	4,357	4,724	4,487
Other finance, insurance, and real estate	6,700	(D)	5,985	5,887	5,683	5,892	6,211	6,246	6,521	6,927	6,846
Security and commodity brokers	(D)	(D)	(D)	282	260	249	263	249	270	280	272
Insurance carriers	1,284	1,224	1,031	931	947	929	928	908	941	943	941
Insurance agents, brokers, and services	1,444	1,430	1,261	1,207	1,082	1,066	1,052	1,042	1,043	1,096	1,069
Real estate	1,902	1,779	1,660	1,834	1,750	1,818	2,038	1,979	2,172	2,327	2,352
Combined real estate, insurance, etc. 4/	(D)	(D)	(D)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Holding and other investment offices	1,799	1,727	1,748	1,633	1,644	1,830	1,930	2,068	2,095	2,281	2,212
Services	47,277	45,917	44,684	46,569	49,960	53,247	54,931	57,440	60,213	62,052	64,571
Hotels and other lodging places	4,999	4,980	4,923	5,034	5,333	5,746	5,494	5,620	5,749	6,165	6,196
Personal services	2,153	2,029	1,966	1,878	1,925	1,963	2,000	2,094	2,091	2,077	2,124
Private households	1,824	1,857	1,871	1,849	1,830	1,759	1,761	1,959	1,958	1,764	1,756
Business services	8,485	7,738	7,221	5,066	6,042	6,618	6,967	6,909	7,442	7,555	7,788
Auto repair, services, and parking	1,792	1,661	1,560	1,751	1,881	2,220	1,978	1,983	2,069	2,203	2,404
Miscellaneous repair services	893	881	798	694	795	753	702	711	742	782	871
Amusement and recreation services	1,297	1,535	1,536	1,795	1,893	1,918	2,362	2,520	2,696	3,114	3,429
Motion pictures	292	315	333	777	868	924	943	1,003	971	916	921
Health services	9,135	9,436	9,419	9,889	10,457	10,938	11,568	12,162	12,768	13,353	13,686
Legal services	2,074	2,162	2,204	2,269	2,221	2,290	2,264	2,275	2,244	2,093	1,941
Educational services	1,145	1,160	1,231	1,285	1,386	1,442	1,498	1,640	1,928	1,832	1,814
Social services 5/	5,006	5,080	5,172	5,298	5,674	5,951	5,967	6,254	6,421	6,353	6,722
Museums, botanical, zoological gardens	33	33	28	76	63	70	79	85	84	84	85
Membership organizations	3,252	3,152	3,348	3,776	4,153	4,357	4,726	5,239	5,739	6,542	6,886
Engineering and management services 6/	(N)	(N)	(N)	5,042	5,312	6,161	6,469	6,833	7,116	7,008	7,738
Miscellaneous services	4,897	3,898	3,074	90	127	137	153	153	195	211	210
Government and government enterprises	92,309	92,763	91,636	93,104	95,485	98,768	98,544	100,484	101,254	97,705	94,660
Federal, civilian	17,270	17,523	17,619	17,571	17,878	18,580	18,630	19,268	19,493	18,398	17,300
Military	26,953	27,655	28,485	29,637	29,975	30,274	30,045	30,825	30,089	27,625	24,860
State and local	48,086	47,585	45,532	45,896	47,632	49,914	49,869	50,391	51,672	51,682	52,500
State	20,247	19,963	18,606	19,158	20,383	21,231	20,783	20,535	21,328	21,527	21,483
Local	27,839	27,622	26,926	26,738	27,249	28,683	29,086	29,856	30,344	30,155	31,017

Source: USDC, Bureau of Economic Analysis, May 1998

Appendix A: Anchorage – Employment

Years	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Total full- and part-time employment	103,100	108,834	112,520	113,380	113,875	114,349	118,098	132,479	142,697	149,325
Wage and salary employment	88,455	92,001	94,161	93,425	93,449	94,707	101,293	111,588	119,048	125,296
Proprietors' employment	14,645	16,833	18,359	19,955	20,426	19,642	16,805	20,891	23,649	24,029
Farm proprietors' employment	0	0	0	0	0	0	0	0	0	0
Nonfarm proprietors' employment 2/	14,645	16,833	18,359	19,955	20,426	19,642	16,805	20,891	23,649	24,029
Farm employment	0	0	0	0	0	0	0	0	0	0
Nonfarm employment	103,100	108,834	112,520	113,380	113,875	114,349	118,098	132,479	142,697	149,325
Private employment	67,707	74,395	78,666	79,576	79,409	80,012	83,499	96,783	106,088	112,122
Industry Employment										
Ag. serv., forestry, fishing, and other 3/	640	1,069	1,171	1,346	1,394	1,379	947	1,696	2,243	2,250
Mining	1,347	1,476	1,406	1,973	2,179	2,946	3,143	4,066	4,016	4,313
Construction	8,223	8,740	9,033	7,765	7,051	6,704	7,611	10,341	12,358	13,172
Manufacturing	1,779	1,847	1,909	1,910	1,979	2,103	2,466	2,576	2,669	2,796
Transportation and public utilities	7,882	7,957	8,161	8,730	8,680	8,728	9,159	9,117	9,623	10,123
Wholesale trade	4,246	4,413	4,369	4,421	4,262	4,365	4,965	5,693	6,257	6,847
Retail trade	12,342	13,341	14,147	14,597	15,099	14,959	16,865	19,944	22,064	23,188
Finance, insurance, and real estate	11,207	13,072	14,376	15,445	15,471	14,432	12,153	14,130	14,451	14,937
Services	20,041	22,480	24,094	23,389	23,294	24,396	26,190	29,220	32,407	34,496
Government and government enterprises	35,393	34,439	33,854	33,804	34,466	34,337	34,599	35,696	36,609	37,203
Federal, civilian	10,728	10,609	10,283	9,878	9,681	9,537	9,403	9,621	9,719	10,015
Military	13,873	13,314	13,103	12,895	12,973	12,755	12,350	12,553	12,425	12,608
State and local	10,792	10,516	10,468	11,031	11,812	12,045	12,846	13,522	14,465	14,580
State	(N)	(N)	(N)	(N)	4,644	4,908	5,544	6,098	6,528	6,552
Local	(N)	(N)	(N)	(N)	7,168	7,137	7,302	7,424	7,937	8,028

Appendix A: Anchorage – Employment (Continued)

Years	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Total full- and part-time employment	153,386	148,898	146,608	145,936	149,214	155,536	160,007	161,150	164,659	166,707
Wage and salary employment	128,869	123,970	117,536	116,440	120,900	127,210	129,987	131,884	135,411	137,333
Proprietors' employment	24,517	24,928	29,072	29,496	28,314	28,326	30,020	29,266	29,248	29,374
Farm proprietors' employment	0	0	0	0	0	0	0	0	0	0
Nonfarm proprietors' employment 2/	24,517	24,928	29,072	29,496	28,314	28,326	30,020	29,266	29,248	29,374
Farm employment	0	0	0	0	0	0	0	0	0	0
Nonfarm employment	153,386	148,898	146,608	145,936	149,214	155,536	160,007	161,150	164,659	166,707
Private employment	115,178	109,600	107,715	107,855	110,864	115,782	120,198	119,651	122,499	125,670
Industry Employment										
Ag. serv., forestry, fishing, and other 3/	2,203	2,334	1,949	2,202	2,204	2,197	2,163	2,198	2,381	2,425
Mining	4,978	5,407	5,094	5,288	5,607	5,914	6,341	5,600	5,561	5,321
Construction	12,084	9,743	7,600	6,497	6,903	7,877	7,811	7,593	8,622	9,084
Manufacturing	2,933	2,526	2,659	2,746	2,703	2,854	3,104	2,730	2,542	2,841
Transportation and public utilities	10,419	9,852	10,741	10,572	11,425	12,511	13,508	13,865	14,024	14,544
Wholesale trade	6,851	6,389	6,134	6,014	6,061	6,026	6,290	6,379	6,411	6,590
Retail trade	23,356	22,148	21,684	22,080	23,033	23,885	24,534	25,051	25,145	27,421
Finance, insurance, and real estate	15,754	15,843	14,771	14,006	13,043	12,449	12,207	11,112	11,657	10,590
Services	36,600	35,358	37,083	38,450	39,885	42,069	44,240	45,123	46,156	46,854
Government and government enterprises	38,208	39,298	38,893	38,081	38,350	39,754	39,809	41,499	42,160	41,037
Federal, civilian	9,697	9,836	10,163	10,084	10,000	10,472	10,505	11,056	11,608	10,927
Military	12,644	13,764	13,610	13,466	13,557	13,392	13,147	13,759	13,588	13,231
State and local	15,867	15,698	15,120	14,531	14,793	15,890	16,157	16,684	16,964	16,879
State	7,201	7,094	6,584	6,696	7,076	7,514	7,703	7,738	8,197	8,301
Local	8,666	8,604	8,536	7,835	7,717	8,376	8,454	8,946	8,767	8,578

Source: USDC, Bureau of Economic Analysis, May 1998

Appendix A: Kenai Peninsula Borough – Employment

Years	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Total full- and part-time employment	(N)	(N)	(N)	(N)	12,845	13,113	14,131	15,202	17,649	18,942
Wage and salary employment	(N)	(N)	(N)	(N)	8,695	9,138	10,256	10,568	11,094	12,269
Proprietors' employment	(N)	(N)	(N)	(N)	4,150	3,975	3,875	4,634	6,555	6,673
Farm proprietors' employment	(N)	(N)	(N)	(N)	83	98	86	127	144	149
Nonfarm proprietors' employment 2/	(N)	(N)	(N)	(N)	4,067	3,877	3,789	4,507	6,411	6,524
Farm employment	(N)	(N)	(N)	(N)	118	133	121	162	180	180
Nonfarm employment	(N)	(N)	(N)	(N)	12,727	12,980	14,010	15,040	17,469	18,762
Private employment	(N)	(N)	(N)	(N)	10,782	10,890	11,802	12,604	14,770	15,772
Industry Employment										
Ag. serv., forestry, fishing, and other 3/	(N)	(N)	(N)	(N)	1,734	1,471	1,461	1,971	3,261	3,095
Mining	(N)	(N)	(N)	(N)	865	865	999	946	804	885
Construction	(N)	(N)	(N)	(N)	750	897	1,151	1,206	1,614	2,095
Manufacturing	(N)	(N)	(N)	(N)	1,754	1,892	2,070	1,849	1,620	1,444
Transportation and public utilities	(N)	(N)	(N)	(N)	709	821	1,038	1,152	1,183	1,190
Wholesale trade	(N)	(N)	(N)	(N)	314	279	377	322	336	408
Retail trade	(N)	(N)	(N)	(N)	1,483	1,438	1,548	1,699	1,949	2,315
Finance, insurance, and real estate	(N)	(N)	(N)	(N)	1,152	1,123	1,004	1,058	1,047	1,106
Services	(N)	(N)	(N)	(N)	2,021	2,104	2,154	2,401	2,956	3,234
Government and government enterprises	(N)	(N)	(N)	(N)	1,945	2,090	2,208	2,436	2,699	2,990
Federal, civilian	(N)	(N)	(N)	(N)	174	177	168	167	189	207
Military	(N)	(N)	(N)	(N)	237	224	283	293	300	339
State and local	(N)	(N)	(N)	(N)	1,534	1,689	1,757	1,976	2,210	2,444
State	(N)	(N)	(N)	(N)	481	527	588	647	709	782
Local	(N)	(N)	(N)	(N)	1,053	1,162	1,169	1,329	1,501	1,662

Appendix A: Kenai Peninsula Borough – Employment (Continued)

Years	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Total full- and part-time employment	19,663	19,095	18,992	20,095	22,060	22,414	23,190	23,259	24,539	25,226	25,422
Wage and salary employment	12,968	12,215	11,642	12,063	13,999	14,790	15,427	15,645	16,543	16,867	17,117
Proprietors' employment	6,695	6,880	7,350	8,032	8,061	7,624	7,763	7,614	7,996	8,359	8,305
Farm proprietors' employment	148	141	130	124	119	113	106	96	94	91	91
Nonfarm proprietors' employment 2/	6,547	6,739	7,220	7,908	7,942	7,511	7,657	7,518	7,902	8,268	8,214
Farm employment	164	155	145	139	135	129	122	110	107	102	101
Nonfarm employment	19,499	18,940	18,847	19,956	21,925	22,285	23,068	23,149	24,432	25,124	25,321
Private employment	16,257	15,663	15,536	16,549	18,233	18,418	19,246	19,255	20,262	20,957	20,811
Ag. serv., forestry, fishing, and other 3/	2,926	2,980	2,351	2,609	2,708	2,494	2,411	2,619	2,771	2,354	2,083
Industry Employment											
Mining	950	1,044	866	935	1,020	1,189	1,241	1,161	1,199	1,305	1,273
Construction	2,156	1,574	1,333	1,291	1,471	1,318	1,337	1,273	1,353	1,476	1,562
Manufacturing	1,588	1,475	1,609	1,811	1,965	2,182	2,401	2,318	2,182	2,183	2,184
Transportation and public utilities	973	824	861	929	1,577	1,340	1,392	1,332	1,364	1,528	1,492
Wholesale trade	410	410	433	461	466	480	469	517	550	577	547
Retail trade	2,586	2,447	2,754	2,763	2,887	3,069	3,346	3,564	3,860	4,223	4,322
Finance, insurance, and real estate	1,156	1,242	1,143	1,097	1,076	1,053	975	882	1,033	870	952
Services	3,512	3,667	4,186	4,653	5,063	5,293	5,674	5,589	5,950	6,441	6,396
Government and government enterprises	3,242	3,277	3,311	3,407	3,692	3,867	3,822	3,894	4,170	4,167	4,510
Federal, civilian	205	221	212	244	264	288	285	304	351	368	369
Military	383	393	405	434	432	483	496	501	495	475	472
State and local	2,654	2,663	2,694	2,729	2,996	3,096	3,041	3,089	3,324	3,324	3,669
State	834	826	792	914	1,061	1,080	1,034	999	1,034	1,046	1,065
Local	1,820	1,837	1,902	1,815	1,935	2,016	2,007	2,090	2,290	2,278	2,604

Source: USDC, Bureau of Economic Analysis, May 1998

Appendix A: Northwest Arctic Borough – Employment

Years	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Total full- and part-time employment	1,450	1,468	1,659	1,565	1,520	1,609	1,937	2,047	1,866	1,956
Wage and salary employment	1,389	1,405	1,596	1,495	1,415	1,511	1,848	1,953	1,780	1,823
Proprietors' employment	61	63	63	70	105	98	89	94	86	133
Farm proprietors' employment	0	0	0	0	0	0	0	0	0	0
Nonfarm proprietors' employment 2/	61	63	63	70	105	98	89	94	86	133
Farm employment	0	0	0	0	0	0	0	0	0	0
Nonfarm employment	1,450	1,468	1,659	1,565	1,520	1,609	1,937	2,047	1,866	1,956
Private employment	566	658	717	610	598	691	932	910	908	905
Industry Employment										
Ag. serv., forestry, fishing, and other 3/	(L)	(L)	(L)	(L)	30	38	35	(D)	(D)	(D)
Mining	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Construction	22	34	67	71	49	92	183	75	44	25
Manufacturing	11	(L)	15	(L)	(L)	(L)	0	0	0	0
Transportation and public utilities	173	156	165	130	135	134	164	205	204	192
Wholesale trade	(L)	(L)	(L)	(L)	0	(L)	(L)	(L)	(L)	(L)
Retail trade	124	126	161	156	154	157	202	253	231	208
Finance, insurance, and real estate	66	96	102	59	36	31	57	48	54	92
Services	(D)	(D)	(D)	(D)	(D)	(D)	(D)	253	307	292
Government and government enterprises	884	810	942	955	922	918	1,005	1,137	958	1,051
Federal, civilian	396	286	278	284	249	216	204	138	109	120
Military	165	138	136	118	72	63	52	54	53	36
State and local	323	386	528	553	601	639	749	945	796	895
State	(N)	(N)	(N)	(N)	48	59	51	59	82	88
Local	(N)	(N)	(N)	(N)	553	580	698	886	714	807

Appendix A: Northwest Arctic Borough – Employment (Continued)

Years	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Total full- and part-time employment	2,023	2,075	2,068	2,155	2,317	2,560	2,594	2,623	2,641	2,828	2,873
Wage and salary employment	1,851	1,856	1,783	1,850	2,026	2,299	2,304	2,344	2,374	2,551	2,604
Proprietors' employment	172	219	285	305	291	261	290	279	267	277	269
Farm proprietors' employment	0	0	0	0	0	0	0	0	0	0	0
Nonfarm proprietors' employment 2/	172	219	285	305	291	261	290	279	267	277	269
Farm employment	0	0	0	0	0	0	0	0	0	0	0
Nonfarm employment	2,023	2,075	2,068	2,155	2,317	2,560	2,594	2,623	2,641	2,828	2,873
Private employment	904	978	1,165	1,226	1,312	1,522	1,616	1,659	1,745	1,904	2,013
Industry Employment											
Ag. serv., forestry, fishing, and other 3/	(D)	121	(D)	(D)	(D)	(D)	114	108	86	91	81
Mining	(D)	27	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Construction	22	23	19	73	52	46	30	12	13	25	(D)
Manufacturing	0	0	11	11	13	(L)	(D)	(D)	(L)	(L)	(L)
Transportation and public utilities	130	109	173	172	185	221	230	230	251	260	263
Wholesale trade	(L)	0	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)
Retail trade	221	266	264	225	237	198	199	221	296	277	309
Finance, insurance, and real estate	94	80	99	102	104	115	91	71	73	105	97
Services	316	352	440	460	517	552	(D)	(D)	(D)	(D)	(D)
Government and government enterprises	1,119	1,097	903	929	1,005	1,038	978	964	896	924	860
Federal, civilian	134	148	109	99	87	79	76	77	74	66	62
Military	40	45	46	51	51	59	60	58	55	53	52
State and local	945	904	748	779	867	900	842	829	767	805	746
State	92	91	93	86	84	83	74	76	76	73	63
Local	853	813	655	693	783	817	768	753	691	732	683

Source: USDC, Bureau of Economic Analysis, May 1998

Appendix A: Kotzebue – Employment

Years	1977	1978	1979	1980	1981	1982	1983	1984	1985
Total Employment	822	1,082	1,045	1,204	1,489	1,609	1,412	1,462	1,490
Agriculture, Forestry & Fishing	0	0	0	0	0	10	11	10	7
Mining	0	0	0	0	0	0	0	1	1
Construction	5	9	11	36	59	30	31	13	8
Manufacturing	14	5	4	1	0	0	0	0	0
Transportation, Communication & Utilitie	158	122	127	125	151	196	194	182	119
Wholesale Trade	0	0	0	0	0	0	0	0	0
Retail Trade	119	118	108	113	155	205	189	161	169
Finance, Insurance & Real Estate	72	33	13	15	40	35	42	71	78
Services	128	121	117	151	188	177	216	224	241
Miscellaneous and Uncoded	3	1	0	15	13	1	0	3	5
Federal Government	261	270	235	210	202	139	110	122	130
State Government	12	43	49	60	52	60	82	88	93
Local Government	50	360	381	478	629	756	537	587	639

Appendix A: Kotzebue – Employment (Continued)

Years	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Total Employment	1,500	1,488	1,466	1,598	1,644	1,525	1,543	1,516	1,571	1,668
Agriculture, Forestry & Fishing	6	0	0	0	0	0	0	0	0	0
Mining	1	1	0	0	0	0	0	0	0	0
Construction	10	3	16	6	35	16	10	10	21	41
Manufacturing	0	0	0	0	0	2	2	0	0	0
Transportation, Communication & Utilitie	99	153	153	155	159	163	176	184	193	235
Wholesale Trade	0	1	1	3	2	2	2	2	2	3
Retail Trade	211	184	150	161	124	69	77	178	143	164
Finance, Insurance & Real Estate	66	83	81	89	101	79	60	65	96	90
Services	265	319	325	371	394	427	469	419	477	514
Miscellaneous and Uncoded	7	9	0	0	0	0	0	3	0	0
Federal Government	120	110	101	88	79	78	78	74	65	62
State Government	92	93	88	86	84	75	76	73	70	59
Local Government	623	532	551	639	666	614	593	508	504	500

Source: Alaska Department of Labor

Appendix A: Kiana/Noorvik – Employment

Years	1977	1978	1979	1980	1981	1982	1983	1984	1985
Total Employment	36	58	75	78	66	91	113	133	123
Agriculture, Forestry & Fishing	0	0	0	0	0	0	0	0	0
Mining	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	1	1	0	0	0
Manufacturing	0	0	0	0	0	0	0	0	0
Transportation, Communication & Utilitie	0	0	0	0	0	0	1	1	1
Wholesale Trade	0	0	0	0	0	0	0	0	0
Retail Trade	9	7	11	10	9	6	7	7	6
Finance, Insurance & Real Estate	0	1	1	2	3	4	2	4	3
Services	1	1	4	4	2	2	2	2	1
Miscellaneous and Uncoded	0	0	0	0	0	0	0	0	0
Federal Government	8	7	7	6	5	2	0	0	0
State Government	0	0	0	0	0	0	0	0	0
Local Government	18	42	52	56	46	76	101	119	112

Appendix A: Kiana/Noorvik – Employment (Continued)

Years	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Total Employment	128	76	77	86	97	99	100	110	173	191
Agriculture, Forestry & Fishing	0	0	0	0	0	0	0	0	0	0
Mining	0	0	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	1	1	2	1
Manufacturing	0	0	0	0	0	0	0	0	0	0
Transportation, Communication & Utilitie	0	0	0	0	0	0	1	1	1	1
Wholesale Trade	0	0	0	0	0	0	0	0	0	0
Retail Trade	6	6	3	4	6	7	7	7	9	12
Finance, Insurance & Real Estate	3	3	3	0	0	1	0	0	0	0
Services	2	2	1	9	12	11	11	19	66	82
Miscellaneous and Uncoded	0	0	0	0	0	1	0	0	0	0
Federal Government	0	0	0	0	0	0	0	0	0	0
State Government	0	0	0	0	0	1	2	2	2	1
Local Government	117	65	70	73	79	78	78	80	93	94

Source: Alaska Department of Labor

Appendix A: Alaska – Labor Force

Year	Total Labor Force	Employed	Unemployed	Unemployment Rate	Peak Month Rate
1976	164,000	151,000	14,000	8.0	11
1977	173,000	157,000	16,000	9.4	11
1978	183,000	162,000	20,000	11	14
1979	183,000	166,000	17,000	9.2	11
1980	188,000	170,000	18,000	9.7	11
1981	196,000	178,000	18,000	9.3	11
1982	211,000	190,000	21,000	9.9	12
1983	234,000	210,000	24,000	10	13
1984	247,000	222,000	25,000	10	13
1985	250,000	226,000	24,000	9.7	11
1986	257,000	229,000	28,000	11	12
1987	250,000	223,000	27,000	11	13
1988	250,000	227,000	23,000	9.3	11
1989	253,000	236,000	17,000	6.7	9
1990	270,275	251,257	19,018	7.0	8
1991	275,954	251,940	24,015	8.7	10
1992	287,728	261,155	26,574	9.2	12
1993	297,777	274,788	22,989	7.7	9.9
1994	305,089	281,417	23,672	7.8	9.7
1995	302,996	280,829	22,167	7.3	9.2

Appendix A: Anchorage SMSA - Labor Force

Year	Annual Average Labor Force	Employed	Unemployed	Rate	Peak Month Rate
1975	65,938	62,041	3,897	5.9	7.4
1976	68,053	63,184	4,869	7.2	9.1
1977	77,648	72,065	5,583	7.2	8.6
1978	82,184	75,435	6,749	8.2	9.5
1979	82,756	76,741	6,015	7.3	8.4
1980	83,610	77,755	5,855	7	8.3
1981	89,783	83,831	5,952	6.6	7.6
1982	98,588	91,383	7,205	7.3	8.3
1983	109,265	101,239	8,026	7.3	9
1984	114,999	106,347	8,652	7.5	8.5
1985	118,968	110,381	8,587	7.2	8
1986	121,488	111,314	10,174	8.4	9.2
1987	116,501	106,670	9,831	8.4	9.9
1988	114,356	105,918	8,438	7.4	8.6
1989	114,257	108,454	5,803	5.1	6.6
1990	122,979	116,734	6,245	5.1	5.6
1991	122,988	114,569	8,409	6.8	7.5
1992	127,850	118,454	9,396	7.3	8.7
1993	133,442	125,527	7,915	5.9	7.2
1994	135,228	127,617	7,611	5.6	6.7
1995	133,215	126,229	6,986	5.2	6.1

Source: ADOL

Appendix A: Kenai-Cook Inlet - Labor Force

Year	Annual Average Labor Force	Employed	Unemployed	Rate	Peak Month Rate
1975	8,576	7,827	749	8.7	13.9
1976	10,635	9,629	1,006	9.5	12.3
1977	9,734	8,747	987	10.1	12.5
1978	9,585	8,111	1,474	15.4	18.8
1979	10,017	8,642	1,375	13.7	17.6
1980	12,736	10,913	1,823	14.3	19
1981	13,079	11,351	1,728	13.2	18.3
1982	14,150	11,985	2,165	15.3	19.8
1983	15,604	13,225	2,379	15.2	22.2
1984	16,393	14,116	2,277	13.9	19.3
1985	16,543	14,261	2,282	13.8	16.7
1986	17,825	14,780	3,045	17.1	18.9
1987	16,968	14,123	2,845	16.8	21.4
1988	17,222	14,816	2,406	14	19.2
1989	19,191	17,411	1,780	9.3	16.1
1990	18,903	16,691	2,212	11.7	15.4
1991	19,703	17,014	2,689	13.6	19
1992	20,281	17,143	3,138	15.5	22.5
1993	20,725	18,045	2,680	12.9	16.9
1994	21,350	18,642	2,708	12.7	17.3
1995	21,524	18,871	2,653	12.3	17.4

Appendix A: NWAB Labor - Force

Year	Annual Average Labor Force	Employed	Unemployed	Rate	Peak Month Rate
1975	1,984	1,796	188	9.5	13.4
1976	2,096	1,848	248	11.8	13.7
1977	1,999	1,788	211	10.6	13
1978	2,516	2,190	326	13	14.7
1979	2,417	2,147	270	11.2	13.3
1980	1,918	1,599	319	16.6	21.2
1981	2,107	1,830	277	13.1	19.9
1982	2,346	2,071	275	11.7	14.1
1983	2,610	2,274	336	12.9	15.3
1984	2,638	2,277	361	13.7	18.6
1985	2,045	1,769	276	13.5	19.4
1986	2,194	1,856	338	15.4	19.9
1987	2,193	1,853	340	15.5	21.1
1988	2,195	1,910	285	13	16.8
1989	2,113	1,902	211	10	11.2
1990	2,112	1,806	306	14.5	20
1991	2,175	1,819	356	16.4	18.5
1992	2,184	1,729	455	20.8	23.5
1993	2,198	1,828	370	16.8	19.7
1994	2,296	1,936	360	15.7	18.4
1995	2,205	1,849	356	16.1	20.2

Source: ADOL

Footnotes for Appendix A: Alaska- statewide, Anchorage, KPB, and NWAB Employment

Total Full- and Part-time Employment by Major Industry

1/ 1969-74 based on 1967 Standard Industrial Classification (SIC). 1975-87 based on 1972 SIC. 1988-96 based on 1987 SIC.
2/ Excludes limited partners.
3/ "Other" consists of the number of jobs held by U.S. residents employed by international organizations and foreign embassies and consulates in the United States.
4/ Cibola, NM was separated from Valencia in June 1981, but in these estimates Valencia includes Cibola through the end of 1981.
5/ La Paz County, AZ was separated from Yuma County on January 1, 1983. The Yuma, AZ MSA contains the area that became La Paz County, AZ through 1982 and excludes it beginning with 1983.
6/ Estimates for 1979 forward reflect Alaska Census Areas as defined in the 1980 Decennial Census; those for prior years reflect Alaska Census forward separate Aleutian Islands Census Area into Aleutians East Borough and Aleutians West Census Area. Estimates for 1991 forward separate Denali Borough from Yukon-Koyukuk Census Area and Lake and Peninsula Borough from Dillingham Census Area. Estimates from 1993 forward separate Skagway-Hoonah-Angoon Census Area and Yakutat Borough.
7/ Shawano, WI and Menominee, WI are combined as Shawano (incl. Menominee), WI for the years prior to 1989.
8/ Halifax, VA contains South Boston from 1969 forward
E Estimate shown constitutes the major portion of the true estimate.
(D) Not shown to avoid disclosure of confidential information.. Estimates are included in totals.
(L) Less than 10 jobs. Estimates are included in totals.
(N) Data not available for this year.

APPENDIX B

ALASKA -- STATEWIDE PAYROLL
(IN NOMINAL AND REAL 1995 DOLLARS)

Appendix B: Alaska Payroll – in nominal dollars

Years	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Payroll by place of work	3,559,497	4,401,119	3,940,984	3,736,798	3,885,894	4,402,611	5,244,375	6,066,232	6,649,080	6,981,239
Nonfarm Payroll	3,558,518	4,400,103	3,939,714	3,734,946	3,883,879	4,400,528	5,242,327	6,063,881	6,646,846	6,979,041
Private Payroll	2,544,194	3,281,550	2,717,571	2,397,755	2,443,166	2,815,704	3,466,588	4,054,968	4,449,233	4,624,487
Industry Payroll										
Ag. services, forestry, fishing & other 2/	17,035	27,279	10,160	8,167	10,703	9,800	12,570	13,332	13,262	15,054
Agricultural services	1,465	1,583	1,872	2,126	2,054	2,666	4,187	6,150	6,336	8,277
Forestry, fishing, and other 2/	15,570	25,696	8,288	6,041	8,649	7,134	8,383	7,182	6,926	6,777
Forestry	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1,539	2,082
Fishing	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	5,387	4,695
Other 2/	0	0	0	0	0	0	0	0	0	0
Mining	107,703	127,468	165,196	220,682	233,246	305,426	434,408	458,182	451,687	497,928
Metal mining	3,534	3,865	3,419	3,789	5,174	8,449	16,413	20,096	(D)	(D)
Coal mining	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Oil and gas extraction	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Nonmetallic minerals, except fuels	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Construction	1,049,596	1,509,621	863,178	448,558	365,661	445,490	609,962	830,057	1,006,860	935,622
General building contractors	111,535	132,408	102,955	120,723	86,270	90,132	166,810	197,365	238,030	239,962
Heavy construction contractors	764,617	1,170,324	524,931	158,405	129,805	191,060	260,059	339,126	448,037	366,761
Special trade contractors	173,444	206,889	235,292	169,430	149,586	164,298	183,093	293,566	320,793	328,899
Manufacturing	144,810	175,564	195,978	219,865	270,410	312,957	310,354	301,502	296,170	290,565
Durable goods	60,228	63,741	67,000	67,329	91,005	110,827	95,517	98,160	94,461	89,647
Lumber and wood products	41,757	46,486	51,263	46,024	59,781	77,429	69,598	68,591	64,295	57,614
Furniture and fixtures	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	558
Stone, clay, and glass products	9,921	9,072	7,638	7,154	6,250	7,000	11,997	13,812	15,368	17,842
Primary metal industries	(D)	(D)	(D)	(D)	(D)	(D)	(D)	352	566	(D)
Fabricated metal products	3,971	3,449	3,770	4,175	3,967	4,921	6,854	7,443	5,981	5,669
Industrial machinery and equipment	2,412	2,715	2,143	7,289	17,652	17,469	2,435	2,923	2,860	2,808
Electronic and other electric equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	543	526
Motor vehicles and equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other transportation equipment	**634**	**557**	**675**	**1,179**	**1,533**	**1,845**	**2,076**	**2,234**	**2,331**	**2,260**
Instruments and related products	95	121	126	93	(L)	(L)	0	0	0	(D)
Miscellaneous manufacturing industries	664	939	941	994	1,372	1,519	1,735	2,088	2,072	1,677
Ordnance 3/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Nondurable goods	84,582	111,823	128,978	152,536	179,405	202,130	214,837	203,342	201,709	200,918
Food and kindred products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	121,397	112,003	108,913
Tobacco products	0	0	0	0	0	0	0	0	0	0
Textile mill products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	147
Apparel and other textile products	161	247	304	308	253	344	494	659	644	552
Paper and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Printing and publishing	9,132	11,016	12,878	14,283	16,777	18,940	23,409	28,025	32,458	37,569
Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Petroleum and coal products	1,696	2,111	3,022	5,409	5,279	8,427	9,418	6,914	8,830	9,832
Rubber and misc. plastics products	1,400	582	787	623	568	616	826	876	1,115	(D)
Leather and leather products	(L)	(L)	(L)	(L)	0	0	0	(D)	(D)	(D)
Transportation and public utilities	364,233	387,967	389,661	437,926	461,662	516,094	610,865	655,008	663,276	677,738
Railroad transportation	5,974	6,842	7,473	7,678	8,208	8,355	8,230	4,152	151	68
Trucking and warehousing	124,778	112,357	84,744	71,259	63,980	74,077	94,898	95,632	86,829	82,734
Water transportation	25,401	27,856	42,177	30,741	30,903	37,744	40,109	46,628	48,310	48,082
Other transportation	103,266	116,339	114,770	162,720	177,650	198,059	248,586	264,054	268,371	281,523
Local and interurban passenger transit	13,604	20,428	17,019	11,854	11,424	13,269	14,659	16,106	15,193	16,173
Transportation by air	78,719	83,564	86,854	96,555	112,966	126,169	162,795	166,509	171,937	181,348
Pipelines, except natural gas	4,332	5,361	5,248	47,987	46,118	50,230	60,101	67,677	64,142	63,189
Transportation services	6,611	6,986	5,649	6,324	7,142	8,391	11,031	13,762	17,099	20,813
Communications	78,801	92,764	104,576	124,740	137,777	152,055	166,021	182,642	190,345	186,731
Electric, gas, and sanitary services	26,013	31,809	35,921	40,788	43,144	45,804	53,021	61,900	69,270	78,600
Retail and wholesale trade	104,814	124,573	140,497	165,528	180,921	197,859	219,042	244,542	259,615	265,331
Wholesale trade	114,839	133,795	131,804	130,008	132,520	145,272	180,714	216,429	248,131	272,254
Retail trade	229,327	261,262	284,902	308,097	326,268	354,383	428,624	511,248	589,536	642,210
Building materials and garden equipment	16,567	20,121	23,877	26,473	24,449	24,070	32,034	45,828	55,356	60,068
General merchandise stores	31,847	35,152	35,626	38,169	40,421	46,065	46,960	50,290	56,691	63,377
Food stores	30,814	39,660	45,924	51,597	54,209	60,299	71,716	85,641	96,562	106,405
Automotive dealers and service stations	39,570	43,956	44,137	41,289	42,819	46,277	56,010	69,741	81,658	94,459
Apparel and accessory stores	6,888	8,411	9,799	10,423	10,693	11,800	14,470	17,461	19,006	19,534
Home furniture and furnishings stores	7,554	9,250	9,989	10,597	10,643	10,986	15,483	20,036	27,035	29,981
Eating and drinking places	64,483	65,793	71,340	81,146	91,148	99,722	126,511	145,570	169,857	181,137
Miscellaneous retail	31,604	38,919	44,210	48,403	51,886	55,164	65,440	76,681	83,371	87,249
Finance, insurance, and real estate	84,906	110,948	128,928	145,689	150,077	158,298	181,615	223,274	262,948	300,775
Depository and nondepository institutions	34,565	45,365	53,694	60,078	62,569	65,707	76,579	93,528	113,282	132,560
Other finance, insurance, and real estate	50,341	65,583	75,234	85,611	87,508	92,591	105,036	129,746	149,666	168,215
Security and commodity brokers	2,057	2,590	2,746	3,247	3,352	5,058	6,375	8,383	(D)	(D)
Insurance carriers	10,707	16,168	22,006	22,360	21,619	21,422	21,776	25,972	30,659	35,626
Insurance agents, brokers, and services	7,616	9,927	12,131	14,288	15,239	17,798	22,115	26,441	29,308	32,994
Real estate	16,356	21,289	21,269	25,987	25,601	23,841	24,902	29,855	36,116	41,736
Combined real estate, insurance, etc. 4/	206	272	687	1,050	1,301	1,808	1,823	1,950	(D)	(D)
Holding and other investment offices	13,399	15,337	16,395	18,679	20,396	22,664	28,045	37,145	39,162	44,302
Services	431,745	547,646	547,764	478,763	492,619	567,984	697,476	845,936	917,363	992,341
Hotels and other lodging places	28,648	34,243	35,577	36,458	39,951	43,342	53,435	62,050	68,680	75,715
Personal services	9,431	10,492	11,892	13,473	13,733	15,468	17,349	20,117	25,179	28,768
Private households	3,248	3,835	4,263	4,749	4,687	4,505	5,119	5,734	6,249	7,754
Business services	175,198	243,449	205,370	103,187	83,794	97,672	131,905	172,635	179,454	182,386
Auto repair, services, and parking	10,821	12,788	14,175	14,235	13,383	16,461	20,142	24,527	33,042	36,169
Miscellaneous repair services	6,930	9,369	10,125	9,170	8,743	10,511	13,431	17,365	20,599	24,842
Amusement and recreation services	1,987	2,601	2,912	3,911	4,954	5,569	7,348	9,625	10,824	12,479
Motion pictures	1,945	2,142	2,657	2,867	2,531	2,272	2,657	3,040	3,520	3,586
Health services	54,464	75,127	89,368	99,250	108,641	127,189	148,412	176,073	194,750	217,168
Legal services	15,809	22,391	27,907	33,641	37,026	41,770	49,657	59,449	64,311	68,905
Educational services	6,894	7,306	7,782	9,218	10,822	11,752	11,602	11,598	12,631	14,329
Social services 5/	20,449	26,206	30,701	39,557	47,349	57,695	65,568	69,073	69,748	70,050
Museums, botanical, zoological gardens	(L)	(L)	93	187	259	239	376	421	418	495
Membership organizations	41,298	42,914	49,315	52,517	54,759	56,061	56,918	60,937	63,928	64,883
Engineering and management services 6/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Miscellaneous services	54,612	54,761	55,627	56,343	61,987	77,478	113,557	153,292	164,030	184,812
Government and government enterprises	1,014,324	1,118,553	1,222,143	1,337,191	1,440,713	1,584,824	1,775,739	2,008,913	2,197,613	2,354,554
Federal, civilian	285,698	300,255	331,521	351,254	373,533	381,262	400,377	417,839	456,791	489,073
Military	272,131	276,182	284,428	297,465	312,042	325,330	354,617	400,360	416,598	436,478
State and local	456,495	542,116	606,194	688,472	755,138	878,232	1,020,745	1,190,714	1,324,224	1,429,003
State	(N)	(N)	(N)	(N)	343,560	414,471	474,789	543,157	598,982	621,928
Local	(N)	(N)	(N)	(N)	411,578	463,761	545,956	647,557	725,242	807,075

Source: USDC, Bureau of Economic Analysis, May 1998

Appendix B: Alaska Payroll – in nominal dollars (Continued)

Years	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Payroll by place of work	7,125,186	6,802,138	6,448,140	6,608,326	7,377,057	7,818,895	8,211,784	8,636,497	8,943,443	9,147,588	9,263,561
Nonfarm Payroll	7,122,993	6,800,109	6,446,118	6,605,637	7,374,094	7,815,687	8,208,395	8,632,762	8,939,935	9,144,071	9,260,454
Private Payroll	4,617,306	4,222,753	3,881,474	3,980,539	4,629,468	4,891,282	5,125,490	5,356,452	5,567,408	5,828,644	5,938,606
Industry Payroll											
Ag. services, forestry, fishing & other 2/	16,628	17,146	18,817	21,821	27,484	29,125	33,984	43,145	46,359	36,384	37,340
Agricultural services	8,029	7,532	7,498	7,735	7,183	8,465	10,308	12,133	14,701	16,083	17,491
Forestry, fishing, and other 2/	8,599	9,614	11,319	14,086	20,301	20,660	23,676	31,012	31,658	20,301	19,849
Forestry	2,475	2,112	2,543	(D)	(D)	(D)	3,962	4,462	4,727	4,492	4,756
Fishing	6,124	7,502	8,776	(D)	(D)	(D)	19,714	26,550	26,931	15,809	15,093
Other 2/	0	0	0	0	0	0	0	0	0	0	0
Mining	567,983	582,811	548,028	590,393	646,333	739,458	801,824	779,275	746,841	776,605	758,059
Metal mining	17,071	(D)	24,139	32,253	40,978	51,764	54,076	56,939	49,820	51,516	51,869
Coal mining	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Oil and gas extraction	(D)	(D)	(D)	545,906	(D)	(D)	736,676	709,105	684,340	712,000	689,925
Nonmetallic minerals, except fuels	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Construction	807,999	575,710	424,795	385,104	435,759	490,363	470,765	456,417	546,307	621,045	622,944
General building contractors	199,277	139,620	114,897	105,896	95,027	94,124	105,516	109,710	132,067	143,965	152,526
Heavy construction contractors	287,652	231,164	154,207	147,100	199,366	228,728	195,688	158,639	189,095	216,253	209,462
Special trade contractors	321,070	204,926	155,691	132,108	141,366	167,511	169,561	188,068	225,145	260,827	260,956
Manufacturing	296,924	306,792	338,155	398,184	443,354	487,090	512,766	536,109	513,346	491,956	512,127
Durable goods	87,957	88,832	107,140	124,258	141,494	149,826	132,925	124,415	126,693	126,002	134,693
Lumber and wood products	57,685	64,966	85,346	100,587	114,741	122,405	104,509	98,791	100,624	94,962	98,504
Furniture and fixtures	628	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	850	698
Stone, clay, and glass products	15,099	12,396	11,137	10,404	10,481	11,500	11,878	10,918	11,790	12,655	12,357
Primary metal industries	(D)	330	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Fabricated metal products	5,176	3,955	3,743	3,867	3,852	3,284	3,073	2,995	2,891	3,017	7,799
Industrial machinery and equipment	3,290	2,664	1,305	1,127	1,516	1,523	2,017	1,770	2,299	3,122	3,321
Electronic and other electric equipment	353	345	(D)	(D)	(D)	(D)	(D)	(D)	175	251	312
Motor vehicles and equipment	(D)	(D)	0	(D)	(D)	(D)	476	(D)	(D)	(D)	(D)
Other transportation equipment	3,187	2,215	3,145	5,257	8,044	7,672	7,998	6,131	5,314	6,558	7,007
Instruments and related products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Miscellaneous manufacturing industries	1,809	1,260	1,041	1,009	902	875	810	762	870	1,565	1,714
Ordnance 3/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Nondurable goods	208,967	217,960	231,015	273,926	301,860	337,264	379,841	411,694	386,653	365,954	377,434
Food and kindred products	113,999	118,417	130,892	168,941	190,029	222,688	253,210	281,887	261,349	251,810	261,017
Tobacco products	0	0	0	0	0	0	0	0	0	0	0
Textile mill products	(D)	(D)	263	295	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Apparel and other textile products	611	583	538	668	739	821	843	905	1,008	981	776
Paper and allied products	(D)	28,231	(D)	(D)	41,439	37,707	38,596	41,318	39,535	(D)	(D)
Printing and publishing	41,082	40,391	35,411	34,533	35,212	40,673	45,397	44,552	38,789	39,387	39,807
Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Petroleum and coal products	11,465	13,037	13,103	13,903	14,655	16,050	17,347	18,730	20,439	21,994	21,807
Rubber and misc. plastics products	(D)	989	826	917	943	1,358	1,193	1,295	1,254	1,409	1,088
Leather and leather products	(D)	0	0	0	(D)	(D)	(D)	209	(D)	(D)	(D)
Transportation and public utilities	657,190	610,378	586,643	567,874	868,692	733,654	789,090	851,949	877,694	922,913	915,186
Railroad transportation	(L)	0	0	0	0	0	0	0	0	0	0
Trucking and warehousing	81,572	67,169	58,277	59,912	68,965	80,408	89,657	96,164	(D)	(D)	(D)
Water transportation	49,542	40,284	35,684	38,741	59,494	55,136	57,906	65,009	72,520	79,499	79,953
Other transportation	264,902	251,120	249,853	267,348	299,713	344,436	383,292	431,145	(D)	(D)	(D)
Local and interurban passenger transit	17,906	18,105	18,351	19,382	21,026	25,288	26,014	26,498	27,720	28,666	28,789
Transportation by air	160,526	150,386	150,199	160,018	184,413	205,374	222,729	253,556	255,387	266,985	264,780
Pipelines, except natural gas	63,951	61,077	61,563	63,519	67,322	81,062	99,080	114,867	(D)	(D)	(D)
Transportation services	22,519	21,552	19,740	24,429	26,952	32,712	35,469	36,224	38,217	41,508	37,310
Communications	172,767	164,282	158,801	117,930	118,789	126,388	142,007	146,524	153,801	162,218	160,575
Electric, gas, and sanitary services	88,371	87,523	84,028	83,943	321,731	127,286	116,228	113,107	121,194	122,543	120,096
Retail and wholesale trade	261,138	251,805	242,829	201,873	440,520	253,674	258,235	259,631	274,995	284,761	280,671
Wholesale trade	276,923	252,411	224,311	226,064	238,557	253,480	260,973	269,235	273,141	285,831	293,440
Retail trade	653,687	598,629	549,280	561,804	620,260	674,208	700,144	741,736	761,979	827,500	862,961
Building materials and garden equipment	52,040	38,404	27,668	25,878	30,687	34,005	34,353	37,590	41,748	46,422	48,418
General merchandise stores	69,611	67,442	62,387	65,057	72,441	81,651	85,498	95,726	102,457	130,076	137,513
Food stores	109,994	106,811	105,221	104,694	111,554	120,594	130,363	148,153	147,943	152,137	156,140
Automotive dealers and service stations	94,229	82,860	76,771	83,624	97,792	111,610	109,490	110,801	119,268	131,151	138,077
Apparel and accessory stores	18,888	17,410	17,163	17,028	18,305	20,294	21,747	21,629	21,312	20,530	19,627
Home furniture and furnishings stores	26,962	21,980	17,953	17,673	18,949	22,319	24,639	25,472	25,494	29,418	30,742
Eating and drinking places	192,412	177,030	158,946	163,395	178,256	185,819	189,549	195,263	195,013	204,975	215,080
Miscellaneous retail	89,551	86,692	83,171	84,455	92,276	97,916	104,505	107,102	108,744	112,791	117,364
Finance, insurance, and real estate	322,996	327,355	301,023	277,236	261,767	270,106	286,227	299,243	327,740	349,816	344,402
Depository and nondepository institutions	143,969	(D)	132,084	117,423	107,219	102,890	108,168	114,902	128,705	136,639	132,206
Other finance, insurance, and real estate	179,027	(D)	168,939	159,813	154,548	167,216	178,059	184,341	199,035	213,177	212,196
Security and commodity brokers	(D)	(D)	(D)	13,557	11,388	11,765	13,259	15,150	16,498	16,130	16,077
Insurance carriers	37,025	37,152	33,855	32,105	33,994	35,470	36,021	37,101	39,289	40,222	41,474
Insurance agents, brokers, and services	36,211	39,108	36,095	34,058	33,093	32,425	32,081	32,260	32,762	34,223	34,425
Real estate	40,783	35,245	30,783	32,362	32,961	35,828	41,214	41,798	47,804	55,472	53,289
Combined real estate, insurance, etc. 4/	(D)	(D)	(D)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Holding and other investment offices	52,059	52,943	53,887	47,731	43,112	51,728	55,484	58,032	62,682	67,130	66,931
Services	1,016,976	951,521	890,422	952,059	1,087,262	1,213,798	1,269,717	1,379,343	1,474,001	1,516,594	1,592,147
Hotels and other lodging places	75,948	77,217	75,323	77,918	87,708	95,763	94,750	101,540	106,139	110,941	112,222
Personal services	28,991	27,002	25,281	25,901	26,910	28,945	29,993	31,914	32,424	33,148	34,682
Private households	8,279	9,184	9,580	10,757	11,977	13,003	12,829	14,479	15,425	15,933	17,048
Business services	187,279	158,880	139,140	99,061	139,289	155,724	175,228	175,649	195,153	187,229	189,372
Auto repair, services, and parking	38,821	35,593	34,166	47,297	54,801	68,486	43,221	43,786	45,357	48,435	55,031
Miscellaneous repair services	25,809	23,891	20,242	17,023	19,537	20,476	17,420	17,420	19,081	25,250	28,090
Amusement and recreation services	15,962	18,970	18,088	19,649	22,546	25,199	30,266	32,176	35,251	42,257	48,556
Motion pictures	2,558	2,726	2,734	6,273	6,975	7,596	8,182	8,791	11,394	8,692	8,793
Health services	224,637	228,906	227,335	235,095	258,489	284,560	318,563	366,291	392,755	413,852	426,826
Legal services	73,494	71,710	72,897	74,767	71,599	77,585	80,004	82,125	80,168	76,592	72,362
Educational services	16,847	18,230	19,285	19,933	21,790	22,984	25,366	28,019	31,330	31,542	30,776
Social services 5/	77,484	81,946	80,578	81,759	91,307	97,036	102,495	113,682	119,358	115,444	122,990
Museums, botanical, zoological gardens	512	502	382	930	850	1,093	1,347	1,314	1,363	1,407	1,505
Membership organizations	62,754	65,083	63,830	72,261	78,338	85,058	94,209	106,633	121,311	139,135	148,103
Engineering and management services 6/	(N)	(N)	(N)	160,830	192,091	226,152	230,398	250,193	261,134	259,514	288,502
Miscellaneous services	177,601	131,681	101,561	2,605	3,055	4,138	5,446	5,331	6,358	7,223	7,289
Government and government enterprises	2,505,687	2,577,356	2,564,644	2,625,098	2,744,626	2,924,405	3,082,905	3,276,310	3,372,527	3,315,427	3,321,848
Federal, civilian	480,448	500,010	517,755	553,777	568,961	610,167	652,954	697,204	739,809	709,636	704,265
Military	461,417	486,144	531,152	556,160	581,329	633,947	666,565	728,743	725,437	639,406	634,668
State and local	1,563,822	1,591,202	1,515,737	1,515,161	1,594,336	1,680,291	1,763,386	1,850,363	1,907,281	1,966,385	1,982,915
State	689,818	694,337	645,248	661,767	711,605	758,587	799,878	815,672	828,680	846,163	848,091
Local	874,004	896,865	870,489	853,394	882,731	921,704	963,508	1,034,691	1,078,601	1,120,222	1,134,824

Source: USDC, Bureau of Economic Analysis, May 1998

Appendix B: Alaska Payroll – in real 1995 dollars

Years	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
CPI factor	3	2	2	2	2	1.667	1.53	1.42	1.393	1.341
Payroll by place of work	9,026,884	10,074,161	8,441,588	7,552,069	7,161,703	7,339,153	8,023,894	8,614,049	9,262,168	9,361,841
Nonfarm Payroll	9,024,402	10,071,836	8,438,867	7,548,326	7,157,989	7,335,680	8,020,760	8,610,711	9,259,056	9,358,894
Private payroll	6,452,076	7,511,468	5,821,037	4,845,863	4,502,755	4,693,779	5,303,880	5,758,055	6,197,782	6,201,437
Industry Payroll										
Ag. services, forestry, fishing & other 2/	43,201	62,442	21,763	16,506	19,726	16,337	19,232	18,931	18,474	20,187
Agricultural services	3,715	3,623	4,010	4,297	3,786	4,444	6,406	8,733	8,826	11,099
Forestry, fishing, and other 2/	39,486	58,818	17,753	12,209	15,940	11,892	12,826	10,198	9,648	9,088
Forestry									2,144	2,792
Fishing									7,504	6,296
Other 2/	0	0		0	0	0	0	0	0	0
Mining	273,135	291,774	353,850	445,998	429,872	509,145	664,644	650,618	629,200	667,721
Metal mining	8,962	8,847	7,323	7,658	9,536	14,084	25,112	28,536		
Coal mining										
Oil and gas extraction										
Nonmetallic minerals, except fuels										
Construction	2,661,775	3,455,522	1,848,927	906,536	673,913	742,632	933,242	1,178,681	1,402,556	1,254,669
General building contractors	282,853	303,082	220,530	243,981	158,996	150,250	255,219	280,258	331,576	321,789
Heavy construction contractors	1,939,069	2,678,872	1,124,402	320,137	239,231	318,497	397,890	481,559	624,116	491,827
Special trade contractors	439,854	473,569	503,995	342,418	275,687	273,885	280,132	416,864	446,865	441,054
Manufacturing	367,238	401,866	419,785	444,347	498,366	521,699	474,842	428,133	412,565	389,648
Durable goods	152,738	145,903	143,514	136,072	167,722	184,749	146,141	139,387	131,584	120,217
Lumber and wood products	105,896	106,406	109,805	93,015	110,176	129,074	106,485	97,399	89,563	77,260
Furniture and fixtures										748
Stone, clay, and glass products	25,160	20,766	16,361	14,458	11,519	11,669	18,355	19,613	21,408	23,926
Primary metal industries								500	788	
Fabricated metal products	10,070	7,895	8,075	8,438	7,311	8,203	10,487	10,569	8,332	7,602
Industrial machinery and equipment	6,117	6,215	4,590	14,731	32,533	29,121	3,726	4,151	3,984	3,766
Electronic and other electric equipment									756	705
Motor vehicles and equipment										
Other transportation equipment	1,608	1,275	1,446	2,383	2,825	3,076	3,176	3,172	3,247	3,031
Instruments and related products	241	277	270	188			0	0	0	
Miscellaneous manufacturing industries	1,684	2,149	2,016	2,009	2,529	2,532	2,655	2,965	2,886	2,249
Ordnance 3/										
Nondurable goods	214,500	255,963	276,271	308,275	330,643	336,951	328,701	288,746	280,981	269,431
Food and kindred products								172,384	156,020	146,052
Tobacco products	0	0	0	0	0	0	0	0	0	0
Textile mill products										197
Apparel and other textile products	408	565	651	622	466	573	756	936	897	740
Paper and allied products										
Printing and publishing	23,159	25,216	27,585	28,866	30,920	31,573	35,816	39,796	45,214	50,380
Chemicals and allied products										
Petroleum and coal products	4,301	4,832	6,473	10,932	9,729	14,048	14,410	9,818	12,300	13,185
Rubber and misc. plastics products	3,550	1,332	1,686	1,259	1,047	1,027	1,264	1,244	1,553	
Leather and leather products					0	0	0			
Transportation and public utilities	923,695	888,056	834,654	885,048	850,843	860,329	934,623	930,111	923,943	908,847
Railroad transportation	15,150	15,661	16,007	15,517	15,127	13,928	12,592	5,896	210	91
Trucking and warehousing	316,437	257,185	181,522	144,014	117,915	123,486	145,194	135,797	120,953	110,946
Water transportation	64,417	63,762	90,343	62,128	56,954	62,919	61,367	66,212	67,296	64,478
Other transportation	261,883	266,300	245,837	328,857	327,409	330,164	380,337	374,957	373,841	377,522
Local and interurban passenger transit	34,500	46,760	36,455	23,957	21,054	22,119	22,428	22,871	21,164	21,688
Transportation by air	199,631	191,278	186,041	195,138	208,196	210,324	249,076	236,443	239,508	243,188
Pipelines, except natural gas	10,986	12,271	11,241	96,982	84,995	83,733	91,955	96,101	89,350	84,736
Transportation services	16,765	15,991	12,100	12,781	13,163	13,988	16,877	19,542	23,819	27,910
Communications	199,839	212,337	224,002	252,100	253,923	253,476	254,012	259,352	265,151	250,406
Electric, gas, and sanitary services	65,969	72,811	76,943	82,433	79,514	76,355	81,122	87,898	96,493	105,403
Retail and wholesale trade	872,805	904,285	892,584	885,410	845,546	832,925	932,287	1,033,301	1,166,870	1,226,296
Wholesale trade	291,232	306,257	282,324	262,746	244,234	242,168	276,492	307,329	345,646	365,093
Retail trade	581,573	598,029	610,260	622,664	601,312	590,756	655,795	725,972	821,224	861,204
Building materials and garden equipment	42,014	46,057	51,145	53,502	45,060	40,125	49,012	65,076	77,111	80,551
General merchandise stores	80,764	80,463	76,311	77,140	74,496	76,790	71,849	71,412	78,971	84,989
Food stores	78,144	90,782	98,369	104,278	99,907	100,518	109,725	121,610	134,511	142,689
Automotive dealers and service stations	100,350	100,615	94,541	83,445	78,915	77,144	85,695	99,032	113,750	126,670
Apparel and accessory stores	17,468	19,253	20,989	21,065	19,707	19,671	22,139	24,795	26,475	26,195
Home furniture and furnishings stores	19,157	21,173	21,396	21,417	19,615	18,314	23,689	28,451	37,660	40,205
Eating and drinking places	163,529	150,600	152,810	163,996	167,986	166,237	193,562	206,709	236,611	242,905
Miscellaneous retail	80,148	89,086	94,698	97,822	95,626	91,958	100,123	108,887	116,136	117,001
Finance, insurance, and real estate	215,322	253,960	276,164	294,437	276,592	263,883	277,871	317,049	366,287	403,339
Depository and nondepository institutions	87,657	103,840	115,013	121,418	115,315	109,534	117,166	132,810	157,802	177,763
Other finance, insurance, and real estate	127,665	150,119	161,151	173,020	161,277	154,349	160,705	184,239	208,485	225,576
Security and commodity brokers	5,217	5,929	5,882	6,562	6,178	8,432	9,754	11,904		
Insurance carriers	27,153	37,009	47,137	45,190	39,844	35,710	33,317	36,880	42,708	47,774
Insurance agents, brokers, and services	19,314	22,723	25,985	28,876	28,085	29,669	33,836	37,546	40,826	44,245
Real estate	41,479	48,731	45,558	52,520	47,183	39,743	38,100	42,394	50,310	55,968
Combined real estate, insurance, etc. 4/	522	623	1,472	2,122	2,398	3,014	2,789	2,769		
Holding and other investment offices	33,980	35,106	35,118	37,750	37,590	37,781	42,909	52,746	54,553	59,409
Services	1,094,905	1,253,562	1,173,310	967,580	907,897	946,829	1,067,138	1,201,229	1,277,887	1,330,729
Hotels and other lodging places	72,651	78,382	76,206	73,682	73,630	72,251	81,756	88,111	95,671	101,534
Personal services	23,917	24,016	25,473	27,229	25,310	25,785	26,544	28,566	35,074	38,578
Private households	8,237	8,778	9,131	9,598	8,638	7,510	7,832	8,142	8,705	10,398
Business services	444,302	557,255	439,903	208,541	154,432	162,819	201,815	245,142	249,979	244,580
Auto repair, services, and parking	27,442	29,272	30,363	28,769	24,665	27,440	30,817	34,828	46,028	48,503
Miscellaneous repair services	17,574	21,446	21,688	18,533	16,113	17,522	20,549	24,658	28,694	33,313
Amusement and recreation services	5,039	5,954	6,238	7,904	9,130	9,284	11,242	13,668	15,078	16,734
Motion pictures	4,933	4,903	5,691	5,794	4,665	3,787	4,065	4,317	4,903	4,809
Health services	138,121	171,966	191,426	200,584	200,225	212,024	227,070	250,024	271,287	291,222
Legal services	40,092	51,253	59,777	67,988	68,239	69,631	75,975	84,418	89,585	92,402
Educational services	17,483	16,723	16,669	18,630	19,945	19,591	17,751	16,469	17,595	19,215
Social services 5/	51,859	59,986	65,762	79,945	87,264	96,178	100,319	98,084	97,159	93,937
Museums, botanical, zoological gardens			199	378	477	398	575	598	582	664
Membership organizations	104,732	98,230	105,633	106,137	100,921	93,454	87,085	86,531	89,052	87,008
Engineering and management services 6/										
Miscellaneous services	138,496	125,348	119,153	113,869	114,242	129,156	173,742	217,675	228,494	247,833
Government and government enterprises	2,572,326	2,560,368	2,617,830	2,702,463	2,655,234	2,641,902	2,716,881	2,852,656	3,061,275	3,157,457
Federal, civilian	724,530	687,284	710,118	709,884	688,421	635,564	612,577	593,331	636,310	655,847
Military	690,124	632,181	609,245	601,177	575,093	542,325	542,564	568,511	580,321	585,317
State and local	1,157,671	1,240,904	1,298,468	1,391,402	1,391,719	1,464,013	1,561,740	1,690,814	1,844,644	1,916,293
State					633,181	690,923	726,427	771,283	834,382	834,005
Local					758,538	773,090	835,313	919,531	1,010,262	1,082,288

Source: USDC, Bureau of Economic Analysis, May 1998

Appendix B: Alaska Payroll – in real 1995 dollars (Continued)

Years	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
CPI factor	1.307	1.266	1.265	1.259	1.245	1.2	1.13	1.088	1.053	1.024	1
Payroll by place of work	9,312,618	8,611,507	8,156,897	8,319,882	9,184,436	9,382,674	9,279,316	9,396,509	9,417,445	9,367,130	9,263,561
Nonfarm Payroll	9,309,752	8,608,938	8,154,339	8,316,497	9,180,747	9,378,824	9,275,486	9,392,445	9,413,752	9,363,529	9,260,454
Private Payroll	6,034,819	5,346,005	4,910,065	5,011,499	5,763,688	5,869,538	5,791,804	5,827,820	5,862,481	5,968,531	5,938,606
Industry Payroll											
Ag. services, forestry, fishing & other 2/	21,733	21,707	23,804	27,473	34,218	34,950	38,402	46,942	48,816	37,257	37,340
Agricultural services	10,494	9,536	9,485	9,738	8,943	10,158	11,648	13,201	15,480	16,469	17,491
Forestry, fishing, and other 2/	11,239	12,171	14,319	17,734	25,275	24,792	26,754	33,741	33,336	20,788	19,849
Forestry	3,235	2,674	3,217				4,477	4,855	4,978	4,600	4,756
Fishing	8,004	9,498	11,102				22,277	28,886	28,358	16,188	15,093
Other 2/	0	0	0	0	0	0	0	0	0	0	0
Mining	742,354	737,839	693,255	743,305	804,685	887,350	906,061	847,851	786,424	795,244	758,059
Metal mining	22,312		30,536	40,607	51,018	62,117	61,106	61,950	52,460	52,752	51,869
Coal mining											(D)
Oil and gas extraction				687,296			832,444	771,506	720,610	729,088	689,925
Nonmetallic minerals, except fuels											(D)
Construction	1,056,055	728,849	537,366	484,846	542,520	588,436	531,964	496,582	575,261	635,950	622,944
General building contractors	260,455	176,759	145,345	133,323	118,309	112,949	119,233	119,364	139,067	147,420	152,526
Heavy construction contractors	375,961	292,654	195,072	185,199	248,211	274,474	221,127	172,599	199,117	221,443	209,462
Special trade contractors	419,638	259,436	196,949	166,324	176,001	201,013	191,604	204,618	237,078	267,087	260,956
Manufacturing	388,080	388,399	427,766	501,314	551,976	584,508	579,426	583,287	540,553	503,763	512,127
Durable goods	114,960	112,461	135,532	156,441	176,160	179,791	150,205	135,364	133,408	129,026	134,693
Lumber and wood products	75,394	82,247	107,963	126,639	142,853	146,886	118,095	107,485	105,957	97,241	98,504
Furniture and fixtures	821									870	698
Stone, clay, and glass products	19,734	15,693	14,088	13,099	13,049	13,800	13,422	11,879	12,415	12,959	12,357
Primary metal industries		418									(D)
Fabricated metal products	6,765	5,007	4,735	4,869	4,796	3,941	3,472	3,259	3,044	3,089	7,799
Industrial machinery and equipment	4,300	3,373	1,651	1,419	1,887	1,828	2,279	1,926	2,421	3,197	3,321
Electronic and other electric equipment	461	437							184	257	312
Motor vehicles and equipment			0				538				(D)
Other transportation equipment	4,165	2,804	3,978	6,619	10,015	9,206	9,038	6,671	5,596	6,715	7,007
Instruments and related products											(D)
Miscellaneous manufacturing industries	2,364	1,595	1,317	1,270	1,123	1,050	915	829	916	1,603	1,714
Ordnance 3/											(N)
Nondurable goods	273,120	275,937	292,234	344,873	375,816	404,717	429,220	447,923	407,146	374,737	377,434
Food and kindred products	148,997	149,916	165,578	212,697	236,586	267,226	286,127	306,693	275,200	257,853	261,017
Tobacco products	0	0	0	0	0	0	0	0	0	0	0
Textile mill products			333	371							(D)
Apparel and other textile products	799	738	681	841	920	985	953	985	1,061	1,005	776
Paper and allied products		35,740			51,592	45,248	43,613	44,954	41,630		(D)
Printing and publishing	53,694	51,135	44,795	43,477	43,839	48,808	51,299	48,473	40,845	40,332	39,807
Chemicals and allied products											(D)
Petroleum and coal products	14,985	16,505	16,575	17,504	18,245	19,260	19,602	20,378	21,522	22,522	21,807
Rubber and misc. plastics products		1,252	1,045	1,155	1,174	1,630	1,348	1,409	1,320	1,443	1,088
Leather and leather products		0	0	0				227			(D)
Transportation and public utilities	858,947	772,739	742,103	714,953	1,081,522	880,385	891,672	926,921	924,212	945,063	915,186
Railroad transportation		0	0	0	0	0	0	0	0	0	0
Trucking and warehousing	106,615	85,036	73,720	75,429	85,861	96,490	101,312	104,626			(D)
Water transportation	64,751	51,000	45,140	48,775	74,070	66,163	65,434	70,730	76,364	81,407	79,953
Other transportation	346,227	317,918	316,064	336,591	373,143	413,323	433,120	469,086			(D)
Local and interurban passenger transit	23,403	22,921	23,214	24,402	26,177	30,346	29,396	28,830	29,189	29,354	28,789
Transportation by air	209,807	190,389	190,002	201,463	229,594	246,449	251,684	275,869	268,923	273,393	264,780
Pipelines, except natural gas	83,584	77,323	77,877	79,970	83,816	97,274	111,960	124,975			(D)
Transportation services	29,432	27,285	24,971	30,756	33,555	39,254	40,080	39,412	40,243	42,504	37,310
Communications	225,806	207,981	200,883	148,474	147,892	151,666	160,468	159,418	161,952	166,111	160,575
Electric, gas, and sanitary services	115,501	110,804	106,295	105,684	400,555	152,743	131,338	123,060	127,617	125,484	120,096
Retail and wholesale trade	1,216,307	1,077,417	978,593	991,926	1,069,227	1,113,226	1,086,062	1,099,936	1,089,981	1,140,051	1,156,401
Wholesale trade	361,938	319,552	283,753	284,615	297,003	304,176	294,899	292,928	287,617	292,691	293,440
Retail trade	854,369	757,864	694,839	707,311	772,224	809,050	791,163	807,009	802,364	847,360	862,961
Building materials and garden equipment	68,016	48,619	35,000	32,580	38,205	40,806	38,819	40,898	43,961	47,536	48,418
General merchandise stores	90,982	85,382	78,920	81,907	90,189	97,981	96,613	104,150	107,887	133,198	137,513
Food stores	143,762	135,223	133,105	131,810	138,885	144,713	147,310	161,190	155,784	155,788	156,140
Automotive dealers and service stations	123,157	104,901	97,115	105,283	121,751	133,932	123,724	120,551	125,589	134,299	138,077
Apparel and accessory stores	24,687	22,041	21,711	21,438	22,790	24,353	24,574	23,532	22,442	21,023	19,627
Home furniture and furnishings stores	35,239	27,827	22,711	22,250	23,592	26,783	27,842	27,714	26,845	30,124	30,742
Eating and drinking places	251,482	224,120	201,067	205,714	221,929	222,983	214,190	212,446	205,349	209,894	215,080
Miscellaneous retail	117,043	109,752	105,211	106,329	114,884	117,499	118,091	116,527	114,507	115,498	117,364
Finance, insurance, and real estate	422,156	414,431	380,794	349,040	325,900	324,127	323,437	325,576	345,110	358,212	344,402
Depository and nondepository institutions	188,167		167,086	147,836	133,488	123,468	122,230	125,013	135,526	139,918	132,206
Other finance, insurance, and real estate	233,988		213,708	201,205	192,412	200,659	201,207	200,563	209,584	218,293	212,196
Security and commodity brokers				17,068	14,178	14,118	14,983	16,483	17,372	16,517	16,077
Insurance carriers	48,392	47,034	42,827	40,420	42,323	42,564	40,704	40,366	41,371	41,187	41,474
Insurance agents, brokers, and services	47,328	49,511	45,660	42,879	41,201	38,910	36,252	35,099	34,498	35,044	34,425
Real estate	53,303	44,620	38,940	40,744	41,036	42,994	46,572	45,476	50,338	56,803	53,289
Combined real estate, insurance, etc. 4/											(N)
Holding and other investment offices	68,041	67,026	68,167	60,093	53,674	62,074	62,697	63,139	66,004	68,741	66,931
Services	1,329,188	1,204,626	1,126,384	1,198,642	1,353,641	1,456,558	1,434,780	1,500,725	1,552,123	1,552,992	1,592,147
Hotels and other lodging places	99,264	97,757	95,284	98,099	109,196	114,916	107,068	110,476	111,764	113,604	112,222
Personal services	37,891	34,185	31,980	32,609	33,503	34,734	33,892	34,722	34,142	33,944	34,682
Private households	10,821	11,627	12,119	13,543	14,911	15,604	14,497	15,753	16,243	16,315	17,048
Business services	244,774	201,142	176,012	124,718	173,415	186,869	198,008	191,106	205,496	191,722	189,372
Auto repair, services, and parking	50,739	45,061	43,220	59,547	68,227	82,183	48,840	47,639	47,761	49,597	55,031
Miscellaneous repair services	33,732	30,246	25,606	21,432	24,324	24,571	19,685	18,953	20,092	25,856	28,090
Amusement and recreation services	20,862	24,016	22,881	24,738	28,070	30,239	34,201	35,007	37,119	43,271	48,556
Motion pictures	3,343	3,451	3,459	7,898	8,684	9,115	9,246	9,565	11,998	8,901	8,793
Health services	293,601	289,795	287,579	295,985	321,819	341,472	359,976	398,525	413,571	423,784	426,826
Legal services	96,057	90,785	92,215	94,132	89,141	93,102	90,405	89,352	84,417	78,430	72,362
Educational services	22,019	23,079	24,396	25,096	27,129	27,581	28,664	30,485	32,990	32,299	30,776
Social services 5/	101,272	103,744	101,931	102,935	113,677	116,443	115,819	123,686	125,684	118,215	122,990
Museums, botanical, zoological gardens	669	636	483	1,171	1,058	1,312	1,522	1,430	1,435	1,441	1,505
Membership organizations	82,019	82,395	80,745	90,977	97,531	102,070	106,456	116,017	127,740	142,474	148,103
Engineering and management services 6/				202,485	239,153	271,382	260,350	272,210	274,974	265,742	288,502
Miscellaneous services	232,125	166,708	128,475	3,280	3,803	4,966	6,154	5,800	6,695	7,396	7,289
Government and government enterprises	3,274,933	3,262,933	3,244,275	3,304,998	3,417,059	3,509,286	3,483,683	3,564,625	3,551,271	3,394,997	3,321,848
Federal, civilian	627,946	633,013	654,960	697,205	708,356	732,200	737,838	758,558	779,019	726,667	704,265
Military	603,072	615,458	671,907	700,205	723,755	760,736	753,218	792,872	763,885	654,752	634,668
State and local	2,043,915	2,014,462	1,917,407	1,907,588	1,984,948	2,016,349	1,992,626	2,013,195	2,008,367	2,013,578	1,982,915
State	901,592	879,031	816,239	833,165	885,948	910,304	903,862	887,451	872,600	866,471	848,091
Local	1,142,323	1,135,431	1,101,169	1,074,423	1,099,000	1,106,045	1,088,764	1,125,744	1,135,767	1,147,107	1,134,824

Source: USDC, Bureau of Economic Analysis, May 1998

APPENDIX C

PERSONAL INCOME BY MAJOR SOURCE AND EARNINGS BY INDUSTRY (IN NOMINAL AND REAL 1995 DOLLARS)

ALASKA – STATEWIDE
ANCHORAGE
KENAI PENINSULA BOROUGH
NORTHWEST ARCTIC BOROUGH

Appendix C: Alaska Personal Income and Earnings – in nominal dollars

Years	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Personal income (thousands of dollars)	3,759,171	4,520,832	4,650,155	4,736,470	5,005,965	5,623,878	6,504,562	7,782,420	8,786,389	9,299,353
Nonfarm personal income	3,755,242	4,516,792	4,645,390	4,731,181	5,002,138	5,620,263	6,502,624	7,779,969	8,783,899	9,297,012
Farm income 2/	3,929	4,040	4,765	5,289	3,827	3,615	1,938	2,451	2,490	2,341
Population (number of persons) 3/	370,973	393,115	397,363	402,191	403,544	405,315	418,493	449,606	488,418	513,704
Per capita personal income (dollars)	10,133	11,500	11,703	11,777	12,405	13,875	15,543	17,309	17,989	18,103
Earnings by place of work	4,066,552	5,101,507	4,685,085	4,554,120	4,726,875	5,281,230	6,158,105	7,122,717	7,975,914	8,505,384
less: Personal cont. for social insurance 4/	203,958	251,049	233,490	228,871	248,085	280,190	345,856	394,701	443,888	478,287
plus: Adjustment for residence 5/	-618,695	-892,547	-459,507	-332,418	-291,991	-332,209	-445,379	-536,297	-596,201	-607,480
equals: Net earnings by place of residence	3,243,899	3,957,911	3,992,088	3,992,831	4,186,799	4,668,831	5,366,870	6,191,719	6,935,825	7,419,617
plus: Dividends, interest, and rent 6/	222,247	257,119	297,904	352,382	422,615	481,716	579,196	688,187	863,239	995,508
plus: Transfer payments	293,025	305,802	360,163	391,257	396,551	473,331	558,496	902,514	987,325	884,228
Wage and salary disbursements	3,559,497	4,401,119	3,940,984	3,736,798	3,885,894	4,402,611	5,244,375	6,066,232	6,649,080	6,981,239
Other labor income	227,741	335,858	355,879	347,038	320,494	364,122	440,111	510,194	594,590	614,110
Proprietors' income 7/	279,314	364,530	388,222	470,284	520,487	514,497	473,619	546,291	732,244	910,035
Farm proprietors' income	2,882	2,946	3,382	3,273	1,588	1,328	-301	-70	96	(L)
Nonfarm proprietors' income	276,432	361,584	384,840	467,011	518,899	513,169	473,920	546,361	732,148	910,049
Farm earnings	3,929	4,040	4,765	5,289	3,827	3,615	1,938	2,451	2,490	2,341
Nonfarm earnings	4,062,623	5,097,467	4,680,320	4,548,831	4,723,048	5,277,615	6,156,167	7,120,266	7,973,424	8,503,043
Private earnings	3,031,884	3,957,518	3,431,002	3,178,929	3,247,863	3,653,630	4,330,541	5,049,240	5,698,177	6,060,930
Ag. serv., forestry, fishing, and other 8/	45,408	89,443	63,635	102,364	123,998	102,936	38,948	37,492	67,801	37,269
Agricultural services	3,026	3,645	3,757	3,977	3,915	4,020	5,717	8,374	8,758	11,950
Forestry, fishing, and other 8/	42,382	85,798	59,878	98,387	120,083	98,916	33,231	29,118	59,043	25,319
Forestry	708	1,022	935	888	1,023	1,627	1,517	1,666	2,174	3,050
Fishing	41,674	84,776	58,943	97,499	119,060	97,289	31,714	27,452	56,869	22,269
Other 8/	0	0	0	0	0	0	0	0	0	0
Mining	121,258	142,095	193,903	259,850	271,015	359,188	510,520	535,118	522,980	575,663
Metal mining	**(D)**	(D)	(D)	(D)	(D)	(D)	(D)	34,092	26,022	17,894
Coal mining	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	11,015
Oil and gas extraction	(D)	(D)	(D)	(D)	(D)	(D)	(D)	487,832	482,458	538,969
Nonmetallic minerals, except fuels	2,564	2,870	3,067	3,141	3,314	4,517	5,742	(D)	(D)	7,785
Construction	1,197,333	1,740,009	1,062,965	614,525	522,487	612,814	793,618	1,045,529	1,329,435	1,355,952
General building contractors	144,179	182,684	156,103	182,823	152,936	164,498	238,797	275,090	367,604	413,972
Heavy construction contractors	824,134	1,282,079	592,980	182,071	147,467	212,719	284,902	368,649	500,650	419,694
Special trade contractors	229,020	275,246	313,882	249,631	222,084	235,597	269,919	401,790	461,181	522,286
Manufacturing	164,494	201,589	239,447	273,121	331,055	375,352	370,643	361,836	352,826	346,403
Durable goods	68,600	74,033	82,982	85,241	109,088	133,802	115,848	120,536	114,016	111,120
Lumber and wood products	46,604	52,993	61,778	57,112	70,409	90,991	81,322	79,951	75,359	68,817
Furniture and fixtures	503	697	204	(L)	-1,150	(L)	491	452	1,155	1,245
Stone, clay, and glass products	11,408	10,674	9,361	9,140	7,557	8,420	14,063	16,563	18,145	20,804
Primary metal industries	(L)	80	1,217	781	1,928	2,198	2,543	4,168	1,579	(D)
Fabricated metal products	4,815	4,154	4,637	5,247	5,098	6,520	8,351	8,955	7,478	7,321
Industrial machinery and equipment	2,790	3,182	2,772	8,967	20,927	20,643	3,163	3,675	3,566	3,446
Electronic and other electric equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	603	522	911
Motor vehicles and equipment	(L)	59	81	108	155	118	129	(D)	(D)	(D)
Other transportation equipment	737	655	818	1,415	1,795	2,167	2,455	2,636	2,751	2,618
Instruments and related products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Miscellaneous manufacturing industries	888	1,199	1,624	1,974	1,986	2,302	2,855	3,231	3,159	3,900
Ordnance 9/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Nondurable goods	95,894	127,556	156,465	187,880	221,967	241,550	254,795	241,300	238,810	235,283
Food and kindred products	50,493	73,506	86,657	108,696	131,040	142,573	152,363	141,702	130,232	125,506
Tobacco products	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(D)
Textile mill products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	148	210	272
Apparel and other textile products	228	324	766	762	1,316	988	652	993	1,054	919
Paper and allied products	24,916	30,054	34,140	33,233	35,809	42,420	40,806	34,854	34,610	28,862
Printing and publishing	10,780	12,867	19,401	23,150	31,336	27,070	28,926	34,024	39,519	44,387
Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	17,862	19,079	20,090
Petroleum and coal products	2,350	2,965	4,331	7,855	7,822	12,221	13,748	10,364	12,584	13,622
Rubber and misc. plastics products	1,648	720	1,127	1,003	816	927	1,228	(D)	(D)	1,642
Leather and leather products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Transportation and public utilities	429,835	466,663	476,355	528,373	554,325	617,329	722,269	785,243	799,342	834,219
Railroad transportation	7,180	8,641	8,665	8,815	9,341	9,406	9,407	4,367	165	76
Trucking and warehousing	141,829	130,723	101,845	87,251	78,576	90,477	114,850	118,784	111,921	113,318
Water transportation	27,921	30,576	45,298	33,228	33,638	39,552	41,805	48,202	52,017	52,216
Other transportation	121,667	139,709	141,323	191,527	206,702	230,080	283,677	305,750	314,175	334,968
Local and interurban passenger transit	15,753	23,946	22,609	16,661	16,128	17,979	18,144	20,014	21,007	26,459
Transportation by air	92,586	100,866	103,205	113,139	130,666	147,224	185,565	194,435	199,010	210,537
Pipelines, except natural gas	4,618	5,666	5,596	51,038	48,809	53,508	63,912	72,171	68,716	68,714
Transportation services	8,710	9,231	9,913	10,689	11,099	11,369	16,056	19,130	25,442	29,258
Communications	97,547	114,620	130,757	155,268	171,301	190,019	206,891	229,760	233,515	228,124
Electric, gas, and sanitary services	33,691	42,394	48,467	52,284	54,767	57,795	65,639	78,380	87,549	105,517
Wholesale trade	128,360	149,117	148,860	151,502	153,203	167,281	204,919	243,799	277,503	302,913
Retail trade	288,650	330,018	365,589	396,793	415,482	442,197	529,656	631,314	743,031	817,358
Building materials and garden equipment	20,002	24,161	29,820	34,195	31,780	30,846	40,180	55,983	65,597	80,203
General merchandise stores	36,125	40,208	41,175	44,452	47,498	52,055	53,367	56,093	62,644	70,213
Food stores	36,239	46,499	53,929	61,294	62,864	69,189	81,923	99,247	111,857	125,159
Automotive dealers and service stations	50,429	55,207	57,099	55,385	58,662	60,580	71,570	87,371	103,039	117,495
Apparel and accessory stores	11,042	12,472	15,199	15,672	15,011	16,041	19,245	23,425	28,194	31,844
Home furniture and furnishings stores	11,264	15,256	16,477	17,185	16,489	17,299	22,301	29,747	45,948	47,179
Eating and drinking places	77,152	79,266	87,781	99,484	110,496	120,871	150,929	174,311	205,847	211,298
Miscellaneous retail	46,397	56,949	64,109	69,126	72,682	75,316	90,141	105,137	119,905	133,967
Finance, insurance, and real estate	112,331	153,025	159,959	184,728	188,578	199,642	229,749	281,065	335,438	372,190
Depository & non-depository institutions	40,191	53,937	63,927	71,066	73,148	76,872	88,664	109,041	130,635	151,211
Other finance, insurance, & real estate	72,140	99,088	96,032	113,662	115,430	122,770	141,085	172,024	204,803	220,979
Security & commodity brokers	2,237	2,819	3,020	3,540	3,886	6,193	7,602	(D)	(D)	12,777
Insurance carriers	12,192	18,567	25,506	25,833	24,789	24,504	24,785	29,538	34,641	39,982
Insurance agents, brokers, and services	11,065	14,946	18,116	18,825	19,409	22,725	27,909	33,341	35,324	40,605
Real estate	32,296	45,891	30,915	44,107	43,848	40,128	39,059	43,647	65,908	71,590
Combined real estate, insurance, etc. 10/	-229	292	740	1,205	1,589	1,981	1,723	(D)	(D)	1,597
Holding and other investment offices	14,579	16,573	17,735	20,152	21,909	27,239	40,007	54,926	53,652	54,428
Services	544,215	685,559	720,289	667,673	687,720	776,891	930,219	1,127,844	1,269,821	1,418,963
Hotels and other lodging places	31,613	39,078	42,829	46,013	49,536	53,689	65,642	75,567	80,058	87,010
Personal services	16,958	19,700	21,598	25,531	25,903	28,061	30,137	37,964	51,431	60,516
Private households	3,254	3,843	4,277	4,764	4,696	4,514	5,130	5,747	6,262	7,768
Business services	202,333	279,254	250,716	148,203	129,088	144,664	189,728	247,457	283,595	295,570
Auto repair, services, and parking	17,307	21,051	21,971	23,175	22,583	25,297	29,586	34,113	48,629	59,305
Miscellaneous repair services	12,527	15,506	17,785	17,873	17,377	21,335	23,673	30,879	39,492	52,994
Amusement and recreation services	2,805	3,563	5,584	7,378	8,421	8,675	11,212	14,152	17,454	22,102
Motion pictures	3,534	4,789	5,336	5,582	6,393	7,114	5,578	6,915	11,022	20,431
Health services	77,545	103,946	128,114	143,479	153,219	175,940	203,560	240,076	261,878	292,461
Legal services	28,600	35,388	44,766	51,219	54,868	59,886	65,649	83,182	86,500	95,535
Educational services	8,988	9,087	9,895	11,701	13,387	14,620	14,257	14,593	16,030	17,924
Social services 11/	20,772	26,735	31,776	41,340	48,807	59,118	67,569	71,001	75,232	76,079
Museums, botanical, zoological gardens	(L)	(L)	98	197	275	254	399	451	454	540
Membership organizations	42,538	44,350	51,304	54,859	56,743	58,092	59,095	63,544	67,823	69,439
Engineering and management services 12/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Miscellaneous services	75,429	79,246	84,240	86,359	96,424	115,632	159,004	202,203	223,961	261,289
Government and government enterprises	1,030,739	1,139,949	1,249,318	1,369,902	1,475,185	1,623,985	1,825,626	2,071,026	2,275,247	2,442,113
Federal, civilian	294,960	311,789	343,764	364,417	386,740	395,786	417,188	437,589	480,032	515,433
Military	272,131	276,182	284,428	297,465	312,042	325,330	354,617	400,360	416,598	436,478
State and local	463,648	551,978	621,126	708,020	776,403	902,869	1,053,821	1,233,077	1,378,617	1,490,202
State	(N)	(N)	(N)	(N)	353,081	425,528	489,921	562,419	623,551	648,683
Local	(N)	(N)	(N)	(N)	423,322	477,341	563,900	670,658	755,066	841,519

Appendix C: Alaska Personal Income and Earnings – in nominal dollars (Continued)

Years	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Personal income (thousands of dollars)	10,088,930	10,076,039	9,735,788	10,005,894	10,933,489	11,668,932	12,257,649	12,983,631	13,618,291	14,130,372	14,568,490
Nonfarm personal income	10,086,817	10,068,674	9,725,950	9,994,800	10,927,312	11,661,319	12,249,350	12,975,350	13,607,972	14,122,818	14,558,370
Farm income 2/	2,113	7,365	9,838	11,094	6,177	7,613	8,299	8,281	10,319	7,554	10,120
Population (number of persons) 3/	532,496	544,269	539,310	541,984	547,160	553,109	569,063	586,684	596,808	600,765	601,646
Per capita personal income (dollars)	18,946	18,513	18,052	18,462	19,982	21,097	21,540	22,131	22,819	23,521	24,214
Earnings by place of work	8,901,348	8,680,296	8,238,935	8,426,167	9,249,928	9,822,816	10,302,349	10,844,252	11,221,348	11,470,442	11,611,992
less: Personal cont. for social insurance 4/	516,639	509,758	499,198	539,647	604,454	643,357	683,051	706,131	741,682	766,048	775,363
plus: Adjustment for residence 5/	-601,956	-546,675	-514,019	-539,523	-615,489	-652,743	-693,788	-723,583	-736,403	-751,834	-757,131
equals: Net earnings by place of residence	7,782,753	7,623,863	7,225,718	7,346,997	8,029,985	8,526,716	8,925,510	9,414,538	9,743,263	9,952,560	10,079,498
plus: Dividends, interest, and rent 6/	1,122,343	1,171,192	1,174,294	1,210,340	1,317,370	1,399,877	1,431,539	1,477,456	1,572,853	1,785,590	1,968,263
plus: Transfer payments	1,183,834	1,280,984	1,335,776	1,448,557	1,586,134	1,742,339	1,900,600	2,091,637	2,302,175	2,392,222	2,520,729
Wage and salary disbursements	7,125,186	6,802,138	6,448,140	6,608,326	7,377,057	7,818,895	8,211,784	8,636,497	8,943,443	9,147,588	9,265,508
Other labor income	647,323	631,617	630,680	629,963	729,136	807,743	902,057	951,750	1,019,664	1,059,274	1,044,370
Proprietors' income 7/	1,128,839	1,246,541	1,160,115	1,187,878	1,143,735	1,196,178	1,188,508	1,256,005	1,258,241	1,263,580	1,302,114
Farm proprietors' income	-243	5,173	7,628	8,190	2,938	4,072	4,504	4,136	6,433	3,680	6,138
Nonfarm proprietors' income	1,129,082	1,241,368	1,152,487	1,179,688	1,140,797	1,192,106	1,184,004	1,251,869	1,251,808	1,259,900	1,295,976
Farm earnings	2,113	7,365	9,838	11,094	6,177	7,613	8,299	8,281	10,319	7,554	10,120
Nonfarm earnings	8,899,235	8,672,931	8,229,097	8,415,073	9,243,751	9,815,203	10,294,050	10,835,971	11,211,029	11,462,888	11,601,872
Private earnings	6,287,098	5,984,548	5,540,311	5,652,120	6,343,070	6,709,751	7,014,170	7,346,295	7,603,205	7,907,015	8,042,601
Ag. serv., forestry, fishing, and other 8/	186,031	276,478	265,586	362,602	312,763	332,391	275,247	247,704	236,998	221,365	223,633
Agricultural services	11,978	10,961	13,612	12,115	11,163	13,733	17,153	20,442	23,500	24,081	25,589
Forestry, fishing, and other 8/	174,053	265,517	251,974	350,487	301,600	318,658	258,094	227,262	213,498	197,284	198,044
Forestry	3,288	2,854	3,021	3,235	4,097	4,769	4,675	5,399	5,522	5,761	4,996
Fishing	170,765	262,663	248,953	347,252	297,503	313,889	253,419	221,863	207,976	191,523	193,048
Other 8/	0	0	0	0	0	0	0	0	0	0	0
Mining	655,987	671,703	641,412	682,322	736,481	844,713	931,581	908,066	868,434	907,772	884,989
Metal mining	(D)	17,653	29,393	38,980	46,990	58,282	66,665	69,945	59,915	62,462	63,249
Coal mining	(D)	12,230	11,947	(D)	(D)	(D)	10,655	10,910	12,111	(D)	(D)
Oil and gas extraction	617,820	634,033	594,481	627,907	676,763	774,336	850,446	820,411	789,340	824,310	797,301
Nonmetallic minerals, except fuels	9,229	7,787	5,591	(D)	(D)	(D)	3,815	6,800	7,068	(D)	(D)
Construction	1,228,932	976,507	726,502	635,094	675,968	702,463	696,736	700,192	806,789	890,844	893,418
General building contractors	357,076	305,414	223,290	191,880	162,872	138,283	154,805	174,011	199,612	206,853	216,837
Heavy construction contractors	332,799	269,291	183,038	171,720	228,943	263,389	227,944	187,373	225,031	253,862	245,628
Special trade contractors	539,057	401,802	320,174	271,494	284,153	300,791	313,987	338,808	382,146	430,129	430,953
Manufacturing	356,949	370,124	411,564	480,176	540,543	592,660	629,146	675,605	649,994	628,325	646,665
Durable goods	111,441	113,388	136,962	158,159	182,878	192,759	174,995	185,693	188,132	189,168	197,234
Lumber and wood products	71,705	81,902	106,367	124,881	143,603	152,208	132,832	146,331	149,248	142,204	142,252
Furniture and fixtures	1,454	(D)	(D)	581	826	663	1,287	(D)	1,461	2,220	1,759
Stone, clay, and glass products	18,020	14,483	13,412	12,950	13,181	15,056	15,160	14,051	15,105	15,970	15,595
Primary metal industries	1,066	696	644	(D)	(D)	945	1,014	1,973	1,512	1,667	1,263
Fabricated metal products	6,718	5,961	6,005	6,087	6,895	6,861	6,189	5,648	5,158	5,849	11,823
Industrial machinery and equipment	4,334	3,514	2,111	1,852	3,100	3,489	(D)	4,462	4,384	6,560	8,179
Electronic and other electric equipment	517	490	487	768	(D)	1,362	1,083	600	709	(D)	1,853
Motor vehicles and equipment	(D)	(L)	0	(D)	(D)	347	591	124	385	(D)	501
Other transportation equipment	3,673	2,555	3,674	6,092	9,398	9,000	9,552	7,301	6,665	8,328	8,782
Instruments and related products	(D)	(D)	(D)	(D)	(D)	1,049	(D)	(D)	2,086	2,590	2,822
Miscellaneous manufacturing industries	3,391	2,475	2,288	2,501	2,691	1,779	1,550	1,445	1,419	2,313	2,405
Ordnance 9/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Nondurable goods	245,508	256,736	274,602	322,017	357,665	399,901	454,151	489,912	461,862	439,157	449,431
Food and kindred products	131,736	137,619	154,317	197,048	222,025	262,037	300,989	332,232	308,182	296,874	305,027
Tobacco products	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)
Textile mill products	(D)	287	521	(D)	(D)	(D)	(D)	456	(D)	60	(D)
Apparel and other textile products	1,067	1,086	881	1,102	1,125	1,112	1,055	1,281	1,609	1,487	1,344
Paper and allied products	25,589	32,242	38,144	(D)	47,853	43,304	44,540	47,860	45,925	(D)	(D)
Printing and publishing	48,897	48,215	42,941	42,142	44,802	50,122	56,393	55,295	48,736	50,544	50,516
Chemicals and allied products	20,671	18,719	19,438	19,415	21,405	20,430	26,560	27,078	28,894	(D)	(D)
Petroleum and coal products	15,489	17,120	17,217	17,273	18,326	20,320	21,800	23,757	26,345	28,720	(D)
Rubber and misc. plastics products	1,539	1,278	1,097	1,198	1,425	1,786	1,573	1,707	1,613	1,764	1,358
Leather and leather products	(D)	161	(L)	(L)	(D)	(D)	(D)	234	(D)	176	224
Transportation and public utilities	822,133	771,162	750,724	702,425	1,062,171	918,089	986,203	1,070,326	1,131,630	1,173,460	1,166,612
Railroad transportation	(L)	0	0	0	0	0	0	0	0	0	0
Trucking and warehousing	114,340	98,059	86,967	85,469	97,905	114,498	(D)	137,003	138,135	141,608	147,028
Water transportation	55,826	45,693	43,080	44,609	67,140	62,337	(D)	(D)	(D)	(D)	91,765
Other transportation	320,982	311,396	320,854	319,730	372,936	431,764	(D)	(D)	(D)	(D)	568,083
Local and interurban passenger transit	28,982	35,835	36,268	32,630	35,959	37,306	(D)	(D)	(D)	(D)	42,753
Transportation by air	190,945	179,238	185,817	181,853	224,245	260,623	267,654	306,524	317,160	340,684	336,844
Pipelines, except natural gas	69,840	66,309	68,118	69,625	73,971	89,906	110,655	127,780	129,053	142,614	139,659
Transportation services	31,215	30,014	30,651	35,622	38,761	43,929	47,737	48,667	51,042	53,739	48,827
Communications	210,044	197,931	191,568	143,647	144,519	152,051	170,575	183,751	207,549	196,646	197,476
Electric, gas, and sanitary services	120,900	118,083	108,255	108,970	379,671	157,439	150,608	148,320	162,330	165,139	162,260
Wholesale trade	310,138	284,229	256,725	260,743	275,446	295,871	304,903	318,282	319,576	333,739	338,300
Retail trade	867,298	797,740	731,157	739,401	805,204	882,132	926,781	975,725	1,000,986	1,066,705	1,107,416
Building materials and garden equipment	75,818	57,073	42,742	38,445	43,633	43,470	47,024	50,929	56,672	61,094	63,376
General merchandise stores	78,926	78,804	72,689	74,372	85,709	99,636	99,816	110,601	118,435	147,243	155,286
Food stores	129,441	125,056	123,682	125,726	134,632	149,593	160,837	179,192	176,812	180,365	184,790
Automotive dealers and service stations	123,650	105,413	99,148	107,527	119,925	132,421	134,593	132,118	142,178	154,248	161,847
Apparel and accessory stores	32,691	27,121	25,733	23,290	23,233	26,530	33,437	29,345	29,143	27,701	26,760
Home furniture and furnishings stores	48,742	45,193	35,618	31,669	34,482	39,060	38,027	32,139	32,455	37,074	38,563
Eating and drinking places	241,012	220,538	201,961	207,014	214,257	221,764	240,393	257,887	255,723	269,320	280,818
Miscellaneous retail	137,018	138,542	129,584	131,358	149,333	169,658	172,654	183,514	189,568	189,660	195,976
Finance, insurance, and real estate	381,810	395,144	378,642	316,304	296,000	313,068	332,939	367,304	417,283	435,834	441,927
Depository & non-depository institutions	160,795	165,411	147,163	131,001	120,047	115,686	122,843	131,211	148,084	157,603	151,716
Other finance, insurance, & real estate	221,015	229,733	231,479	185,303	175,953	197,382	210,096	236,093	269,199	278,231	290,211
Security & commodity brokers	14,008	15,500	15,412	14,860	12,670	13,202	14,985	17,023	18,595	17,944	18,146
Insurance carriers	41,352	41,199	37,734	35,737	37,915	39,919	40,715	42,215	44,864	45,928	47,413
Insurance agents, brokers, and services	43,630	47,587	45,189	45,017	45,161	47,403	48,218	49,835	52,649	55,135	56,870
Real estate	57,728	53,622	68,921	49,318	39,907	41,411	46,300	64,118	83,085	84,631	93,376
Combined real estate, insurance, etc. 10/	-668	-510	-425	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Holding and other investment offices	64,965	72,335	64,648	40,371	40,300	55,447	59,878	62,902	70,006	74,593	74,406
Services	1,477,820	1,441,461	1,377,999	1,473,053	1,638,494	1,828,364	1,930,634	2,083,091	2,171,515	2,248,971	2,339,641
Hotels and other lodging places	88,622	89,224	89,870	89,738	101,429	112,474	114,365	124,029	129,604	135,574	138,885
Personal services	71,950	77,672	72,148	76,502	71,989	65,662	65,607	69,129	74,419	75,341	74,878
Private households	8,296	9,196	9,594	10,772	11,991	13,016	12,842	14,495	15,440	15,945	17,065
Business services	309,704	286,133	261,242	226,826	275,023	297,212	307,429	327,852	326,712	325,577	330,489
Auto repair, services, and parking	70,198	64,139	66,279	83,249	87,489	102,468	76,949	75,721	76,943	85,601	90,637
Miscellaneous repair services	48,097	50,746	44,169	42,896	44,033	51,161	45,937	39,457	44,032	55,669	59,598
Amusement and recreation services	32,750	40,885	43,679	43,189	44,856	54,758	64,217	71,652	60,247	70,076	81,487
Motion pictures	21,047	25,170	20,990	20,881	18,354	16,987	17,049	17,292	21,505	16,388	17,711
Health services	300,209	310,522	316,023	334,692	376,166	438,940	496,953	546,915	575,912	599,545	612,064
Legal services	102,555	104,055	105,666	110,700	108,214	122,543	132,453	127,943	136,880	131,250	127,009
Educational services	20,195	21,315	22,920	24,031	26,414	28,323	33,477	34,803	38,849	40,917	39,671
Social services 11/	85,469	90,613	89,885	90,824	101,895	109,427	116,602	129,541	136,142	131,573	140,435
Museums, botanical, zoological gardens	561	554	417	1,010	929	1,198	1,485	1,452	1,506	1,558	1,658
Membership organizations	68,032	70,696	69,318	78,425	85,503	93,127	103,364	117,402	134,487	154,420	163,634
Engineering and management services 12/	(N)	(N)	(N)	211,961	248,255	281,580	289,038	303,005	322,477	318,712	350,430
Miscellaneous services	250,135	200,541	165,799	27,357	35,954	39,488	52,867	82,403	76,360	90,825	93,990
Government and government enterprises	2,612,137	2,688,383	2,688,786	2,762,953	2,900,681	3,105,452	3,279,880	3,489,676	3,607,824	3,555,873	3,559,271
Federal, civilian	506,516	524,300	548,880	593,543	618,883	667,961	718,438	772,239	823,623	793,369	780,455
Military	461,417	486,144	531,152	556,160	581,329	633,947	666,565	728,743	725,437	639,406	641,026
State and local	1,644,204	1,677,939	1,608,754	1,613,250	1,700,469	1,803,544	1,894,877	1,988,694	2,058,764	2,123,098	2,137,790
State	725,030	732,253	684,941	704,642	759,100	813,630	858,020	875,703	894,986	915,390	917,156
Local	919,174	945,686	923,813	908,608	941,369	989,914	1,036,857	1,112,991	1,163,778	1,207,708	1,220,634

Source: USDC, Bureau of Economic Analysis, May 1998

Appendix C: Anchorage Personal Income and Earnings – in nominal dollars

Years	1,975	1,976	1,977	1,978	1,979	1,980	1,981	1,982	1,983	1,984
Personal income (thousands of dollars)	1,701,530	2,064,794	2,297,438	2,298,100	2,400,152	2,677,289	3,158,121	3,849,739	4,393,862	4,725,889
Nonfarm personal income	1,701,530	2,064,794	2,297,438	2,298,100	2,400,152	2,677,289	3,158,121	3,849,739	4,393,862	4,725,889
Farm income 2/	0	0	0	0	0	0	0	0	0	0
Population (number of persons) 3/	165,035	174,496	177,003	179,642	178,825	175,808	180,969	195,216	211,028	220,254
Per capita personal income (dollars)	10,310	11,833	12,980	12,793	13,422	15,228	17,451	19,720	20,821	21,457
Earnings by place of work	1,587,068	1,915,912	2,156,582	2,135,249	2,206,280	2,438,133	2,820,331	3,336,107	3,782,483	4,153,594
less: Personal cont. for social insurance 4/	80,058	95,142	107,990	107,995	116,607	129,960	158,999	186,146	212,218	233,661
plus: Adjustment for residence 5/	-20,843	-2,055	-42,482	-64,272	-60,874	-57,169	-26,193	-41,572	-44,518	-74,161
equals: Net earnings by place of residence	1,486,167	1,818,715	2,006,110	1,962,982	2,028,799	2,251,004	2,635,139	3,108,389	3,525,747	3,845,772
plus: Dividends, interest, and rent 6/	118,521	134,627	155,843	187,206	218,767	244,969	291,844	346,710	439,462	500,784
plus: Transfer payments	96,842	111,452	135,485	147,912	152,586	181,316	231,138	394,640	428,653	379,333
Wage and salary disbursements	1,373,552	1,633,007	1,819,796	1,766,452	1,823,981	2,032,541	2,380,255	2,814,003	3,123,690	3,360,857
Other labor income	82,908	117,760	157,198	158,154	144,360	161,014	189,704	231,661	274,278	293,111
Proprietors' income 7/	130,608	165,145	179,588	210,643	237,939	244,578	250,372	290,443	384,515	499,626
Farm proprietors' income	0	0	0	0	0	0	0	0	0	0
Nonfarm proprietors' income	130,608	165,145	179,588	210,643	237,939	244,578	250,372	290,443	384,515	499,626
Farm earnings	0	0	0	0	0	0	0	0	0	0
Nonfarm earnings	1,587,068	1,915,912	2,156,582	2,135,249	2,206,280	2,438,133	2,820,331	3,336,107	3,782,483	4,153,594
Private earnings	1,110,578	1,398,506	1,592,315	1,529,769	1,554,755	1,734,152	2,037,025	2,463,785	2,815,607	3,121,912
Ag. serv., forestry, fishing, and other 8/	2,929	6,696	7,111	15,225	20,193	15,155	5,555	6,627	9,812	8,937
Agricultural services	1,649	1,917	2,243	2,262	2,111	2,262	3,698	4,995	5,787	7,578
Forestry, fishing, and other 8/	1,280	4,779	4,868	12,963	18,082	12,893	1,857	1,632	4,025	1,359
Forestry	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	149
Fishing	1,259	4,736	4,849	12,943	18,070	12,882	1,847	1,634	3,995	1,210
Other 8/	0	0	0	0	0	0	0	0	0	0
Mining	38,573	48,398	52,244	74,053	78,898	124,542	147,248	198,063	201,535	226,609
Metal mining	(D)	(D)	(D)	(D)	(D)	(D)	(D)	7,146	5,675	6,265
Coal mining	479	214	334	268	204	294	276	384	354	588
Oil and gas extraction	37,273	47,227	50,140	72,052	74,483	118,114	138,964	190,257	194,966	218,943
Nonmetallic minerals, except fuels	(D)	(D)	(D)	(D)	(D)	(D)	(D)	276	540	813
Construction	264,016	361,260	420,638	303,160	296,252	316,793	345,729	461,587	554,432	634,198
General building contractors	61,904	75,961	78,227	82,790	86,696	80,748	92,972	135,653	180,170	219,518
Heavy construction contractors	69,041	122,135	141,809	52,143	61,954	83,871	78,849	97,736	99,767	103,732
Special trade contractors	133,071	163,164	200,602	168,227	147,602	152,174	173,908	228,198	274,495	310,948
Manufacturing	30,660	35,806	47,121	51,118	52,639	55,689	64,457	71,343	76,685	80,059
Durable goods	16,317	17,621	20,937	21,144	15,918	20,366	29,490	31,693	33,639	35,338
Lumber and wood products	2,876	2,987	5,003	5,615	4,386	4,969	6,884	5,744	8,656	7,954
Furniture and fixtures	375	368	143	(L)	-1,132	(L)	487	452	1,155	1,245
Stone, clay, and glass products	7,319	8,113	7,603	7,412	5,251	5,624	10,818	12,728	13,279	14,142
Primary metal industries	(D)	(D)	(D)	(D)	(D)	(D)	(D)	770	764	(D)
Fabricated metal products	3,115	2,833	3,666	4,113	3,910	4,861	5,567	5,409	3,150	3,397
Industrial machinery and equipment	1,476	1,711	1,417	1,271	1,410	2,072	2,483	2,789	2,710	2,674
Electronic and other electric equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	716
Motor vehicles and equipment	(L)	59	81	107	153	104	129	(D)	(D)	(D)
Other transportation equipment	146	146	156	146	288	377	453	517	773	1,118
Instruments and related products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Miscellaneous manufacturing industries	696	1,001	1,304	1,355	1,424	1,791	2,214	2,568	2,465	2,925
Ordnance 9/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Nondurable goods	14,343	18,185	26,184	29,974	36,721	35,323	34,967	39,650	43,046	44,721
Food and kindred products	5,596	7,455	10,032	10,448	11,692	11,344	12,008	12,303	11,983	10,975
Tobacco products	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(D)
Textile mill products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	148	210	(D)
Apparel and other textile products	135	212	411	522	848	489	296	504	568	489
Paper and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Printing and publishing	7,050	8,628	12,922	14,963	20,904	18,636	20,547	24,582	28,297	31,287
Chemicals and allied products	147	115	130	171	167	107	0	(D)	(D)	(D)
Petroleum and coal products	560	689	1,092	2,424	1,868	3,247	0	(D)	(D)	(D)
Rubber and misc. plastics products	560	628	1,005	860	585	702	977	(D)	(D)	(D)
Leather and leather products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Transportation and public utilities	179,301	208,575	229,805	248,764	250,903	270,383	324,223	341,867	358,771	384,075
Railroad transportation	4,467	5,337	5,276	5,381	5,599	5,543	5,502	2,980	132	76
Trucking and warehousing	49,834	47,364	42,654	41,861	41,070	48,357	54,918	(D)	(D)	(D)
Water transportation	7,462	10,727	27,103	13,921	10,414	9,117	9,913	11,327	14,759	14,832
Other transportation	63,584	73,022	77,738	111,277	116,404	121,563	155,297	(D)	(D)	(D)
Local and interurban passenger transit	(D)	(D)	(D)	(D)	(D)	(D)	(D)	3,151	3,491	6,366
Transportation by air	51,518	60,322	64,881	72,172	83,985	87,884	115,487	119,393	125,957	136,364
Pipelines, except natural gas	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Transportation services	5,184	4,953	4,851	5,873	6,689	7,516	9,224	9,132	11,959	16,111
Communications	38,089	51,136	53,983	52,285	52,540	60,542	67,904	70,636	75,453	77,093
Electric, gas, and sanitary services	15,865	20,989	23,051	24,039	24,876	25,261	30,689	36,294	40,580	44,588
Wholesale trade	85,861	100,002	103,356	110,579	112,025	124,900	148,603	186,565	210,155	230,254
Retail trade	146,544	175,325	196,803	215,315	219,614	234,799	289,719	359,077	433,268	461,678
Building materials and garden equipment	10,030	13,367	16,901	19,246	17,897	18,184	26,126	37,180	44,714	43,759
General merchandise stores	19,753	21,682	22,779	25,329	25,889	27,760	30,003	31,997	35,600	35,612
Food stores	16,176	20,641	25,425	28,564	26,478	30,963	36,153	44,700	51,752	58,560
Automotive dealers and service stations	30,682	33,613	35,315	33,057	35,266	36,515	42,415	51,376	61,172	71,491
Apparel and accessory stores	5,607	6,816	8,492	8,950	9,108	9,405	11,731	14,284	16,040	17,575
Home furniture and furnishings stores	5,417	6,990	7,962	8,070	8,224	8,575	12,550	18,771	29,819	31,069
Eating and drinking places	36,035	43,220	47,010	57,023	57,461	63,156	81,834	101,693	126,469	128,968
Miscellaneous retail	22,844	28,996	32,919	35,076	39,291	40,241	48,907	59,076	67,702	74,644
Finance, insurance, and real estate	71,562	94,862	102,243	117,151	118,094	131,230	150,947	188,122	229,024	256,215
Depository & non-depository institutions	25,792	34,700	42,247	47,746	50,255	53,811	62,514	78,301	96,326	111,309
Other finance, insurance, & real estate	45,770	60,162	59,996	69,405	67,839	77,419	88,433	109,821	132,698	144,906
Security & commodity brokers	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Insurance carriers	9,672	14,718	20,286	19,302	18,265	21,647	21,619	24,763	29,242	33,133
Insurance agents, brokers, and services	8,187	11,157	13,668	14,005	14,430	17,028	19,718	23,822	25,140	28,034
Real estate	20,573	27,728	19,795	29,420	27,540	25,281	26,303	29,804	44,553	48,074
Combined real estate, insurance, etc. 10/	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Holding and other investment offices	5,318	4,155	3,233	2,770	3,261	6,754	12,918	22,772	21,216	23,587
Services	291,132	367,582	432,994	394,404	406,137	460,661	560,544	650,534	741,925	839,887
Hotels and other lodging places	14,595	17,848	19,503	21,928	24,991	27,848	37,974	44,196	42,205	46,318
Personal services	11,673	13,635	15,217	16,977	16,996	18,293	20,367	26,028	35,307	41,750
Private households	(D)	(D)	(D)	(D)	2,013	1,940	2,370	2,783	3,140	3,998
Business services	91,100	131,437	157,130	90,659	80,048	87,386	111,386	126,754	162,809	178,931
Auto repair, services, and parking	10,532	13,353	14,020	15,099	14,634	15,393	19,361	23,107	28,030	35,356
Miscellaneous repair services	4,501	4,890	5,903	6,336	6,813	9,136	10,479	13,223	15,310	19,501
Amusement and recreation services	1,200	1,727	2,451	3,197	4,711	4,302	6,839	8,800	10,353	13,216
Motion pictures	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Health services	43,634	59,177	72,775	80,944	86,458	99,967	113,899	141,450	153,642	171,751
Legal services	21,536	27,030	33,791	38,687	41,610	46,167	51,916	63,896	67,029	73,707
Educational services	4,865	5,004	5,412	6,465	7,725	8,455	7,960	8,254	8,356	9,495
Social services 11/	12,488	15,030	18,792	20,938	22,964	27,824	30,942	33,319	37,736	34,303
Museums, botanical, zoological gardens	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Membership organizations	24,034	24,555	27,943	29,454	30,093	30,479	30,942	30,306	30,856	31,617
Engineering and management services 12/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Miscellaneous services	46,952	48,787	54,477	57,676	62,485	78,040	111,777	122,967	138,577	163,194
Government and government enterprises	476,490	517,406	564,267	605,480	651,525	703,981	783,306	872,322	966,876	1,031,682
Federal, civilian	174,966	186,419	204,174	207,791	220,294	223,524	236,186	254,946	279,869	304,270
Military	127,532	127,068	131,730	138,052	149,857	160,397	172,628	190,487	199,347	207,033
State and local	173,992	203,919	228,363	259,637	281,374	320,060	374,492	426,889	487,660	520,379
State	(N)	(N)	(N)	(N)	109,637	133,878	160,450	184,670	208,395	213,576
Local	(N)	(N)	(N)	(N)	171,737	186,182	214,042	242,219	279,265	306,803

Source: USDC, Bureau of Economic Analysis, May 1998

Appendix C: Anchorage Personal Income and Earnings – in nominal dollars (Continued)

Years	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Personal income (thousands of dollars)	5,066,442	5,027,059	4,748,724	4,755,991	5,169,979	5,588,841	5,902,892	6,286,750	6,621,693	6,907,051	7,056,549
Nonfarm personal income	5,066,442	5,027,059	4,748,724	4,755,991	5,169,979	5,588,841	5,902,892	6,286,750	6,621,693	6,907,051	7,056,549
Farm income 2/	0	0	0	0	0	0	0	0	0	0	0
Population (number of persons) 3/	226,848	229,965	225,170	224,371	225,374	227,570	234,984	245,191	249,577	251,430	250,864
Per capita personal income (dollars)	22,334	21,860	21,090	21,197	22,940	24,559	25,120	25,640	26,532	27,471	28,129
Earnings by place of work	4,380,390	4,345,546	4,069,845	4,024,385	4,333,844	4,736,196	4,989,594	5,265,437	5,506,503	5,623,277	5,592,563
less: Personal cont. for social insurance 4/	255,892	258,971	246,988	258,088	282,771	310,319	330,557	341,947	361,830	373,524	370,995
plus: Adjustment for residence 5/	-121,509	-175,849	-195,850	-195,862	-163,660	-239,447	-245,153	-238,321	-250,792	-242,033	-220,287
equals: Net earnings by place of residence	4,002,989	3,910,726	3,627,007	3,570,435	3,887,413	4,186,430	4,413,884	4,685,169	4,893,881	5,007,720	5,001,281
plus: Dividends, interest, and rent 6/	560,563	574,252	555,560	568,681	613,590	665,560	680,937	721,894	759,837	890,052	984,224
plus: Transfer payments	502,890	542,081	566,157	616,875	668,976	736,851	808,071	879,687	967,975	1,009,279	1,071,044
Wage and salary disbursements	3,509,144	3,435,765	3,202,800	3,214,244	3,482,116	3,811,723	4,003,783	4,201,959	4,401,460	4,505,658	4,472,417
Other labor income	317,399	319,107	310,677	302,678	335,955	390,269	438,806	460,232	500,550	518,683	498,812
Proprietors' income 7/	553,847	590,674	556,368	507,463	515,773	534,204	547,005	603,246	604,493	598,936	621,334
Farm proprietors' income	0	0	0	0	0	0	0	0	0	0	0
Nonfarm proprietors' income	553,847	590,674	556,368	507,463	515,773	534,204	547,005	603,246	604,493	598,936	621,334
Farm earnings	0	0	0	0	0	0	0	0	0	0	0
Nonfarm earnings	4,380,390	4,345,546	4,069,845	4,024,385	4,333,844	4,736,196	4,989,594	5,265,437	5,506,503	5,623,277	5,592,563
Private earnings	3,277,883	3,195,403	2,911,921	2,850,073	3,115,462	3,434,875	3,608,012	3,754,036	3,922,650	4,063,581	4,048,271
Ag. serv., forestry, fishing, and other 8/	30,779	47,125	46,929	55,923	54,737	55,232	44,676	40,650	40,114	39,736	41,130
Agricultural services	7,598	7,083	8,412	(D)	(D)	(D)	(D)	12,531	(D)	(D)	(D)
Forestry, fishing, and other 8/	23,181	40,042	38,517	(D)	(D)	(D)	(D)	28,119	(D)	(D)	(D)
Forestry	79	76	78	(D)	(D)	(D)	(D)	1,294	(D)	(D)	(D)
Fishing	23,102	39,966	38,439	48,584	47,200	46,061	33,285	26,825	23,791	22,990	23,280
Other 8/	0	0	0	0	0	0	0	0	0	0	0
Mining	295,086	385,715	349,434	380,947	417,717	459,071	509,282	481,431	458,028	451,207	382,596
Metal mining	4,845	6,366	(D)	11,824	8,959	(D)	2,507	1,836	-50	1,517	641
Coal mining	642	(D)	1,355	92	(L)	(L)	0	0	0	0	161
Oil and gas extraction	288,930	377,696	(D)	368,925	408,716	457,928	505,968	477,042	455,474	447,426	379,231
Nonmetallic minerals, except fuels	669	(D)	(L)	106	(L)	(D)	807	2,553	2,604	2,264	2,563
Construction	600,196	529,619	400,261	315,767	352,115	385,462	380,463	359,006	448,778	482,071	474,522
General building contractors	199,590	171,693	128,431	95,949	83,848	72,574	79,212	96,874	114,446	112,919	111,561
Heavy construction contractors	100,827	118,331	80,744	71,470	108,680	156,740	143,681	86,908	127,992	139,852	132,788
Special trade contractors	299,779	239,595	191,086	148,348	159,587	156,148	157,570	175,224	206,340	229,300	230,173
Manufacturing	80,188	68,213	63,718	62,630	64,889	72,408	88,711	89,539	82,059	90,996	99,490
Durable goods	32,271	23,140	21,219	18,132	20,988	19,963	23,219	32,259	32,299	38,016	45,115
Lumber and wood products	5,696	3,142	3,010	1,510	1,662	1,747	3,695	11,819	10,001	10,288	9,597
Furniture and fixtures	1,454	(D)	(D)	581	826	663	1,287	(D)	(D)	1,982	1,397
Stone, clay, and glass products	11,234	8,500	8,507	6,647	7,124	6,428	5,970	7,191	8,307	9,509	9,534
Primary metal industries	838	559	(D)	(D)	(D)	(D)	(D)	1,817	982	1,270	(D)
Fabricated metal products	3,689	3,658	3,062	2,740	2,807	(D)	2,882	2,423	3,139	3,798	9,667
Industrial machinery and equipment	3,893	3,085	1,730	1,288	2,365	2,689	3,612	3,030	3,797	5,119	6,387
Electronic and other electric equipment	(D)	392	396	573	(D)	1,211	(D)	(D)	(D)	289	1,523
Motor vehicles and equipment	(D)	(D)	0	(D)	(D)	347	591	124	385	(D)	501
Other transportation equipment	2,035	753	315	525	1,238	958	1,049	797	687	959	910
Instruments and related products	(D)	(D)	(D)	(D)	(D)	1,049	(D)	(D)	(D)	(D)	(D)
Miscellaneous manufacturing industries	2,471	1,750	1,595	1,856	2,243	1,491	1,094	932	1,182	2,021	2,159
Ordnance 9/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Nondurable goods	47,917	45,073	42,499	44,498	43,901	52,445	65,492	57,280	49,760	52,980	54,375
Food and kindred products	11,711	10,065	12,483	14,888	12,762	15,378	21,807	15,538	12,500	13,820	13,995
Tobacco products	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)
Textile mill products	(D)	156	(D)	(D)	363	(D)	470	444	0	0	0
Apparel and other textile products	634	667	464	514	506	517	435	(D)	(D)	(D)	(D)
Paper and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Printing and publishing	33,861	32,722	28,430	27,655	29,323	35,299	40,040	37,275	32,604	33,993	34,851
Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	284	(D)	(D)	(D)	2,754	2,349
Petroleum and coal products	(D)	256	(D)	204	0	0	0	0	0	0	968
Rubber and misc. plastics products	(D)	(D)	(D)	810	(D)	(D)	848	1,043	(D)	1,367	966
Leather and leather products	(D)	161	0	0	(D)	(D)	(L)	0	(D)	(D)	0
Transportation and public utilities	393,586	363,064	369,431	368,710	433,950	479,516	527,754	588,032	631,090	654,987	627,148
Railroad transportation	(L)	0	0	0	0	0	0	0	0	0	0
Trucking and warehousing	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Water transportation	13,810	11,331	11,698	10,820	11,842	12,651	13,918	19,130	22,116	29,015	27,188
Other transportation	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Local and interurban passenger transit	12,144	13,999	12,196	9,720	10,960	11,814	11,257	10,766	10,336	8,450	12,638
Transportation by air	113,575	99,338	120,399	124,683	144,355	164,381	183,192	215,496	222,098	235,798	231,967
Pipelines, except natural gas	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Transportation services	21,034	20,503	18,291	21,699	24,140	29,920	32,884	33,579	36,317	39,081	33,863
Communications	91,772	82,777	82,080	75,559	76,232	82,089	97,092	105,589	125,781	118,596	107,349
Electric, gas, and sanitary services	52,967	52,619	46,683	47,095	74,015	70,622	61,363	62,705	69,938	69,773	59,168
Wholesale trade	237,114	219,268	196,044	196,345	206,442	215,150	224,081	231,065	229,507	239,792	246,282
Retail trade	479,269	436,563	389,748	401,330	437,219	482,016	489,802	509,340	507,569	542,140	557,809
Building materials and garden equipment	39,119	28,339	20,567	18,158	21,269	18,599	20,531	21,893	26,780	28,439	29,139
General merchandise stores	41,146	39,631	35,104	36,861	42,227	50,811	53,464	55,958	61,979	79,265	83,987
Food stores	62,814	60,710	59,888	56,898	61,743	68,828	76,805	92,733	86,316	87,503	83,529
Automotive dealers and service stations	72,813	60,879	56,960	63,351	70,039	75,263	75,076	73,148	75,405	81,791	85,713
Apparel and accessory stores	17,823	15,345	14,384	13,218	13,343	15,713	18,993	16,952	15,954	14,686	16,718
Home furniture and furnishings stores	31,529	28,826	23,166	20,029	22,246	25,701	25,031	22,106	22,802	26,155	26,595
Eating and drinking places	141,087	130,558	112,026	123,914	130,103	144,721	140,681	143,545	134,359	138,705	144,063
Miscellaneous retail	72,938	72,275	67,653	68,901	76,249	82,380	79,221	83,005	83,974	85,596	88,065
Finance, insurance, and real estate	263,830	269,782	260,415	216,168	199,408	204,057	216,308	238,715	273,039	278,287	290,994
Depository & non-depository institutions	119,025	119,865	108,026	97,819	87,031	81,553	86,598	93,189	107,105	114,434	112,602
Other finance, insurance, & real estate	144,805	149,917	152,389	118,349	112,377	122,504	129,710	145,526	165,934	163,853	178,392
Security & commodity brokers	(D)	(D)	(D)	13,139	11,123	11,792	13,658	15,712	17,120	16,514	16,592
Insurance carriers	34,861	34,634	32,223	30,839	33,197	34,933	35,396	35,926	38,375	39,319	40,063
Insurance agents, brokers, and services	30,211	31,668	30,690	31,174	32,440	34,136	33,896	35,619	38,060	38,966	39,766
Real estate	37,799	34,965	47,235	29,770	26,512	27,438	30,187	40,162	51,288	48,027	55,323
Combined real estate, insurance, etc. 10/	(D)	(D)	(D)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Holding and other investment offices	30,735	36,276	29,986	13,427	9,105	14,205	16,573	18,107	21,091	21,027	26,648
Services	897,835	876,054	835,941	852,253	948,985	1,081,963	1,126,935	1,216,258	1,252,466	1,284,365	1,328,300
Hotels and other lodging places	48,437	48,282	46,442	48,036	56,899	64,335	64,495	70,007	69,468	55,634	55,286
Personal services	48,735	51,780	48,237	48,895	44,937	42,249	44,877	(D)	(D)	48,874	48,438
Private households	4,361	(D)	(D)	5,910	(D)	7,271	7,170	8,097	8,623	8,903	9,533
Business services	193,427	175,038	161,908	139,465	164,836	188,583	178,425	197,367	189,973	222,354	223,856
Auto repair, services, and parking	41,107	36,044	35,510	37,538	38,029	43,661	45,560	46,353	46,491	53,642	57,170
Miscellaneous repair services	18,758	18,293	15,194	16,303	17,544	20,130	20,594	19,032	19,430	22,358	22,587
Amusement and recreation services	20,555	25,921	27,875	25,287	26,595	32,188	40,074	43,984	36,227	43,158	50,552
Motion pictures	17,502	21,399	17,907	15,913	13,920	12,908	12,304	12,622	15,512	12,156	13,414
Health services	178,093	183,914	184,505	195,533	217,582	259,106	296,900	317,121	325,613	328,687	337,366
Legal services	81,309	82,926	86,179	90,259	89,470	102,321	107,580	104,512	109,902	103,085	100,542
Educational services	11,749	13,229	14,907	15,368	17,696	19,099	21,216	21,759	24,614	26,346	24,818
Social services 11/	39,854	38,936	40,286	41,984	46,860	50,247	48,375	52,980	54,651	59,736	61,167
Museums, botanical, zoological gardens	93	(D)	(D)	572	(D)	673	943	880	895	791	960
Membership organizations	29,448	28,397	27,077	27,413	30,191	33,765	38,942	(D)	(D)	48,593	49,650
Engineering and management services 12/	(N)	(N)	(N)	126,899	151,455	177,873	186,080	200,729	220,793	221,253	242,185
Miscellaneous services	164,407	146,914	124,647	16,878	25,874	27,554	13,400	30,809	34,925	28,795	30,776
Government and government enterprises	1,102,507	1,150,143	1,157,924	1,174,312	1,218,382	1,301,321	1,381,582	1,511,401	1,583,853	1,559,696	1,544,292
Federal, civilian	291,871	298,848	322,736	351,916	361,096	390,589	420,766	464,185	514,418	489,442	478,447
Military	217,838	247,931	262,604	261,896	272,379	291,621	301,191	333,660	334,270	308,838	311,235
State and local	592,798	603,364	572,584	560,500	584,907	619,111	659,625	713,556	735,165	761,416	754,610
State	255,892	254,629	236,966	241,722	260,891	284,041	312,768	326,199	336,528	344,929	346,919
Local	336,906	348,735	335,618	318,778	324,016	335,070	346,857	387,357	398,637	416,487	407,691

Appendix C: Kenai Peninsula Borough Personal Income and Earnings – in nominal dollars

Years	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Personal income (thousands of dollars)	(N)	(N)	(N)	(N)	303,566	348,082	406,751	487,507	545,033	597,293
Nonfarm personal income	(N)	(N)	(N)	(N)	303,309	347,822	406,403	487,329	544,959	597,593
Farm income 2/	(N)	(N)	(N)	(N)	257	260	348	178	74	-300
Population (number of persons) 3/	(N)	(N)	(N)	(N)	23,524	25,653	27,098	29,587	33,225	36,036
Per capita personal income (dollars)	(N)	(N)	(N)	(N)	12,905	13,569	15,010	16,477	16,404	16,575
Earnings by place of work	(N)	(N)	(N)	(N)	251,279	283,586	328,622	350,218	388,408	451,299
less: Personal cont. for social insurance 4/	(N)	(N)	(N)	(N)	12,449	14,550	18,303	19,247	21,360	24,973
plus: Adjustment for residence 5/	(N)	(N)	(N)	(N)	13,561	18,805	22,310	45,765	45,584	31,857
equals: Net earnings by place of residence	(N)	(N)	(N)	(N)	252,391	287,841	332,629	376,736	412,632	458,183
plus: Dividends, interest, and rent 6/	(N)	(N)	(N)	(N)	29,658	33,656	39,548	48,737	63,112	75,449
plus: Transfer payments	(N)	(N)	(N)	(N)	21,517	26,585	34,574	62,034	69,289	63,661
Wage and salary disbursements	(N)	(N)	(N)	(N)	177,813	212,539	262,359	277,039	293,836	337,006
Other labor income	(N)	(N)	(N)	(N)	18,999	22,312	28,594	30,094	32,811	36,192
Proprietors' income 7/	(N)	(N)	(N)	(N)	54,467	48,735	37,669	43,085	61,761	78,101
Farm proprietors' income	(N)	(N)	(N)	(N)	248	249	205	(L)	-66	-422
Nonfarm proprietors' income	(N)	(N)	(N)	(N)	54,219	48,486	37,464	43,073	61,827	78,523
Farm earnings	(N)	(N)	(N)	(N)	257	260	348	178	74	-300
Nonfarm earnings	(N)	(N)	(N)	(N)	251,022	283,326	328,274	350,040	388,334	451,599
Private earnings	(N)	(N)	(N)	(N)	211,789	236,473	274,489	288,363	315,219	367,267
Ag. serv., forestry, fishing, and other 8/	(N)	(N)	(N)	(N)	22,457	16,294	5,142	4,573	9,957	8,580
Agricultural services	(N)	(N)	(N)	(N)	214	281	388	317	427	705
Forestry, fishing, and other 8/	(N)	(N)	(N)	(N)	22,243	16,013	4,754	4,256	9,530	7,875
Forestry	(N)	(N)	(N)	(N)	(L)	(L)	(L)	(L)	(L)	97
Fishing	(N)	(N)	(N)	(N)	22,230	15,999	4,741	4,258	9,487	7,778
Other 8/	(N)	(N)	(N)	(N)	0	0	0	0	0	0
Mining	(N)	(N)	(N)	(N)	32,584	33,465	46,371	47,722	39,081	39,346
Metal mining	(N)	(N)	(N)	(N)	306	527	988	(D)	(D)	(D)
Coal mining	(N)	(N)	(N)	(N)	51	77	(L)	(L)	(L)	(L)
Oil and gas extraction	(N)	(N)	(N)	(N)	31,975	32,713	45,219	46,432	38,621	38,904
Nonmetallic minerals, except fuels	(N)	(N)	(N)	(N)	252	148	129	(D)	(D)	(D)
Construction	(N)	(N)	(N)	(N)	24,477	37,866	45,914	50,053	66,474	101,260
General building contractors	(N)	(N)	(N)	(N)	8,622	8,569	8,724	10,419	17,035	28,496
Heavy construction contractors	(N)	(N)	(N)	(N)	5,386	16,644	24,799	25,178	24,065	36,181
Special trade contractors	(N)	(N)	(N)	(N)	10,469	12,653	12,391	14,456	25,374	36,583
Manufacturing	(N)	(N)	(N)	(N)	35,752	41,023	45,825	46,172	46,040	46,072
Durable goods	(N)	(N)	(N)	(N)	4,517	5,264	5,143	3,189	2,422	2,025
Lumber and wood products	(N)	(N)	(N)	(N)	(D)	(D)	(D)	1,545	795	393
Furniture and fixtures	(N)	(N)	(N)	(N)	0	0	0	0	0	0
Stone, clay, and glass products	(N)	(N)	(N)	(N)	557	692	723	(D)	(D)	1,004
Primary metal industries	(N)	(N)	(N)	(N)	0	0	0	0	0	0
Fabricated metal products	(N)	(N)	(N)	(N)	(L)	0	0	0	0	0
Industrial machinery and equipment	(N)	(N)	(N)	(N)	(D)	(D)	(D)	(D)	(D)	(D)
Electronic and other electric equipment	(N)	(N)	(N)	(N)	53	0	0	(D)	(D)	(L)
Motor vehicles and equipment	(N)	(N)	(N)	(N)	0	0	0	0	0	0
Other transportation equipment	(N)	(N)	(N)	(N)	(D)	(D)	(D)	(D)	(D)	(D)
Instruments and related products	(N)	(N)	(N)	(N)	0	0	0	0	0	0
Miscellaneous manufacturing industries	(N)	(N)	(N)	(N)	160	142	174	128	112	108
Ordnance 9/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Nondurable goods	(N)	(N)	(N)	(N)	31,235	35,759	40,682	42,983	43,618	44,047
Food and kindred products	(N)	(N)	(N)	(N)	(D)	(D)	(D)	(D)	(D)	(D)
Tobacco products	(N)	(N)	(N)	(N)	0	0	0	0	0	0
Textile mill products	(N)	(N)	(N)	(N)	0	0	0	0	0	0
Apparel and other textile products	(N)	(N)	(N)	(N)	(L)	0	(L)	(L)	(L)	(L)
Paper and allied products	(N)	(N)	(N)	(N)	0	0	0	0	0	0
Printing and publishing	(N)	(N)	(N)	(N)	817	627	741	946	1,192	1,514
Chemicals and allied products	(N)	(N)	(N)	(N)	(D)	(D)	(D)	(D)	(D)	(D)
Petroleum and coal products	(N)	(N)	(N)	(N)	3,347	4,799	6,769	7,702	8,156	8,764
Rubber and misc. plastics products	(N)	(N)	(N)	(N)	0	0	0	0	0	0
Leather and leather products	(N)	(N)	(N)	(N)	0	0	0	0	0	0
Transportation and public utilities	(N)	(N)	(N)	(N)	26,194	34,459	49,996	50,200	48,891	47,935
Railroad transportation	(N)	(N)	(N)	(N)	86	127	162	(L)	0	0
Trucking and warehousing	(N)	(N)	(N)	(N)	(D)	(D)	(D)	(D)	(D)	16,792
Water transportation	(N)	(N)	(N)	(N)	1,897	2,429	2,538	3,645	2,091	3,710
Other transportation	(N)	(N)	(N)	(N)	(D)	(D)	(D)	(D)	(D)	10,485
Local and interurban passenger transit	(N)	(N)	(N)	(N)	(D)	(D)	(D)	(D)	(D)	(D)
Transportation by air	(N)	(N)	(N)	(N)	1,298	1,773	2,672	2,537	2,853	3,368
Pipelines, except natural gas	(N)	(N)	(N)	(N)	0	0	0	0	0	0
Transportation services	(N)	(N)	(N)	(N)	471	415	1,139	(D)	(D)	(D)
Communications	(N)	(N)	(N)	(N)	(D)	(D)	(D)	8,849	8,888	8,045
Electric, gas, and sanitary services	(N)	(N)	(N)	(N)	3,888	5,247	5,766	5,823	7,085	8,903
Wholesale trade	(N)	(N)	(N)	(N)	8,006	8,573	11,916	9,645	9,811	12,469
Retail trade	(N)	(N)	(N)	(N)	22,139	21,285	22,525	26,850	33,110	40,979
Building materials and garden equipment	(N)	(N)	(N)	(N)	1,419	561	644	1,413	1,288	4,887
General merchandise stores	(N)	(N)	(N)	(N)	1,171	1,314	1,311	1,297	1,586	1,668
Food stores	(N)	(N)	(N)	(N)	2,997	3,651	4,162	4,954	6,632	7,872
Automotive dealers and service stations	(N)	(N)	(N)	(N)	3,275	2,726	3,202	4,067	4,873	5,127
Apparel and accessory stores	(N)	(N)	(N)	(N)	759	713	811	923	1,454	2,046
Home furniture and furnishings stores	(N)	(N)	(N)	(N)	946	1,057	1,145	1,604	3,220	2,899
Eating and drinking places	(N)	(N)	(N)	(N)	7,339	6,855	6,010	5,884	6,850	7,614
Miscellaneous retail	(N)	(N)	(N)	(N)	4,233	4,408	5,240	6,708	7,207	8,866
Finance, insurance, and real estate	(N)	(N)	(N)	(N)	4,626	4,840	6,063	6,981	8,423	9,731
Depository & non-depository institutions	(N)	(N)	(N)	(N)	(D)	(D)	(D)	3,386	4,117	5,004
Other finance, insurance, & real estate	(N)	(N)	(N)	(N)	(D)	(D)	(D)	3,595	4,306	4,727
Security & commodity brokers	(N)	(N)	(N)	(N)	(L)	(L)	(L)	0	(L)	(L)
Insurance carriers	(N)	(N)	(N)	(N)	(D)	(D)	(D)	502	479	598
Insurance agents, brokers, and services	(N)	(N)	(N)	(N)	325	553	1,099	1,208	1,341	1,462
Real estate	(N)	(N)	(N)	(N)	1,305	1,036	1,243	1,183	1,967	2,117
Combined real estate, insurance, etc. 10/	(N)	(N)	(N)	(N)	373	275	0	0	0	0
Holding and other investment offices	(N)	(N)	(N)	(N)	(D)	(D)	(D)	702	510	515
Services	(N)	(N)	(N)	(N)	35,554	38,668	40,737	46,167	53,432	60,895
Hotels and other lodging places	(N)	(N)	(N)	(N)	1,820	2,117	2,051	2,125	3,554	4,314
Personal services	(N)	(N)	(N)	(N)	793	1,037	921	1,170	1,438	1,770
Private households	(N)	(N)	(N)	(N)	501	479	482	489	491	568
Business services	(N)	(N)	(N)	(N)	6,631	7,635	7,907	9,565	11,831	11,562
Auto repair, services, and parking	(N)	(N)	(N)	(N)	1,877	2,793	1,434	1,149	1,768	3,236
Miscellaneous repair services	(N)	(N)	(N)	(N)	3,889	4,028	4,723	5,052	5,729	6,832
Amusement and recreation services	(N)	(N)	(N)	(N)	(D)	(D)	(D)	619	669	1,005
Motion pictures	(N)	(N)	(N)	(N)	296	279	179	(D)	(D)	(D)
Health services	(N)	(N)	(N)	(N)	9,024	8,753	10,658	13,291	13,011	14,615
Legal services	(N)	(N)	(N)	(N)	1,018	747	694	1,070	852	999
Educational services	(N)	(N)	(N)	(N)	499	544	506	537	636	775
Social services 11/	(N)	(N)	(N)	(N)	1,668	1,647	2,306	2,213	2,931	3,167
Museums, botanical, zoological gardens	(N)	(N)	(N)	(N)	(D)	(D)	(D)	(D)	(D)	(D)
Membership organizations	(N)	(N)	(N)	(N)	1,830	2,068	2,202	2,002	2,069	2,100
Engineering and management services 12/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Miscellaneous services	(N)	(N)	(N)	(N)	5,211	5,834	6,155	6,563	7,933	9,112
Government and government enterprises	(N)	(N)	(N)	(N)	39,233	46,853	53,785	61,677	73,115	84,332
Federal, civilian	(N)	(N)	(N)	(N)	3,834	4,458	4,573	4,747	5,453	6,346
Military	(N)	(N)	(N)	(N)	637	654	1,780	2,063	2,206	2,621
State and local	(N)	(N)	(N)	(N)	34,762	41,741	47,432	54,867	65,456	75,365
State	(N)	(N)	(N)	(N)	12,035	15,001	17,600	20,289	23,526	27,141
Local	(N)	(N)	(N)	(N)	22,727	26,740	29,832	34,578	41,930	48,224

Appendix C: Kenai Peninsula Borough Personal Income and Earnings – in nominal dollars (Continued)

Years	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Personal income (thousands of dollars)	695,692	679,326	654,655	700,380	806,947	861,807	897,914	925,284	977,708	1,023,591	1,060,618
Nonfarm personal income	696,297	679,741	655,526	700,920	807,759	862,158	898,072	925,341	977,590	1,023,758	1,060,649
Farm income 2/	-605	-415	-871	-540	-812	-351	-158	-57	118	-167	(L)
Population (number of persons) 3/	37,773	40,144	40,316	40,060	40,069	41,101	42,535	43,312	43,977	45,102	46,133
Per capita personal income (dollars)	18,418	16,922	16,238	17,483	20,139	20,968	21,110	21,363	22,232	22,695	22,990
Earnings by place of work	506,435	482,279	444,433	483,159	581,695	606,928	624,925	632,253	662,068	683,888	696,855
less: Personal cont. for social insurance 4/	28,794	27,871	26,540	30,963	38,905	40,482	42,662	42,443	45,235	47,126	48,063
plus: Adjustment for residence 5/	30,954	28,962	40,124	40,888	39,974	51,015	55,407	54,244	54,104	61,434	62,047
equals: Net earnings by place of residence	508,595	483,370	458,017	493,084	582,764	617,461	637,670	644,054	670,937	698,196	710,839
plus: Dividends, interest, and rent 6/	88,075	90,357	93,633	98,743	103,967	110,025	112,890	113,380	121,456	134,142	147,338
plus: Transfer payments	99,022	105,599	103,005	108,553	120,216	134,321	147,354	167,850	185,315	191,253	202,441
Wage and salary disbursements	357,526	322,640	293,999	314,901	412,474	422,062	440,427	449,556	476,131	491,527	501,588
Other labor income	40,078	36,339	34,596	34,978	47,304	50,600	55,540	56,492	61,960	64,338	63,683
Proprietors' income 7/	108,831	123,300	115,838	133,280	121,917	134,266	128,958	126,205	123,977	128,023	131,584
Farm proprietors' income	-702	-489	-931	-621	-903	-449	-265	-170	(L)	-270	-141
Nonfarm proprietors' income	109,533	123,789	116,769	133,901	122,820	134,715	129,223	126,375	123,964	128,293	131,725
Farm earnings	-605	-415	-871	-540	-812	-351	-158	-57	118	-167	(L)
Nonfarm earnings	507,040	482,694	445,304	483,699	582,507	607,279	625,083	632,310	661,950	684,055	696,886
Private earnings	412,205	381,120	347,373	378,340	465,892	482,772	495,627	495,709	516,753	532,750	531,097
Ag. serv., forestry, fishing, and other 8/	33,706	47,104	46,033	56,819	52,443	64,693	54,314	53,324	51,027	34,003	33,514
Agricultural services	733	702	1,125	1,079	1,036	1,323	1,863	1,873	1,835	1,828	1,589
Forestry, fishing, and other 8/	32,973	46,402	44,908	55,740	51,407	63,370	52,451	51,451	49,192	32,175	31,925
Forestry	52	50	(L)	(L)	(L)	(L)	(L)	(L)	0	0	0
Fishing	32,921	46,352	44,868	55,731	51,401	63,358	52,442	51,438	49,192	32,175	31,925
Other 8/	0	0	0	0	0	0	0	0	0	0	0
Mining	44,601	51,628	49,708	51,360	55,823	64,879	72,140	71,416	72,235	76,824	76,046
Metal mining	-125	(L)	(D)	56	242	211	226	(D)	(D)	615	(D)
Coal mining	(L)	(L)	(D)	(L)	(L)	(L)	66	59	0	0	0
Oil and gas extraction	44,278	51,083	49,693	51,253	55,548	64,635	71,848	71,149	71,830	75,994	75,328
Nonmetallic minerals, except fuels	432	540	0	(L)	0	0	0	(D)	(D)	215	(D)
Construction	102,085	67,226	47,274	50,896	61,485	54,489	50,117	47,456	50,046	57,604	58,138
General building contractors	23,714	20,546	13,393	11,074	9,168	7,179	8,061	10,706	13,307	14,146	13,373
Heavy construction contractors	41,783	14,801	7,952	12,054	27,647	22,013	12,140	8,020	8,878	11,137	10,270
Special trade contractors	36,588	31,879	25,929	27,768	24,670	25,297	29,916	28,730	27,861	32,321	34,495
Manufacturing	48,776	45,696	50,318	55,769	64,444	76,466	83,694	79,617	79,056	82,580	86,899
Durable goods	1,429	1,263	1,087	1,456	4,236	6,952	8,871	5,287	10,588	10,059	12,633
Lumber and wood products	149	80	(D)	(D)	(D)	(D)	(D)	1,926	7,141	6,313	9,046
Furniture and fixtures	0	0	0	0	0	0	0	0	0	0	0
Stone, clay, and glass products	941	1,096	948	863	466	582	852	1,327	1,594	847	795
Primary metal industries	0	0	0	0	0	0	0	0	0	0	0
Fabricated metal products	0	0	0	0	60	50	(L)	204	64	(L)	(D)
Industrial machinery and equipment	(D)	(D)	0	0	0	0	0	(D)	(D)	(D)	(D)
Electronic and other electric equipment	(L)	(L)	0	0	0	0	0	0	0	0	0
Motor vehicles and equipment	0	0	0	0	0	0	0	0	0	0	0
Other transportation equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1,720	1,830	(D)
Instruments and related products	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous manufacturing industries	60	(L)	0	0	0	0	0	0	(D)	(D)	(D)
Ordnance 9/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Nondurable goods	47,347	44,433	49,231	54,313	60,208	69,514	74,823	74,330	68,468	72,521	74,266
Food and kindred products	(D)	(D)	(D)	22,959	(D)	(D)	(D)	(D)	26,640	27,995	(D)
Tobacco products	0	0	0	0	0	0	0	0	0	0	0
Textile mill products	0	0	0	0	0	0	0	0	0	0	0
Apparel and other textile products	0	0	0	0	0	(L)	0	0	(D)	(D)	0
Paper and allied products	0	0	0	0	0	0	0	0	0	0	0
Printing and publishing	1,907	2,113	2,309	2,354	2,707	2,441	3,387	4,070	3,408	3,295	2,127
Chemicals and allied products	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Petroleum and coal products	9,964	9,949	9,639	9,620	10,011	11,346	11,198	11,357	12,027	13,376	13,766
Rubber and misc. plastics products	0	0	0	(D)	0	0	0	0	0	0	0
Leather and leather products	0	0	0	0	0	0	0	0	0	0	0
Transportation and public utilities	46,712	35,099	26,168	25,976	77,484	49,312	48,823	48,052	50,568	51,718	53,420
Railroad transportation	0	0	0	0	0	0	0	0	0	0	0
Trucking and warehousing	(D)	11,112	2,990	3,571	4,664	5,532	6,019	3,686	3,529	4,017	4,200
Water transportation	5,257	2,873	1,473	1,823	7,976	9,519	8,866	7,061	7,658	9,271	8,344
Other transportation	(D)	5,177	5,171	4,528	8,197	11,308	9,442	8,422	8,326	9,687	9,765
Local and interurban passenger transit	(D)	521	348	453	884	1,171	1,929	1,984	1,991	2,831	2,478
Transportation by air	3,792	3,563	3,770	2,819	5,983	8,613	5,963	5,145	4,539	5,278	5,454
Pipelines, except natural gas	0	0	0	0	0	0	0	0	0	0	0
Transportation services	1,298	1,093	1,053	1,256	1,330	1,524	1,550	1,293	1,796	1,578	1,833
Communications	7,861	6,025	7,062	6,667	7,040	6,983	6,967	9,436	10,654	7,505	8,347
Electric, gas, and sanitary services	9,888	9,912	9,472	9,387	49,607	15,970	17,529	19,447	20,401	21,238	22,764
Wholesale trade	12,417	11,621	10,841	13,715	14,892	15,098	15,271	18,191	22,732	23,858	20,336
Retail trade	49,464	46,047	41,231	39,589	43,207	50,068	55,458	60,979	65,425	71,902	72,527
Building materials and garden equipment	5,528	5,021	4,106	3,806	4,509	3,996	4,636	4,819	4,899	5,142	5,477
General merchandise stores	1,478	(D)	584	1,090	1,790	2,387	1,752	1,736	3,881	6,706	7,339
Food stores	8,672	9,154	8,459	7,719	7,473	9,285	11,695	13,151	13,082	15,248	14,714
Automotive dealers and service stations	6,764	6,180	5,600	5,770	6,434	7,290	7,476	7,207	8,247	9,021	9,452
Apparel and accessory stores	2,739	(D)	2,119	1,802	1,479	1,713	2,643	1,994	1,929	1,920	1,431
Home furniture and furnishings stores	3,303	3,287	2,558	2,167	1,867	1,931	1,918	1,388	1,328	1,360	1,388
Eating and drinking places	10,262	9,064	8,218	8,144	8,303	9,417	11,395	14,765	14,583	15,649	16,090
Miscellaneous retail	10,718	9,952	9,587	9,091	11,352	14,049	13,943	15,919	17,476	16,856	16,636
Finance, insurance, and real estate	9,255	9,736	9,141	6,613	5,953	6,569	6,627	8,539	10,530	10,495	11,023
Depository & non-depository institutions	5,060	4,983	3,679	(D)	(D)	3,241	3,398	(D)	(D)	(D)	(D)
Other finance, insurance, & real estate	4,195	4,753	5,462	(D)	(D)	3,328	3,229	(D)	(D)	(D)	(D)
Security & commodity brokers	(L)	(L)	(L)	(D)	67	(D)	(D)	142	165	143	185
Insurance carriers	816	742	668	462	(D)	(D)	(D)	(D)	(D)	(D)	641
Insurance agents, brokers, and services	1,468	1,696	1,469	1,534	1,416	1,754	1,783	2,347	2,453	3,233	3,559
Real estate	1,252	1,278	2,315	1,412	612	778	652	1,359	2,532	1,436	1,879
Combined real estate, insurance, etc. 10/	0	0	0	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Holding and other investment offices	625	1,005	978	234	265	492	431	425	487	417	(D)
Services	65,189	66,963	66,659	77,603	90,161	101,198	109,183	108,135	115,134	123,766	119,194
Hotels and other lodging places	4,770	4,970	4,524	4,693	5,198	6,004	5,887	6,485	8,754	10,596	11,528
Personal services	2,243	2,812	2,661	4,739	3,262	2,558	2,158	2,333	2,817	3,010	2,923
Private households	573	601	598	645	695	729	719	812	866	894	957
Business services	13,061	13,489	13,349	13,184	18,105	19,066	15,862	13,855	11,375	10,997	12,152
Auto repair, services, and parking	4,607	3,859	4,283	4,293	4,634	4,780	4,698	4,317	4,322	4,989	5,267
Miscellaneous repair services	5,714	5,727	5,536	8,284	8,396	9,875	7,181	5,038	6,550	4,372	4,927
Amusement and recreation services	1,669	2,207	2,788	4,410	3,941	4,761	5,291	5,875	4,470	5,333	5,909
Motion pictures	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Health services	15,697	16,814	17,780	20,655	23,225	27,170	30,315	32,764	38,270	41,207	31,163
Legal services	1,439	1,321	1,330	1,798	1,607	1,722	1,993	1,866	2,233	2,120	2,162
Educational services	774	729	738	1,000	801	884	1,227	1,190	1,228	1,465	1,521
Social services 11/	3,469	2,881	2,914	3,077	4,117	4,044	4,222	4,713	5,140	6,331	6,588
Museums, botanical, zoological gardens	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Membership organizations	1,956	2,577	2,684	3,143	3,908	4,441	5,551	6,451	7,057	6,816	7,401
Engineering and management services 12/	(N)	(N)	(N)	2,300	8,066	10,452	12,116	8,977	8,929	6,200	6,610
Miscellaneous services	8,353	7,944	6,563	3,581	2,960	3,590	10,677	12,259	11,728	18,236	18,924
Government and government enterprises	94,835	101,574	97,931	105,359	116,615	124,507	129,456	136,601	145,197	151,305	165,789
Federal, civilian	6,606	7,122	6,677	8,678	9,719	11,077	11,585	12,632	16,191	17,623	18,654
Military	3,076	3,084	3,241	3,611	3,875	4,241	4,609	5,478	5,702	5,884	5,975
State and local	85,153	91,368	88,013	93,070	103,021	109,189	113,262	118,491	123,304	127,798	141,160
State	30,074	31,078	30,093	34,932	40,443	42,478	41,886	42,294	43,220	43,834	45,242
Local	55,079	60,290	57,920	58,138	62,578	66,711	71,376	76,197	80,084	83,964	95,918

Appendix C: Northwest Arctic Borough Personal Income and Earnings – in nominal dollars

Years	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Northwest Arctic Borough										
Personal income (thousands of dollars)	26,931	27,896	31,954	32,774	33,002	39,562	48,335	54,815	59,368	62,623
Nonfarm personal income	26,931	27,896	31,954	32,774	33,002	39,562	48,335	54,815	59,368	62,623
Farm income 2/	0	0	0	0	0	0	0	0	0	0
Population (number of persons) 3/	4,865	4,760	4,751	4,778	4,843	4,809	4,715	5,021	5,337	5,600
Per capita personal income (dollars)	5,536	5,861	6,726	6,859	6,814	8,227	10,251	10,917	11,124	11,183
Earnings by place of work	18,482	21,701	26,557	26,916	26,225	31,173	41,953	45,070	47,663	50,591
less: Personal cont. for social insurance 4/	1,083	1,254	1,522	1,565	1,548	1,829	2,474	2,484	2,601	2,871
plus: Adjustment for residence 5/	(L)	-192	-756	-1,180	-1,037	-1,466	-3,437	-2,706	-2,605	-2,533
equals: Net earnings by place of residence	17,355	20,255	24,279	24,171	23,640	27,878	36,042	39,880	42,457	45,187
plus: Dividends, interest, and rent 6/	632	665	669	876	1,308	1,720	2,404	3,359	4,267	5,302
plus: Transfer payments	8,944	6,976	7,006	7,727	8,054	9,964	9,889	11,576	12,644	12,134
Wage and salary disbursements	16,906	19,730	24,217	24,371	23,118	27,827	37,998	40,118	41,814	44,032
Other labor income	801	1,089	1,593	1,688	1,424	1,722	2,630	3,382	3,490	3,575
Proprietors' income 7/	775	882	747	857	1,683	1,624	1,325	1,570	2,359	2,984
Farm proprietors' income	0	0	0	0	0	0	0	0	0	0
Nonfarm proprietors' income	775	882	747	857	1,683	1,624	1,325	1,570	2,359	2,984
Farm earnings	0	0	0	0	0	0	0	0	0	0
Nonfarm earnings	18,482	21,701	26,557	26,916	26,225	31,173	41,953	45,070	47,663	50,591
Private earnings	7,903	10,694	12,403	11,963	11,403	14,007	22,625	23,092	24,103	24,116
Ag. serv., forestry, fishing, and other 8/	(L)	(L)	(L)	(L)	396	545	438	(D)	(D)	(D)
Agricultural services	(L)	(L)	(L)	(L)	0	(L)	(L)	(L)	(L)	(L)
Forestry, fishing, and other 8/	(L)	0	0	0	396	557	463	(D)	(D)	(D)
Forestry	0	0	0	0	0	0	0	0	0	0
Fishing	(L)	0	0	0	396	557	463	(D)	(D)	(D)
Other 8/	0	0	0	0	0	0	0	0	0	0
Mining	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Metal mining	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(L)
Coal mining	0	0	0	0	0	0	0	0	0	0
Oil and gas extraction	0	0	0	0	0	0	(L)	64	93	82
Nonmetallic minerals, except fuels	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Construction	621	1,629	2,764	3,535	1,886	2,810	8,034	2,959	1,756	1,004
General building contractors	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2,899	1,372	922
Heavy construction contractors	0	0	0	0	0	0	423	(D)	(D)	(L)
Special trade contractors	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	77
Manufacturing	148	65	136	79	76	(L)	0	0	0	0
Durable goods	72	(L)	0	0	0	0	0	0	0	0
Lumber and wood products	0	0	0	0	0	0	0	0	0	0
Furniture and fixtures	0	0	0	0	0	0	0	0	0	0
Stone, clay, and glass products	0	0	0	0	0	0	0	0	0	0
Primary metal industries	0	0	0	0	0	0	0	0	0	0
Fabricated metal products	0	0	0	0	0	0	0	0	0	0
Industrial machinery and equipment	0	0	0	0	0	0	0	0	0	0
Electronic and other electric equipment	0	0	0	0	0	0	0	0	0	0
Motor vehicles and equipment	0	0	0	0	0	0	0	0	0	0
Other transportation equipment	0	0	0	0	0	0	0	0	0	0
Instruments and related products	0	0	0	0	0	0	0	0	0	0
Miscellaneous manufacturing industries	72	(L)	0	0	0	0	0	0	0	0
Ordnance 9/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Nondurable goods	76	(L)	136	79	76	(L)	0	0	0	0
Food and kindred products	76	(L)	136	79	76	(L)	0	0	0	0
Tobacco products	0	0	0	0	0	0	0	0	0	0
Textile mill products	0	0	0	0	0	0	0	0	0	0
Apparel and other textile products	0	0	0	0	0	0	0	0	0	0
Paper and allied products	0	0	0	0	0	0	0	0	0	0
Printing and publishing	0	0	0	0	0	0	0	0	0	0
Chemicals and allied products	0	0	0	0	0	0	0	0	0	0
Petroleum and coal products	0	0	0	0	0	0	0	0	0	0
Rubber and misc. plastics products	0	0	0	0	0	0	0	0	0	0
Leather and leather products	0	0	0	0	0	0	0	0	0	0
Transportation and public utilities	3,471	3,155	3,356	3,041	3,398	3,951	4,253	8,158	8,508	8,988
Railroad transportation	0	0	0	0	0	0	0	0	0	0
Trucking and warehousing	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)
Water transportation	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other transportation	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1,752	1,733	1,778
Local and interurban passenger transit	262	(L)	60	(L)	61	53	(L)	(L)	87	143
Transportation by air	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1,699	1,641	1,625
Pipelines, except natural gas	0	0	0	0	0	0	0	0	0	0
Transportation services	0	0	0	(L)	(L)	0	(L)	(L)	(L)	(L)
Communications	391	487	554	569	546	653	786	4,543	4,717	4,665
Electric, gas, and sanitary services	292	394	618	533	577	619	591	(D)	(D)	(D)
Wholesale trade	(L)	(L)	(L)	(L)	0	(L)	(L)	(L)	(L)	(L)
Retail trade	1,101	1,222	1,473	1,829	1,984	2,275	3,274	4,164	4,387	3,609
Building materials and garden equipment	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	0
General merchandise stores	582	637	720	997	1,151	1,149	1,487	1,322	2,286	2,495
Food stores	96	131	167	146	90	81	296	556	113	(D)
Automotive dealers and service stations	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(L)	(L)	(L)
Apparel and accessory stores	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	0
Home furniture and furnishings stores	0	0	0	0	0	0	0	0	0	0
Eating and drinking places	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Miscellaneous retail	(D)	(D)	(D)	(D)	(D)	(D)	(D)	69	144	201
Finance, insurance, and real estate	877	1,499	1,507	849	496	601	1,285	1,292	1,707	2,799
Depository & non-depository institutions	(D)	(D)	(D)	(D)	(D)	(D)	(D)	446	457	616
Other finance, insurance, & real estate	(D)	(D)	(D)	(D)	(D)	(D)	(D)	846	1,250	2,183
Security & commodity brokers	0	0	0	0	0	0	0	0	0	0
Insurance carriers	0	0	0	0	0	0	0	0	0	0
Insurance agents, brokers, and services	0	0	0	0	0	0	0	0	0	0
Real estate	103	105	(L)	103	167	196	525	(D)	(D)	(D)
Combined real estate, insurance, etc. 10/	0	0	0	0	0	0	0	0	0	0
Holding and other investment offices	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Services	(D)	(D)	(D)	(D)	(D)	(D)	(D)	5,092	6,304	6,498
Hotels and other lodging places	0	0	0	0	(L)	(L)	(L)	0	(L)	(L)
Personal services	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)
Private households	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	51
Business services	73	114	135	126	173	145	156	309	696	341
Auto repair, services, and parking	(L)	(L)	(L)	(L)	53	(L)	(L)	(L)	(L)	(L)
Miscellaneous repair services	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	53
Amusement and recreation services	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Motion pictures	0	0	0	0	0	0	0	0	0	0
Health services	137	176	200	198	200	213	237	274	296	235
Legal services	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)
Educational services	0	0	0	0	0	0	0	0	0	0
Social services 11/	839	1,794	1,283	307	404	960	1,041	(D)	(D)	(D)
Museums, botanical, zoological gardens	0	0	0	0	0	0	0	0	0	0
Membership organizations	(D)	(D)	(D)	(D)	(D)	(D)	(D)	476	241	318
Engineering and management services 12/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Miscellaneous services	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Government and government enterprises	10,579	11,007	14,154	14,953	14,822	17,166	19,328	21,978	23,560	26,475
Federal, civilian	5,568	4,328	4,755	4,625	4,743	4,629	4,632	3,363	3,025	3,199
Military	1,125	978	1,062	921	409	407	374	434	466	162
State and local	3,886	5,701	8,337	9,407	9,670	12,130	14,322	18,181	20,069	23,114
State	(N)	(N)	(N)	(N)	1,199	1,587	1,710	2,103	2,785	3,000
Local	(N)	(N)	(N)	(N)	8,471	10,543	12,612	16,078	17,284	20,114

Appendix C: Northwest Arctic Borough Personal Income and Earnings – in nominal dollars (Continued)

Years	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Northwest Arctic Borough											
Personal income (thousands of dollars)	67,925	68,685	69,104	73,277	79,209	89,813	95,544	103,070	112,468	112,752	115,795
Nonfarm personal income	67,925	68,685	69,104	73,277	79,209	89,813	95,544	103,070	112,468	112,752	115,795
Farm income 2/	0	0	0	0	0	0	0	0	0	0	0
Population (number of persons) 3/	5,747	5,869	5,950	6,087	6,217	6,143	6,205	6,344	6,450	6,514	6,504
Per capita personal income (dollars)	11,819	11,703	11,614	12,038	12,741	14,620	15,398	16,247	17,437	17,309	17,804
Earnings by place of work	51,172	49,625	49,365	56,634	61,517	78,510	85,249	92,124	96,174	99,762	104,353
less: Personal cont. for social insurance 4/	3,006	2,872	3,157	3,775	4,134	5,239	5,689	6,056	6,453	6,758	7,112
plus: Adjustment for residence 5/	-2,570	-2,789	-3,160	-5,244	-6,366	-14,780	-18,537	-20,887	-20,361	-22,105	-24,051
equals: Net earnings by place of residence	45,596	43,964	43,048	47,615	51,017	58,491	61,023	65,181	69,360	70,899	73,190
plus: Dividends, interest, and rent 6/	5,930	6,486	7,207	5,952	7,103	6,854	7,739	6,933	7,303	6,298	6,604
plus: Transfer payments	16,399	18,235	18,849	19,710	21,089	24,468	26,782	30,956	35,805	35,555	36,001
Wage and salary disbursements	44,025	42,898	42,139	47,476	52,729	67,045	71,288	77,079	80,784	84,514	88,963
Other labor income	3,653	3,616	3,969	4,643	5,482	8,242	10,273	11,535	11,743	12,331	12,441
Proprietors' income 7/	3,494	3,111	3,257	4,515	3,306	3,223	3,688	3,510	3,647	2,917	2,949
Farm proprietors' income	0	0	0	0	0	0	0	0	0	0	0
Nonfarm proprietors' income	3,494	3,111	3,257	4,515	3,306	3,223	3,688	3,510	3,647	2,917	2,949
Farm earnings	0	0	0	0	0	0	0	0	0	0	0
Nonfarm earnings	51,172	49,625	49,365	56,634	61,517	78,510	85,249	92,124	96,174	99,762	104,353
Private earnings	23,318	21,431	25,083	31,378	34,531	50,031	57,594	64,023	66,826	70,799	76,397
Ag. serv., forestry, fishing, and other 8/	(D)	332	(D)	(D)	(D)	(D)	344	205	104	132	134
Agricultural services	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)
Forestry, fishing, and other 8/	(D)	336	(D)	(D)	(D)	(D)	350	211	110	137	139
Forestry	0	0	0	0	0	0	0	0	0	0	0
Fishing	(D)	336	(D)	(D)	(D)	(D)	350	211	110	137	139
Other 8/	0	0	0	0	0	0	0	0	0	0	0
Mining	(D)	857	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Metal mining	(D)	(L)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Coal mining	0	0	0	0	0	0	0	0	0	0	0
Oil and gas extraction	(L)	(D)	122	97	0	0	0	0	0	0	0
Nonmetallic minerals, except fuels	(D)	(D)	(D)	(D)	(D)	0	0	0	0	0	0
Construction	782	813	484	2,643	2,536	1,846	1,267	678	788	1,673	(D)
General building contractors	575	656	352	2,135	915	820	267	189	117	1,300	(D)
Heavy construction contractors	(D)	(L)	(L)	(D)	(D)	(D)	(D)	0	0	0	0
Special trade contractors	(D)	156	131	(D)	(D)	(D)	(D)	489	671	373	(D)
Manufacturing	0	0	0	0	0	0	(D)	(D)	0	0	0
Durable goods	0	0	0	0	0	0	0	0	0	0	0
Lumber and wood products	0	0	0	0	0	0	0	0	0	0	0
Furniture and fixtures	0	0	0	0	0	0	0	0	0	0	0
Stone, clay, and glass products	0	0	0	0	0	0	0	0	0	0	0
Primary metal industries	0	0	0	0	0	0	0	0	0	0	0
Fabricated metal products	0	0	0	0	0	0	0	0	0	0	0
Industrial machinery and equipment	0	0	0	0	0	0	0	0	0	0	0
Electronic and other electric equipment	0	0	0	0	0	0	0	0	0	0	0
Motor vehicles and equipment	0	0	0	0	0	0	0	0	0	0	0
Other transportation equipment	0	0	0	0	0	0	0	0	0	0	0
Instruments and related products	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous manufacturing industries	0	0	0	0	0	0	0	0	0	0	0
Ordnance 9/	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Nondurable goods	0	0	0	0	0	0	(D)	(D)	0	0	0
Food and kindred products	0	0	0	0	0	0	0	0	0	0	0
Tobacco products	0	0	0	0	0	0	0	0	0	0	0
Textile mill products	0	0	0	0	0	0	0	0	0	0	0
Apparel and other textile products	0	0	0	0	0	0	0	0	0	0	0
Paper and allied products	0	0	0	0	0	0	0	0	0	0	0
Printing and publishing	0	0	0	0	0	0	(D)	(D)	0	0	0
Chemicals and allied products	0	0	0	0	0	0	0	0	0	0	0
Petroleum and coal products	0	0	0	0	0	0	0	0	0	0	0
Rubber and misc. plastics products	0	0	0	0	0	0	0	0	0	0	0
Leather and leather products	0	0	0	0	0	0	0	0	0	0	0
Transportation and public utilities	5,985	5,149	7,086	7,306	6,616	8,943	9,915	10,742	11,349	11,338	11,675
Railroad transportation	0	0	0	0	0	0	0	0	0	0	0
Trucking and warehousing	(L)	(L)	(L)	92	(D)	(D)	(D)	2,583	2,494	(D)	(D)
Water transportation	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other transportation	1,207	(D)	(D)	(D)	(D)	(D)	(D)	5,006	5,149	4,871	4,865
Local and interurban passenger transit	124	211	332	975	446	817	943	881	750	304	342
Transportation by air	1,075	(D)	1,759	1,422	3,214	3,539	3,439	4,025	4,332	4,554	4,510
Pipelines, except natural gas	0	0	0	0	0	0	0	0	0	0	0
Transportation services	(L)	(L)	(D)	(D)	(D)	(D)	(D)	100	67	(L)	(L)
Communications	3,024	2,683	3,035	3,399	1,185	1,113	1,182	1,265	1,298	1,409	1,548
Electric, gas, and sanitary services	(D)	(D)	1,639	1,113	937	1,016	(D)	(D)	(D)	1,568	1,493
Wholesale trade	(L)	(L)	(L)	52	86	60	52	64	(L)	(L)	(L)
Retail trade	4,498	4,897	5,020	5,088	5,684	4,244	3,897	4,444	6,976	5,308	6,504
Building materials and garden equipment	0	0	(D)	(D)	(D)	(D)	(D)	(D)	(D)	0	0
General merchandise stores	3,084	(D)	2,966	2,812	3,023	3,252	3,010	3,477	3,680	(D)	(D)
Food stores	(D)	320	375	498	572	491	687	698	771	421	1,356
Automotive dealers and service stations	(L)	(L)	(D)	(D)	(D)	(L)	(L)	(L)	(L)	(L)	(L)
Apparel and accessory stores	0	0	0	0	0	0	0	0	0	0	0
Home furniture and furnishings stores	0	0	0	0	0	0	0	0	0	0	0
Eating and drinking places	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Miscellaneous retail	242	296	284	181	86	63	78	91	108	(L)	153
Finance, insurance, and real estate	3,103	2,228	2,584	2,700	3,006	3,739	2,910	2,800	3,130	5,099	4,820
Depository & non-depository institutions	708	585	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Other finance, insurance, & real estate	2,395	1,643	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Security & commodity brokers	0	0	0	0	0	0	0	0	0	0	0
Insurance carriers	0	0	0	0	0	0	0	0	0	0	0
Insurance agents, brokers, and services	0	0	0	0	0	0	(D)	0	0	0	0
Real estate	(D)	(D)	(D)	424	347	343	483	(D)	(D)	3,490	4,276
Combined real estate, insurance, etc. 10/	0	0	0	(N)	(N)	(N)	(N)	(N)	(N)	(N)	(N)
Holding and other investment offices	(D)	(D)	1,249	(D)	(D)	(D)	1,071	(D)	(D)	(D)	(D)
Services	7,256	7,135	8,355	10,317	12,622	14,094	(D)	(D)	(D)	(D)	(D)
Hotels and other lodging places	(L)	0	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Personal services	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)
Private households	56	64	69	79	89	93	92	103	110	114	121
Business services	296	270	569	1,037	880	384	238	214	217	207	222
Auto repair, services, and parking	101	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)
Miscellaneous repair services	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)	(L)
Amusement and recreation services	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	274
Motion pictures	0	0	0	0	(D)	(D)	0	0	0	(D)	(D)
Health services	182	127	103	234	163	388	465	377	359	529	539
Legal services	(L)	(L)	53	(L)	(L)	56	(L)	(L)	(L)	141	92
Educational services	0	0	0	0	0	0	0	0	0	0	0
Social services 11/	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	987	842
Museums, botanical, zoological gardens	0	(D)	0	0	0	0	0	0	0	(D)	(D)
Membership organizations	260	315	434	667	722	679	778	1,019	1,426	(D)	(D)
Engineering and management services 12/	(N)	(N)	(N)	139	92	292	(L)	50	80	(L)	(L)
Miscellaneous services	(D)	51	(L)	(L)	(L)	(L)	149	169	132	282	293
Government and government enterprises	27,854	28,194	24,282	25,256	26,986	28,479	27,655	28,101	29,348	28,963	27,956
Federal, civilian	3,739	4,822	3,556	3,372	3,105	2,864	2,866	3,126	2,933	2,447	2,221
Military	207	237	247	294	320	356	373	396	387	412	408
State and local	23,908	23,135	20,479	21,590	23,561	25,259	24,416	24,579	26,028	26,104	25,327
State	3,151	3,254	3,116	3,512	3,764	3,964	3,812	3,779	3,951	3,965	3,469
Local	20,757	19,881	17,363	18,078	19,797	21,295	20,604	20,800	22,077	22,139	21,858

Footnotes for Appendix C: Personal Income by Major Source and Earnings by Industry – Alaska, Anchorage, Kenai Peninsula Borough and Northwest Arctic Borough

1/ 1969-74 based on 1967 Standard Industrial Classification (SIC). 1975-87based on 1972 SIC. 1988-96 based on 1987 SIC.

2/ Farm income consists of proprietors' net income; the cash wages, pay-in-kind, and other labor income of hired farm workers; and the salaries of officers of corporate farms.

3/ Census Bureau midyear population estimates.

4/ Personal contributions for social insurance are included in earnings by type and industry but excluded from personal income.

5/ The adjustment for residence is the net inflow of the earnings of interarea commuters. For the United States, it consists of adjustments for border workers and for certain temporary and migratory workers: Wage and salary disbursements to U.S. residents commuting or working temporarily outside U.S. borders less wage and salary disbursements to foreign residents commuting or working temporarily inside U.S. borders.

6/ Includes the capital consumption adjustment for rental income of persons.

7/ Includes the inventory valuation and capital consumption adjustments.

8/ "Other" consists of wage and salary disbursements to U.S. residents employed by international organizations and foreign embassies and consulates in the United States.

9/ Under the 1972 Standard Industrial Classification, ordnance was reclassified to four 2-digit industries: fabricated metal products; electronic equipment, except computer equipment; transportation equipment; and instruments and related products.

10/ Under the 1987 Standard Industrial Classification, combined real estate, insurance, etc., was reclassified to four 2-digit industries:nondepository credit institutions; insurance agents, brokers, and services; real estate; and legal services.

11/ Social services is new under the 1972 Standard Industrial Classification; it consists of establishments previously classified under hotels, health services, educational services, membership organizations, and miscellaneous services.

12/ Engineering and management services is new under the 1987 Standard Industrial Classification; it consists of establishments previously classified under business services and miscellaneous services.

E The estimate shown here constitutes the major portion of the true estimate.

(D) Not shown to avoid disclosure of confidential information. Estimates are included in totals.

(L) Less than $50,000. Estimates are included in totals.

(N) Data not available for this year.

APPENDIX D

ALASKA GROSS STATE PRODUCT
(IN NOMINAL AND REAL 1995 DOLLARS)

Appendix D: Alaska Gross State Product by Sector – in nominal dollars (millions of $)

Years	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Total GSP	5,863	7,363	7,855	10,738	14,383	19,903	25,060	24,957	24,940	25,729
Net of Oil and Gas	5,620	7,180	6,371	6,195	6,513	7,076	8,284	9,551	10,707	11,354
Private Basic Sectors										
Oil and Gas	243	183	1,484	4,543	7,871	12,827	16,777	15,406	14,233	14,375
Production	222	157	750	2,010	4,906	9,285	13,259	11,777	10,583	10,567
Transportation	0	0	697	2,468	2,901	3,441	3,406	3,547	3,546	3,692
Processing	21	26	36	65	63	101	111	82	105	116
Seafood	151	241	349	460	577	584	654	555	554	568
Harvesting	73	135	197	284	369	420	480	423	412	417
Processing	78	105	152	177	208	164	174	132	142	150
Forest Products	161	174	143	137	164	186	171	158	127	93
Harvest/Mill	102	104	70	65	88	111	103	102	75	50
Pulp	59	70	73	72	76	74	68	56	52	43
Mining	16	18	17	22	27	35	48	52	48	54
Metal	4	4	4	5	8	15	23	30	24	26
Other	12	14	13	18	19	20	25	22	24	28
Tourism	69	96	124	128	139	161	185	217	249	290
Agriculture	4	4	5	6	4	4	2	3	2	3
Other Private Sectors										
Public Utilities	99	122	142	164	163	175	208	243	293	348
Transportation	403	416	357	369	372	408	502	518	543	580
Construction	1,639	2,460	1,407	735	585	694	900	1,233	1,562	1,499
Communication	194	230	262	318	338	371	404	444	496	512
Services	612	835	744	665	674	764	954	1,153	1,271	1,379
Trade	559	638	678	730	764	791	970	1,150	1,359	1,527
FIRE	366	479	586	693	715	722	826	989	1,172	1,340
Misc. Manufacturing	132	134	98	133	175	194	197	267	210	159
Public Sectors										
Federal Government	687	721	769	821	878	909	1,004	1,087	1,165	1,229
State and Local Government	529	615	690	813	937	1,079	1,259	1,483	1,656	1,775

Appendix D: Alaska Gross State Product by Sector – in nominal dollars (millions of $) (Continued)

Years	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Total GSP	26,074	17,909	21,063	19,657	22,647	25,160	23,289	23,841	22,430	22,712	23,708
Net of Oil and Gas	11,642	11,165	10,892	11,241	12,924	13,194	13,734	14,584	14,822	15,512	15,642
Private Basic Sectors											
Oil and Gas	14,432	6,744	10,171	8,415	9,723	11,966	9,555	9,257	7,608	7,200	8,066
Production	10,454	3,544	7,234	5,910	7,476	9,240	6,966	6,856	5,658	5,022	5,717
Transportation	3,841	3,044	2,788	2,338	2,079	2,529	2,399	2,207	1,741	1,952	2,125
Processing	136	156	150	167	167	197	190	195	209	225	223
Seafood	615	724	887	1,188	975	1,123	1,062	1,281	1,088	1,166	1,201
Harvesting	477	577	717	1,004	813	889	740	943	717	797	818
Processing	139	147	170	184	163	234	321	338	371	369	383
Forest Products	109	141	253	331	455	439	411	368	327	290	298
Harvest/Mill	65	74	158	207	315	308	278	235	206	219	226
Pulp	44	67	95	124	140	132	133	133	121	72	72
Mining	63	58	84	80	119	346	360	378	276	335	384
Metal	27	28	56	48	91	320	330	342	241	298	338
Other	36	29	28	32	28	26	30	36	35	37	46
Tourism	304	305	300	315	342	379	410	452	474	529	526
Agriculture	2	8	11	12	6	8	9	9	11	11	12
Other Private Sectors											
Public Utilities	388	378	368	369	1,405	497	494	481	516	544	516
Transportation	547	493	505	541	608	651	732	806	866	927	917
Construction	1,309	978	731	659	737	815	775	764	934	1,069	1,070
Communication	496	491	482	373	375	397	452	472	501	544	525
Services	1,446	1,353	1,241	1,320	1,513	1,689	1,748	1,888	2,008	2,057	2,171
Trade	1,605	1,480	1,326	1,358	1,464	1,563	1,627	1,705	1,750	1,904	1,928
FIRE	1,453	1,419	1,307	1,206	1,165	1,207	1,296	1,339	1,432	1,538	1,524
Misc. Manufacturing	95	29	105	112	199	298	186	149	22	84	105
Public Sectors											
Federal Government	1,256	1,314	1,399	1,484	1,566	1,712	1,951	2,140	2,195	2,014	1,953
State and Local Government	1,955	1,994	1,892	1,894	1,995	1,069	2,222	2,353	2,425	2,501	2,513

Source: ISER, ISER Gross State Product: 1963 to 1996, May 1995

Appendix D: Alaska Gross State Product by Sector – in real 1996 dollars (millions of $)

Years	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Total GSP	13,262	13,500	14,105	19,188	20,919	22,620	23,334	24,493	25,725	26,306
Net of Oil and Gas	12,252	12,766	11,388	11,463	11,512	11,542	12,296	13,027	14,108	14,783
Private Basic Sectors										
Oil and Gas	1,010	733	2,717	7,725	9,407	11,078	11,038	11,467	11,617	11,523
Seafood	331	431	518	613	706	823	858	659	716	747
Forest Products	341	318	247	213	229	248	223	201	151	110
Mining	34	39	40	37	37	39	56	64	52	62
Tourism	169	190	208	244	258	276	280	301	339	390
Agriculture	11	8	7	7	5	6	2	3	3	4
Other Private Sectors										
Public Utilities	210	226	253	282	270	267	297	319	380	441
Transportation	1,732	1,328	743	982	950	974	1,040	993	1,039	1,079
Construction	2,353	2,787	1,801	1,155	933	955	1,108	1,449	1,857	1,874
Communication	297	327	357	409	421	438	446	468	523	529
Services	985	1,169	1,093	1,071	1,083	1,115	1,212	1,320	1,424	1,541
Trade	954	992	1,024	1,048	1,061	1,020	1,168	1,314	1,480	1,640
FIRE	839	988	1,135	1,269	1,261	1,183	1,270	1,352	1,532	1,687
Misc. Manufacturing	314	306	207	297	336	331	342	449	338	256
Public Sectors										
Federal Government	2,267	2,217	2,233	2,162	2,170	2,095	2,111	2,106	2,123	2,160
State and Local Government	1,418	1,440	1,523	1,672	1,973	1,775	1,885	2,029	2,153	2,265

Appendix D: Alaska Gross State Product by Sector – in real 1996 dollars (millions of $) (Continued)

Years	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Total GSP	27,224	25,116	26,936	27,413	27,635	27,394	27,428	26,982	26,220	26,065	25,539
Net of Oil and Gas	15,112	14,317	14,011	14,017	15,458	15,591	15,931	15,889	16,157	16,414	15,971
Private Basic Sectors											
Oil and Gas	12,112	10,799	12,925	13,396	12,177	11,803	11,497	11,093	10,062	9,651	9,568
Seafood	787	782	783	857	855	961	1,194	1,118	1,204	1,135	1,150
Forest Products	137	177	302	380	500	481	442	375	328	299	301
Mining	76	68	96	89	128	272	348	363	311	358	389
Tourism	413	430	442	457	482	500	508	533	551	603	520
Agriculture	3	8	9	8	5	7	10	7	13	11	11
Other Private Sectors											
Public Utilities	481	467	469	460	1,105	560	574	541	567	582	545
Transportation	1,042	972	1,030	1,069	1,232	1,209	1,224	1,253	1,308	1,324	907
Construction	1,748	1,315	1,007	883	953	998	966	947	1,096	1,189	1,208
Communication	523	526	522	443	435	453	505	531	553	582	558
Services	1,655	1,618	1,550	1,601	1,719	1,855	1,834	1,905	1,973	2,033	2,132
Trade	1,735	1,653	1,531	1,566	1,615	1,650	1,676	1,701	1,750	1,891	1,921
FIRE	1,798	1,705	1,575	1,482	1,441	1,450	1,504	1,478	1,521	1,644	1,609
Misc. Manufacturing	154	47	172	186	324	470	277	206	28	107	118
Public Sectors											
Federal Government	2,160	2,170	2,253	2,235	2,282	2,237	2,358	2,359	2,377	2,084	1,996
State and Local Government	2,401	2,381	2,270	2,303	2,383	2,488	2,511	2,571	2,577	2,573	2,607

Source: ISER, ISER Gross State Product: 1963 to 1996, May 1997

Economic and Social Effects of the Oil Industry in Alaska 1975 to 1995

Volume 2, Part 4

Effects on Individuals and Households

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Introduction

A. Introduction to Volume 2, Part 4

The purpose of this report is to add a personal perspective to the oil industry's impact on Alaska. Volume 1 and Volume 2, Part 1 through 3, provide a broad range of spending, employment, population and other data that clearly assess the quantitative effects of oil revenues and the oil industry at the statewide, regional and local levels. Part 4 looks at how people were affected by events in the oil industry. Using newspaper articles, key informants and case studies, this report puts a human face on the economic and social impacts of the oil industry in Alaska.

B. Scope of Work

The study covers a 20-year period, 1975-1995, but concentrates on the years of recession and declining production from 1985 to 1995. The regions of study include the two hardest hit -- Anchorage and the Kenai Peninsula Borough -- and the Northwest Arctic Borough, which represents a traditional rural, subsistence economy that has experienced little direct impact from oil exploration and production.

Alaska's pipeline boom, high oil prices and optimism quickly inflated the economy, which fell sharply in 1985-86, then quickly recovered. Alaskans collectively sighed relief and plunged into the next cycle, marked by a decline in production and industry consolidation. As research for this study was underway in spring 1999, the industry was changing yet again, with the proposed merger of BP Amoco and ARCO Alaska.[1]

The intent of this report is to describe the impact of the mid-1980s recession on Alaskans and the continuing decline in Prudhoe Bay production. The McDowell study team uses the statistics of those years – population trends, unemployment, migration, and others – to depict the cyclical effects on the individual level. Through analysis of labor statistics and economic studies, a review of daily news reports, and a series of key informant interviews, we describe Alaskans who found their lives changed in some way by the economic cycles of the oil industry.

Some key informants preferred to remain anonymous, but allowed their comments to be used in the report. Their names are listed in Appendix A. Others quoted in the text gave permission to use their names.

C. Report Organization

Chapter one outlines the causes and effects of the 1985-86 economic bust in Alaska, its recovery, and subsequent decline of North Slope oil production. Chapter two describes the impact of the recession in Anchorage and the economic recovery. The Kenai Peninsula Borough is the focus of chapter three. During the recession, the Kenai had the highest unemployment rate in the state, but more workers were losing their jobs in oil service companies and the construction industry, than in the oil production and refining sectors. Chapter four examines the impact of the fluctuating economy in the Northwest Arctic Borough, where jobs are few, and traditional subsistence activity is a major part of the cash economy. State spending may well be the most direct impact of oil development in this region.

[1] The nearly $30 million buyout was pending before the Federal Trade Commission. If approved, BP would own 76 percent of the trans-Alaska pipeline. Also in May 1999, Exxon and Mobil shareholders had approved a merger, with regulatory approval pending. The Exxon-Mobil merger would make the corporation the worlds largest energy company. Exxon was the third largest owner of the pipeline, but Exxon and Mobil had few employees in Alaska.

Chapter 1: Overview

A. Introduction

When Cathy Williams' 11-year-old son saw her standing outside his school at 3:15, he knew something was wrong.

"Tell me you're not laid off, Mom. Tell me you're not laid off," he said to his mother, who just minutes before had ended her 22-year career with BP Exploration. Williams had survived two other major layoffs, but became one of more than 400 employees and contractors to be terminated on Jan. 25, 1999. Williams was yet another statistic of Alaska's boom and bust economy.

Like Williams, all Alaskans live with the uncertainty of an economy driven by the oil industry. Oil company employees, oil service and construction workers have had plenty of personal experience with Alaska's fluctuating economy during its short history as an oil-producing state. So have thousands of others who work in the private and public sectors in this state, where oil royalties and taxes account for nearly 75 percent of the annual unrestricted general fund revenue. (See Volume 1and Volume 2, Part 1).

1. Background

Alaska produces about 25 percent of all U.S. crude oil. Alaska's oil industry has several unique qualities not found in the industry in the Lower 48 states. One large field, Prudhoe Bay, dominates production activity, with a much smaller workforce than found in other oil producing states. In 1988, Alaska employed about 9,000 people in production, while Texas employed more than 171,000 workers for about the same amount of oil produced.[2]

Though it takes fewer people to produce oil, personnel costs are higher. Alaska workers are paid more and receive a wage premium as well, due to the higher cost of living. "While Alaska might be more efficient, the cost is still more to the company," said Don Packham, BP's human resources manager in Alaska in the 1980s.

The average Alaska oil worker's household is unique. For the most part, the oil isn't close to where people live, and some workers spend long periods of time away from their homes and families. "There's a whole host of people who board an airplane each week. That means the household operates without one person being there…one family member is always dropping in or dropping out," Packham said. The average household in Alaska is also usually just the immediate family "whereas in Houston … the extended family is within 50 miles." Grandma and Grandpa may be just down the road. Even for workers who commute to offshore drilling platforms in the Gulf of Mexico, family disruptions may be less pronounced because their roots are generally deeper, their family closer, and their climate more temperate, compared to those who made the move to Alaska with Big Oil.

Though direct oil-sector employment may be small, about 36 percent of Alaska's Gross State Product comes from oil production. Not only does the state of Alaska reap the majority of its revenue from oil production, labor economists attribute a large share of state and local government jobs to the economic rents generated by the oil industry. Considering production-related and rent-related jobs, petroleum has accounted for nearly 40 percent of all jobs in the Alaska economy since the 1970s.[3]

2. From Boom to Bust

Alaska's history as an oil-producing state is marked by the same kinds of economic cycles experienced in other oil-driven states: periods of great highs and deep lows. But each cycle writes itself indelibly on Alaska's collective mind as the boom and bust is not yet as familiar in America's last frontier as it is in other states with a rich oil history.

Construction of the $9 billion, 800-mile trans-Alaska

[2] John Boucher, Brian Rae & James Wilson, "An Overview of Alaska's Oil Industry," *Alaska Economic Trends*, November 1989, p. 5-12.

[3] Oliver Scott Goldsmith, *Structural Analysis of the Alaska Economy: A Perspective from 1997*, Institute of Social and Economic Research, University of Alaska Anchorage, August 1997.

oil pipeline from the North Slope to Valdez ushered in the first big boom, when "employment and wages and salaries grew at phenomenal average rates.[4] Resident wages and salaries increased more than 17 percent from 1972 to 1976 – not including the money made by nonresidents who came for the boom but had no intention of staying through the bust. Alaska had fewer specially skilled construction workers than needed to build the pipeline, and "many workers from other states came to Alaska with the intent of returning home when the work was completed."[5] When the pipeline was completed and the high-paying construction jobs were gone, average annual total wages and salaries declined by 9.8 percent. That decline was especially felt by nonresident workers. An estimated 6,400 people left the state in 1977. (See Volume 2, Part 3).

The post-pipeline economy adjusted quickly as oil started flowing through the pipeline in 1977. By 1979, the gross state product had increased at a 30 percent annual rate. Between 1980 and 1985, Alaska's population also grew by 28.5 percent statewide, most of that in Anchorage, the Kenai Peninsula, the Fairbanks region and Juneau. Fueled by oil royalties and tax revenue, which are deposited into the state's general fund, state leaders pumped money into projects, programs and services. State government doubled its real per capita spending between 1980 and 1981. (See Volume 1 and Volume 2, Part 1). At least one politician suggested the state had so much money it could bail out the financially troubled Chrysler Corporation.[6] In the early 1980s Alaskans were sometimes jokingly referred to as America's "blue-eyed Arabs."

Over the 20-year period of study, the amount of oil revenue spent on state government fluctuated from a low of $391.5 million (nominal dollars)[7] in the first year of 1976, to more than $3,495.4 billion (nominal dollars)[8] in 1993. (See Volume 1). While spending plunged in fiscal year 1987 during the recession, it actually was lower in 1994.

During the 20 years, oil revenue accounted for at least 75 percent of the state's annual unrestricted general fund revenue, spent on state programs and services (operating budget), and public construction (capital budget). Among other things, oil prices, total production, and political policies influence state spending.

General fund dollars flowing through the economy help create jobs, but it is difficult to correlate total employment with state government expenditures. As the following table show, public expenditures fell significantly with the price of oil during the recession and recovery, but total statewide employment did not, however, certain job sectors were hard hit. Total employment rose steadily after 1986.

[4] Eric Larson, "The Alaska Economy," Institute of Social and Economic Research, June 1990, p. 10.
[5] Brian N. Rae, "Analysis: Migration & Employment During Two Recent Recessions," *Alaska Economic Trends*, June 1989, p. 11.
[6] Rep. Pappy Moss, D-Delta Junction.
[7] $896.2 million in 1995 dollars.
[8] $3,668.6 billion

Table I.1

CHANGES IN PUBLIC EXPENDITURES & STATEWIDE EMPLOYMENT, 1975-1995

Fiscal Year July 1- June 30	**Total Oil Revenue Spent*** (millions of nominal dollars)	**Revenue Spent Percent Change**	**Total Employment****	**Employment Percent Change**
1976	$391.5		242,947	
1977	$477.6	22	236,918	-2
1978	$441.5	-8	237,418	0.2
1979	$821.6	86	240,914	1
1980	$2,256.5	175	244,126	1
1981	$2,404.3	7	253,145	4
1982	$2,774.8	15	277,888	10
1983	$2,626.6	-5	297,505	7
1984	$2,561.6	-2	310,225	4
1985	$2,443.5	-5	318,073	3
1986	$2,657.9	9	311,337	-2
1987	$1,394.5	-48	311,664	0.1
1988	$1,949.6	40	319,133	2
1989	$1,840.4	-6	330,885	4
1990	$2,121.4	15	341,079	3
1991	$2,593.5	22	349,576	2
1992	$2,111.7	-19	353,788	1
1993	$3,485.4	65	361,495	2
1994	$1,252.7	-64	367,315	2
1995	$1,822.6	50	368,376	0.3
Total	$38,429.2			
Total, 1995 dollars	$50,469.40			

*Statewide public expenditures -- operating and capital.
**Total employment includes full and part-time; workers may hold more than one job.
***Economists suggest the recession began September 1985. Alaska's economy hit bottom in April 1986, then started its recovery.

B. The Recession

With flowing oil and higher prices, the gross state product continued to grow, as did employment in other sectors, such as construction, residential and commercial real estate, retail even the nonprofit sector. "Money was flowing at phenomenal levels … There was a lot of money chasing around in the system," said one industry key informant. In the oil business, there was "little or no concern about spending until the bottom fell out."

When the recession hit in mid-1985, Alaska oil companies were "coming off enormous price shocks."[9] Bold talk of the possibility of $50-a-barrel oil became mumbles of $9-a-barrel oil. Economic growth slowed statewide and in Anchorage it ground to a halt.

Layoffs affected many sectors, but were most severe in the construction and oil industries. "The 1985-86 layoff shock was pretty potent," but initially there was the sense that "it can't last long." When it seemed for real, the mood was grim, even in distant company headquarters such as Houston, according to industry spokesmen.

Economists agree that Alaska's sharp recession was different than most and was of its own making. "(I)t was not primarily the result of weakness in the markets for the goods and services which Alaska sells to the rest of the world" as generally occurred in economic slumps in other regional economies. [10]

The recession was probably "a necessary adjustment we had to go through," suggested oil industry historian, Tom Brennan. Alaska's dramatic population growth, rapid economic expansion, and favorable lending practices led to a high level of speculative development and over-capacity. Falling oil prices compounded the recession, but were not the cause.

In July 1987 the Department of Labor described the outcome: "Although Alaska's economy was likely to have a mild recession in 1986, the rapid and severe decline in oil prices from February through July of 1986 turned a mild downturn into the worst economic recession in Alaska's 27 years of statehood. The shock rippled through the economy, first hitting the oil and gas industry and exacerbating the ills of an already weak construction sector. The support sectors to these industries were next to feel the pinch and by mid-1986 government employment began to decline."[11]

The Alaska Department of Labor estimated that $750 million in Alaska payroll was lost between 1985 and 1987. If unemployment insurance were considered "payroll," Labor's Unemployment Insurance (UI) program would have been the third largest employer in Alaska during this period. More than 138,000 unemployed workers received unemployment compensation between 1985 and 1988, totaling $578 million both in-state and out-of-state claims. ($127 million went to former workers living out of state).[12]

Alaska's major oil companies have two types of operations – field and support. Employees at Anchorage headquarters are support staff for field operations, such as Cook Inlet and Prudhoe Bay. Field staff works at the site of exploration and drilling in Prudhoe Bay and other oil fields. Oil companies, including Sohio (BP) and ARCO Alaska, were still moving workers into the state in 1985 when the economy slumped.

"For each job we created in the oil business, there were several jobs created" in other sectors, Packham said.[13] "Every time we let people go, there's a knock-out effect in the economy." Considered one of Alaska's basic industries, the petroleum sector is composed of oil and gas extraction, pipeline transportation, and petroleum processing. Petroleum also interacts with the infrastructure sectors, particularly construction and

[9] Interview, industry key informant.

[10] Scott Goldsmith, quoted in a policy paper written by Gregg Erickson, "The Recession, The Real Estate Crash and Alaska's Economic Prospects," Office of the Governor, State of Alaska, March 1988.

[11] Greg Huff, "Alaska's Employment Scene," Alaska Department of Labor, *Alaska Economic Trends*, July 1987, p 19.

[12] Michael Hurst, "The Unemployment Insurance System: It Works for Alaskans When Alaskans Cannot Work," *Alaska Economic Trends*, Feb. 1989, p 1-10. UI was put in place by Congress in 1935 when Social Security was enacted. It is only available to persons who have worked and are temporarily unemployed. The program is considered a cost of doing business for all U.S. employers.

[13] Don Packham was human resources director in Alaska for Sohio, also known as Standard Alaska, during the recession. In may 1999, he wasHuman Resources Integrator for BP Amoco in Chicago. In 1985, Sohio was operating in Alaska under an agreement with BP, which owned 45 percent of Sohio. In 1987, BP purchased the company outright and the name became BP Exploration (Alaska) Inc. In 1998, British Petroleum merged with Amoco Corp., operating as BP Amoco. Interview.

support sectors, including trade and services.

Oil's direct contribution to the economy comes from producing oil. The income from the sale of that oil enters the economy and is re-spent, creating jobs and income in other businesses. The total contribution of oil, then, includes the multiplier effect as it winds its way through the entire economy.[14]

Economists estimate that for every oil production job in 1985, another 2.3 jobs existed in other sectors. The multiplier effect dipped to 2.1 in 1987, and was again 2.3 in 1995. At anyone time, Alaska's oil and gas industry jobs represent only about 4 percent of Alaska's total wages and salaries. (See Volume 1, Part 1).

The 1986 oil-price decline forced oil companies to examine projects and curtail construction. Oil corporate and oil service company workers were quickly terminated. The state also put construction projects on hold as political leaders saw general fund revenue steadily shrink. As layoffs rippled through the economy, the construction industry took the hardest jolt. Soon after, the retail and trade, financial services, state and local government sectors felt the blow.

"When construction companies laid off workers, there was a lot of velocity throughout the economy," Packham said.[15] After the post-pipeline economic adjustment, Alaska's construction industry had ballooned with the population influx and high oil prices. In 1985, the U.S. Bureau of Economic Analysis reported 19,709 people employed in the construction industry statewide. More than 12,000 construction workers were in Anchorage. By 1987, statewide construction was down to 9,451, with 7,600 in Anchorage. (See Volume 2, Part 3).

The construction industry is highly transient and seasonal. It includes electrical contractors and homebuilders, commercial builders and petroleum industry contractors. State government construction budgets were well over $1 billion (nominal dollars) from 1980 through 1984 in state general funds and federal funds,[16] compared to a low of $45.6 million to $865 million from 1975-1979. In the early 1980s, tremendous public and private sector expenditures were driving the rush of contractors and construction workers to Alaska from the Lower 48, as entrepreneurs and politicians speculated on a booming economy. By mid-1985, when the state began its free-fall into recession, construction employment was declining. More than 21 percent of the wages paid to nonresidents in Alaska in 1985 went to construction workers; 15 percent to nonresident oil and gas workers. As the economy was recovering in 1988, about 17 percent of the construction workforce was made up of nonresidents, accounting for 13 percent of the earnings paid to nonresidents.

During the recession, jobs were being lost statewide at an annual 8.5 percent rate. Properties went into foreclosure, especially in Anchorage. Earnings declined. The Department of Labor estimated the net out-migration at 49,500 between 1986-89. "In the late 1980s, half our friends were going down the highway," Brennan said.

The years 1986 and '87 were a real turning point, according to Packham. "It opened people's eyes that this boom cycle was over."

C. Living With Uncertainty

The economy recovered and the industry stabilized, but Alaska's big oil boom was over. The next step was to adjust to the impending decline in Prudhoe Bay production. In 1989, major corporations like BP and ARCO were "talking about alliances, trying to figure out how we could work together in this lower oil-price world." In 1990, state labor economists reported that Alaska's economy was at a standstill.[17] The early 1990s saw industry consolidation, as oil companies began outsourcing and contracting out many functions to lower overhead.

Because of increased reliance on contractors, the decline in major oil company employment in Alaska may overstate the actual impact on the economy of downsizing. Still, the decline was significant. In 1991, Alaska's BP had about 1,500 on its payroll. As this report was being written in May 1999, the BP staff was about half that number. ARCO employed 2,914 in 1991, which had shrunk to 1,526 in 1997. ARCO was about to be gobbled up by BP.

[14] Goldsmith, "Structural Analysis…," p. 7.

[15] Packham.

[16] 1982 was the exception, when state capital appropriations totaled just under $84.5 million. See Volume 1.

[17] Neal Fried, "Alaska's Economy is at a Virtual Standstill," *Alaska Economic Trends*, September 1992, p. 10-16.

It's "not just markets and oil prices," that have changed the oil scene in Alaska, according to Packham. It is also "a reflection of innovations and technology. You just get greater efficiencies. That's going to happen whether you have high or low oil prices."

But when Bob Cowan started working as a mechanical engineer for Exxon in the 1970s, he thought his career was secure. "I thought as long as people were using gasoline, I had a job. That wasn't the case."

He also thought the oil industry culture was to maintain stability. Instead, he soon found that Exxon's operations in California were on shaky ground, forcing him to look for new oil employment. In 1983, when oil in Alaska was booming, he was hired by ARCO in Anchorage. A newlywed in marriage and job, the honeymoon at ARCO was shorter than he expected. 1985-86 "was a nervous time for everybody in the industry. Everybody was wondering if they were going to be the next one (laid off)," he said.

For 11 years, Cowan's ARCO job was safe as he worked at Anchorage headquarters and on the North Slope. In 1994 he was "on loan" from ARCO to Alyeska Pipeline Service Co. when "they called me and said, 'You're laid off.' That was a big surprise."

Cowan became victim of a corporate mandate to downsize ARCO Alaska by one-third -- 750 workers. "I felt a little like they broke a promise, although there was nothing in writing, that I'd be working on the pipeline for awhile," he said.

Before oil even flowed through the pipeline, Cathy Williams was working for BP Exploration on the North Slope. During the beginning of the 1985-86 recession, she felt insulated, untouched, and didn't think much about the price of oil until layoffs began around her. "It was a slap of reality to see the exodus then," she said.

When another layoff hit BP in 1992 due to consolidation, Williams was manager of integrated supply at Anchorage headquarters. More than 400 employees lost their jobs, but her job was spared. "I had adjusted since 1985 to the word 'decline.' You just sort of move from one layoff to the next," Williams said. "You truly hope you can go by untouched, but it eventually reaches out and gets you."

It finally got Williams on Jan. 25, 1999, when oil prices dropped farther than during the 1980s recession. The January layoff included 220 BP employees and 380 contract employees. Prices had started a dramatic decline the previous fall.

"The word was out in November and we were all watching the oil price keep dropping," she said. "I guess you sort of know this is the one you're not going to survive."

While she had speculated she might not "survive" this layoff, it was still difficult for Williams and her family. As she left BP headquarters, she told KTUU television cameras: "I'm in shock. That's a lot of years. Twenty-two years for me is like a lifetime … (I) worked really hard for the company and you'd tend to think that would weigh out, but these are tough times."[18]

Williams' and Cowan's reactions were not unusual. When the deep recession hit in 1985-86, "(t)here was a lot of anger, shock and feeling that the company had violated a commitment, sort of an 'I've been so loyal, how can the company throw me out' kind of thing."[19]

At each major downsizing, companies offered large severance packages to help their Alaska employees deal with job losses, moves and foreclosures. Severance often included one month of pay for each year of service to the company, for a maximum of 12 months, as well as health and retirement benefits to bridge the gap between jobs. During the 1986 recession, some companies actually purchased employees' homes, as well as paid the costs of relocation out of state, because so many employees had come to Alaska from somewhere else. Companies generally gave personnel several months to one year from the date of their termination to use the moving allowance.

In 1986, market values were dropping almost daily, and many people couldn't get what they owed out of their homes. "We were giving people some pretty hefty loss-on-sale payments," one industry informant said.

With the continual decline, some companies started

[18] Transcript, KTUU-TV News, 5 and 6 p.m. newscasts, Jan. 25, 1999.
[19] Interview, industry key informant.

offering a retraining payment for tuition to an approved educational institution. ARCO, BP and Alyeska contracted with Wright Management Consultants, an international career transition service with an office in Anchorage. Employees were offered assistance in finding a job, including career counseling, resume writing, marketing, and small business development, as well as office space, computer use, long-distance telephone calls and postage.

"I've seen some pretty despondent people coming in here and leave feeling there's hope. One of the biggest contributions we make is helping them realize there's life after BP, there's life after ARCO, there's life after Alyeska. It may not be the same, but it goes on," said a key informant at Wright.

She said she has seen a change in peoples' attitudes about their future careers since she started working at Wright in the early 1990s. "At that time they still had some pretty positive feelings about being involved in the oil industry. Now they're less certain. There are fewer jobs out there." While most stay in their area of expertise, they find that other occupations begin to look attractive, she said.

Just how many find another career was not known. And Wright Management was not sure how many former oil company employees have used its services. But of those who had, it seemed most initially wanted to stay in Alaska. "Those who are really committed to staying here … seem to be able to do it," she said.

Williams and Cowan wanted to stay in Alaska. The word "decline" had become part of their vocabulary during the recession and like many oil company workers, they had learned to keep their options open. Losing an oil-industry job "is one of those things you must accept if you want to stay in Alaska," Williams said.

Still, she did not know what options she had before she left BP. Her children, ages 8 and 11, were scared when she lost her job; her husband was concerned because she made the larger salary and like most Anchorage families, they needed two incomes to meet the high cost of living.

Within two months layoff, Williams was an investor in Alaska Supply Chain Integrators, a company that specialized in procurement services. Her severance package allowed her to invest in the new business, which soon captured a six-year contract from BP. Williams went back to work in the Anchorage BP building as general manager of marketing and customer service for ASCI.

Cowan left the oil industry for a new career. When his job was terminated in 1992, ARCO gave him two months notice, time enough to earn a civil engineering license. Cowan used ARCO's offer of job assistance to network with other former oil company employees and learn more about small business ownership. He pooled his severance package with other resources and soon after layoff purchased S & S Engineering in Anchorage.

"I basically bought a job," Cowan said. He is still living in the same house and enjoying the same standard of living, but is not yet able to save money in his new business. He has replaced the uncertainty of the oil patch with his own uncertainties. But this time, Cowan is in control and he expects his business to grow.

For Williams, "it's exciting to be in a business that's growing, not declining." She is one of many oil company employees who landed back on her feet as an oil industry contractor. As the Alaska corporations have consolidated over the years, some terminated employees have been rehired in similar positions with oil service companies. Often, however, the old job with the new company is at less pay.[20]

Not all laid-off ARCO and BP workers landed on their feet in Alaska, or even wanted to stay. The Department of Labor estimates that 1,639 former ARCO and BP employees left the state between mid-1989 and mid-1995. Some of these were executives, engineers, and geophysicists who generally are transferred out about every three years.[21]

For the rank and file, Alaska is no longer an oil field where "you'd work for while and you'd move on to another place." That has changed and "(F)or most of the folks, Alaska is a long-term place of employment. People are going up with the intention of staying for awhile," said one human resource manager who served in Alaska for eight years. "Whenever people left the

[20] Interview, industry key informant. No firm figures were available on the numbers of former oil company employees who were contractors at the time of this report.

[21] Jeff Hadland, Research and Analysis, Alaska Department of Labor. Figures are not available for other years of the period of study.

state, they didn't stay gone," and many asked to return.

D. Boom and Bust on the Slope

As luck would have it, oil was about $30 a barrel (1978 dollars) when it started flowing through the pipeline. Alyeska Pipeline Service Co. was pushing more and more black gold through the pipe, and the North Slope was full of oil-field service companies ready to work. A Project Labor Agreement was in place requiring union hire on major projects, including construction. Even non-union companies were paying the higher union wages. As one former oil worker described, "It was gangbuster time."

Employment in Alaska's two basic petroleum sectors – oil producers and firms providing services to the producers – has been somewhat evenly distributed between each sector.[22] When oil prices began to fall in the mid-1980s, most of the direct oil industry jobs lost were in oil-field services, including drilling and geophysical services; construction, transportation and utility companies; camp operators and maintenance crews. In mid-1985 the Alaska Support Industry Alliance had 360 member companies. By 1988 that number had fallen to 88 members. Of those that left the North Slope, about half "just flat out couldn't afford it, they'd shrunk, had spent every dime and were just hanging on," according to Bill Webb, former board president and general manager of the Alliance. The other half "just flat couldn't make it and filed bankruptcy."

In the early 1980's, Webb owned and operated several camps, including Frontier. Times were good and money to invest was easy. Many companies like his "were under capitalized, but you could get money just by picking up the phone." When prices fell, he had two days notice that the Frontier facility was being closed. By 1986, all his camps had closed, "just no work. I was doing 30 some-odd million (dollars) in one day and the next day, half a million," he said. "We were dealing with $32.50 a barrel oil and all of a sudden you had $9 a barrel oil."

Producers like ARCO and BP were consolidating into company-owned camps and forging deals with other service providers. Webb claimed to have lost an oil company contract to the NANA Regional Corp., which operated a hotel and food service business with Marriott Corp. at Deadhorse.

During the recession, NANA also saw its profits plummet. A room and three meals cost $120 to $140 per day before 1986. That year, the company was getting as little as $57 a day for room and board.

"For the contractors up there, it was just gloom and doom," said Joe Mathis, manager of the business development arm of NANA Development Corp. "NANA was one of the few that hung in there."

Few NANA workers were laid off, instead, the company reduced wages by 20 percent, reduced overtime, and cut services. The change oil field workers probably noticed the most was the hotel menu.

"There was a time up there when you had lobster once a month, prime rib each Sunday, steaks twice a week," Mathis said. With the recession, "You got more chicken and fish on the menu. The less expensive stuff."

The cost of doing business on the North Slope also declined when the Project Labor Agreement expired on the last day of 1985. For example, housekeeping wages dropped from $18 an hour in union wages to about $12 non-union, Mathis said.

When the economy began to turn around, the firms that survived thought the worst was over even though a production decline at Prudhoe Bay was inevitable. "As an oil field gets older, it takes more work to get oil out of the ground. We thought the service industry was going to boom," Mathis said. "Low and behold, the oil industry made a significant shift and went into alliancing and partnering."

Few oil service companies were "making any money, nobody had any work" from 1986 to the end of the decade, according to Webb. By 1991 it was clear that oil company alliances with service providers were inevitable. "That was not a volunteer program," he said. "Most (service) companies were very upset about it."

At the same time, some oil field companies such as VECO and Alaska Petroleum Contractors were expanding, partly through acquisition as the industry looked for ways to become more efficient. Webb believed the major corporations encouraged

[22] John Boucher, Brian Rae and James Wilson, "An Overview of Alaska's oil Industry, *Alaska Economic Trends*, November 1989, p. 5-12.

acquisitions and even purchased some equipment from service companies to help downsize North Slope operations.

A drilling company partnership among VECO and NANA, Bristol Bay and Sealaska Native corporations was frozen out as oil companies hired other drilling operators. The partnership sold its drilling rigs to the company that got a contract. "The pie was shrinking. There wasn't enough business to split the pie up three ways," Mathis said.

The consolidation period was much harder on oil service contractors than the recession, according to Webb and Mathis. "In '86, everybody got hurt. It was sort of like we're all in this together," Mathis said. During the consolidation of the early 1990s, "there was a lot of depression … a lot of resentment among contractors."

Many of the contractors operating in Prudhoe Bay could be considered "political" and ethnic survivors, including companies partly owned by a Native corporation, Webb said. "This is all a political process. It was a horrible period," he said.

Some oil service contractors actually grew during the recession and consolidation periods. VE Construction started as an oil service contractor on the Kenai oil platforms and gas fields. It later expanded to Prudhoe Bay and changed its name to VECO in the late 1970s. As a non-union company, its work on the North Slope was mostly limited to facility maintenance and rebuilding until the Project Labor Agreement expired in 1985. Then many union companies saw their work declining and going to other contractors until the unions agreed to reduce wages. VECO was able to underbid and attract work as a nonunion shop, expanding into construction and operations.

"In the bust, no longer did union-run companies have preference for contracts. That's where you saw a real drop in wages," said a VECO key informant. The company continued to grow even during the recession.

"We've definitely seen the oil companies make the decision that more people bidding on work was not necessarily better," he said. It is no longer the "master – slave relationship" with the oil industry. "Now on the North Slope you don't look at anyone as competitors because we're all working side-by-side…Cost savings is the bottom line. Everything is done at cost."

VECO's success in forming partnerships has helped the company expand to the Lower 48, Canada, and outside North America. As the largest oil field service and construction company in Alaska, this key informant sees a future of greater production efficiencies and more steady, year around work, due to consolidation and the proposed BP/ARCO merger.

As the operator of the trans-Alaska pipeline, the Alyeska Pipeline Service Co. is owned and operated by the major producers. In 1985, employment stood at 907, according to Labor Department figures. In 1986, Alyeska's workforce was reduced to 868. Hiring resumed the next year and was at 891 when through-put reached its peak of 2 billion barrels of oil per day. (See Volume 2, Part 3). As Prudhoe Bay production was declining, Alyeska's employment peaked at 1,325 in 1992, but has steadily dropped off. By 1995 Alyeska's workforce had pretty much stabilized, according to Patty Petachek, human resources vice president. "Being owned by the major oil companies insulates us to a degree from the boom and bust cycles...We have to keep the pipeline running" no matter what the price per barrel, she said.

E. Keeping the Trucks Running

"When the pipeline was running at full-bore" times were outlandish, said Dave Haugen, a former Alyeska employee. At that time he owned two apartment buildings in Anchorage and recalled that "you could almost get 100 percent financing on real estate." In 1979, pipeline production was being pushed to an ever higher level. "So you had the combination of tremendous through-put and high prices," Haugen said.

Then came the recession and Haugen lost both apartment buildings. Times were so bad the rent would not have come close to the payments on the buildings. "The whole real estate market just went gunny sack in Anchorage," he said.

In 1985 Haugen joined Lynden, Inc., one of Alaska's major transportation companies. Lynden's trucks had been plenty busy driving the 416-mile North Slope Haul Road[23] to deliver equipment and supplies. In

[23] The North Slope Haul Road was turned over to the State of Alaska in 1978. It was subsequently renamed the Dalton Highway. Arctic engineer James Dalton played a major role in the early discovery and development of oil on the North Slope.

1986, the company eliminated company-sponsored autos, was forced to reduce pay 10 to 15 percent, laid off workers at Lynden Transports' North Slope facility, and had little work for independent drivers.

"In a downturn, the contract guys are the first to go," Haugen said. "The minute that drill rig quits drilling that well, you see transportation services drop off...You're talking lots of truck loads that don't happen."

As the economy slowed, especially in the Railbelt, the trucking industry found itself with fewer and fewer loads to deliver. "Retail stores were in a funk, construction was down…The Railbelt in those days had a real severe case of the economic flu," Haugen said. The Matanuska-Susitna region especially suffered, with an unemployment rate reaching 17 percent in early 1986.

Airfreight forwarding is typically one of the first indicators of a boom or bust, according to Haugen, who was also a former deputy commissioner for the Alaska Department of Transportation and Public Facilities. Lynden's air freight operations dropped off during the recession, as companies cut back on expenses. "If somebody has to have something immediately, they put it on air. Once things go sour…people think long and hard about paying the premium (for air freight)."

The transportation industry recovered slowly from the recession until the Exxon Valdez oil tanker hit Bligh Reef in Prince William Sound in March 1989. "Our volume took off like a real bullet," Haugen said.

The oil spill brought a temporary boost in the economy and employment, especially in the Gulf Coast Region and Anchorage.[24] Direct employment peaked at 2,830 jobs. Subcontractor-vessel employment and support-sector employment peaked at 2,260 jobs. Lynden's tugs, barges, trucks and planes were busy hauling in boom and equipment, and hauling out contaminated soils and materials used in the clean up.

The transportation industry is a barometer of economic health. Whether times are good or poor, the ebb and flow of freight is not buffered. When the rush to Alaska was on in the 1970s and early '80s, trucks, barges and planes were full. In 1986 and '87, people were leaving the state and the health of Alaska's transportation industry suffered like many oil-related services.

In May 1999, Lynden's direct participation in the oil industry was about 20 percent of its business. But the multiplier throughout Alaska's economy affects the rest of its operations. "In some ways we are incrementally in the oil industry, if not exclusively," Haugen said.

F. Summary

From the high wages and salaries paid by the industry, to state spending to the annual Permanent Fund Dividend, oil is more significant than any other industry in the state. "Every time there's a (oil industry) layoff in Anchorage, we see some impact," Haugen said. "And when people have some cash and spend it, they order out the trinkets and the hard goods and we're the ones who bring it up."

Alaska's petroleum industry creates three sources of economic activity: petroleum production,[25] government spending of oil revenues, and Permanent Fund Dividend expenditures.[26] The annual Permanent Fund check has created an economy of its own, as Alaskans become at least $1,000 richer every October. The Permanent Fund Dividend is entirely new money flowing into the economy. Its total contribution through the multiplier effect approached $1 billion in 1997.[27]

Alaskan's quality of life has also improved in terms of arts and humanities, social services and community activities. Over the years, the oil industry has donated at least $60 million and perhaps as much as $80 million to charities and nonprofit organizations

[24] The Gulf Coast Region includes Kodiak Island Borough, Kenai Peninsula Borough, and the Valdez-Cordova census area (Prince William Sound). Neal Fried, "Oil Spill Causes an Upward Revision in Employment Forecast," *Alaska Economic Trends*, August 1989, p. 9-15.

[25] Production includes exploration, development, transportation and processing. Goldsmith, "Structural Analysis…," p. 2.

[26] The Permanent Fund Dividend is paid to every qualified Alaskan from the annual earnings of the Alaska Permanent Fund after the fund has been inflation-proofed.

[27] Goldsmith, "Structural Analysis…," p. 8.

(nominal dollars).[28]

In addition to corporate and foundation contributions, many of Alaska's nonprofit institutions receive grants from the state's oil-driven general fund. It is difficult, however, to draw a relationship between public expenditures and oil company philanthropy without information about operating budget appropriations to these community organizations. The following table indicates that no correlation can safely be made without detailed annual budgets from both government and the oil companies.[29] Assuming a decrease in state funds to the arts, social service and other organizations during the recession, the increase seen in oil company philanthropy in 1986-1988 would probably be coincidence, since companies were also cutting expenditures. (See Volume 2, Part 2.)

Table I.2

Public Expenditures and Petroleum Company Philanthropy

Fiscal Year July 1-June 30	Total Oil Revenue Spent* (millions of nominal dollars)	Petroleum Philanthropy (millions of nominal dollars)
1976	$391.5	n/a
1977	$477.6	n/a
1978	$441.5	n/a
1979	$821.6	n/a
1980	$2,256.5	0.2
1981	$2,404.3	0.1
1982	$2,774.8	1.0
1983	$2,626.6	1.8
1984	$2,561.6	1.5
1985	$2,443.5	0.8
1986	$2,657.9	0.9
1987	$1,394.5	1.0
1988	$1,949.6	1.9
1989	$1,840.4	5.5
1990	$2,121.4	6.3
1991	$2,593.5	6.2
1992	$2,111.7	7.5
1993	$3,485.4	7.4
1994	$1,252.7	4.8
1995	$1,822.6	6.2
Total		**$53.1 million**

*Statewide public expenditures–operating and capital. See Volume 1, Table A.1
**Corporate information was for clendar year. Most of the data reported to the McDowell Group came after 1988. Figures are rounded to nearest $100,000. See Volume 2, Part 2.

The effect of the oil industry on every business and household in the state also can be seen in state spending and tax policies. Even as oil prices bottomed out again in 1998, Alaskans paid neither a state sales nor state income tax, and the politicians were loathe to pass one. Studies show that state spending supports one in three jobs, and $3 out of every $10 of personal income grows out of state spending.[30] Alaska's oil-driven economy in the future will depend more on how state leaders use the oil revenue, than on the price of oil.

[28] Due to the difficulty of obtaining data from various companies producing oil in Alaska, corporate philanthropy is under represented. Information collected by McDowell Group for Volume 2, Part 2 indicates the oil industry contributed about $53 million for the period of study. The study team believes philanthropy actually is higher. See Volume 2, Part 2.
[29] As the table indicates, contributions swelled in 1989. This is due to data received from BP, which was unavaible prior to 1989. Please refer to Volume2, Part 2.

[30] Scott Goldsmith, et al., "Alaska's Dependence on State Spending," Institute of Social and Economic Research, October 1990.

Chapter II: Anchorage

The recession that hit the state in the late 1980s had a greater impact on the citizens of Anchorage than any other residents in Alaska.

Many in Anchorage have stories to tell about the impact of oil development on their lives. The McDowell Group study team interviewed key informants and searched the news media archives for personal accounts of the oil-driven economic cycles that mark the recent history of Alaska's largest city.

A. Population

Anchorage's population trends for the 1975-1995 period parallel those of the state. Over the entire period, the city's population increased by 46 percent, but growth was far from steady.[31]

The construction of the trans-Alaska pipeline in 1976-1977 brought a major influx of people into the city. Following the completion of the pipeline in 1978, many of these people went back to the Lower 48, dropping the population 8 percent by 1980. However, the bulk of the newcomers stayed in Anchorage.

The early 1980s were marked by substantial growth in Anchorage's population. Thousands came to the city from around the country, lured by a booming economy and high-paying oil and construction industry jobs. The city's population grew 8.1 percent in 1980, but this trend had slowed to 3.4 percent by 1985.

The severe economic recession that began in 1985 hit Anchorage harder than other areas of the state. Thousands of people left the city for greener pastures – most of whom had come during the oil boom years. The "exodus" consisted mostly of male, blue-collar workers between the ages of 18 and 34.[32] The largest dip in population occurred in 1988, when 5.2 percent fewer people were living in the city than in 1987.

By 1990 Anchorage's population had started to recover, and enjoyed an average of 2.8 percent growth until 1995. This reflects the relative health of the economy and oil industry during this period, as well as the growth of other industries such as tourism and retail.

B. Employment

Predictably, employment in Anchorage from 1975 to 1995 was closely linked to population trends. Figures also tend to reflect the boom/bust cycle of the oil industry.[33]

Between 1975 and 1980, total employment in Anchorage grew an average annual rate of 2 percent, with the addition of 11,243 jobs. During this period, the oil and gas sector more than doubled in size in Anchorage, reaching 3 percent of all employment. The construction sector expanded for the building of the pipeline, then contracted at its completion, causing unemployment to reach a high of 8.2 percent. By 1980 this figure had fallen to 7 percent, due to a combination of job growth and out-migration of unemployed workers.

The economic boom experienced in Anchorage between 1980 and 1985 is evidenced by rapidly growing employment; 6 percent annually, on average, and relatively low unemployment (ranging from 6.6 percent in 1981 to 7.2 percent in 1985). This employment growth was fed mostly by the construction boom in Anchorage. Driven by enormous oil revenues, the state was funding construction projects at a furious pace. Further, oil money allowed the state to offer subsidized home loans, through the Alaska Housing Finance Corporation (AHFC, see Volume 1, Part 1). Affordable housing costs pushed residential construction activity to record levels. As a result, from 1980 to 1984, construction employment grew at an astounding annual rate of 19 percent (see Volume 2, Part 3).

State general-fund appropriations to the Municipality of Anchorage for construction varied widely during the 20-year period. Capital budget appropriations to local communities are not tied directly to state oil revenue. Rather, many factors determine the general fund dollars spent locally, including local needs, the amount

[31] See Volume 2, Part 3.

[32] Bill White, "Anchorage Economic Survey," *Anchorage Daily News*, March 21, 1988, p. A1.

[33] See Volume 2, Part 3.

of state revenue required to capture federal funds, and the political power and skill of the area's legislators.

Public expenditures often create jobs, but in Anchorage it is difficult to attribute employment changes to public spending. Employment fell during the mid-1980s recession, when public spending was less and the oil industry was downsizing. Another dip in employment in 1995 came on the heels of oil industry consolidation as well as lower construction budgets to Anchorage. On the whole, however, total employment increased between 1975 and 1995.

The following table illustrates the change in total public expenditures, including state general fund capital appropriations and federal dollars. It is difficult in the Municipality of Anchorage to compare these expenditures with total employment, due to other factors affecting the economy, including the strength or weakness of the private sector.

Table II.1

Municipality of Anchorage
Capital Budget Appropriations and Total Employment, 1975 - 1995.

Fiscal Year July 1-June 30	General Fund* (nominal dollars) (000s)	Other Funds**	Total Funds	Percent Change	Total Employment***	Percent Change
1975	$3,641	$1,359	$5,000		103,100	
1976	2,367	22,581	24,948	>200%	108,834	6%
1977	3,781	11,632	15,413	-38	112,520	3
1978	5,002	85,663	90,665	>200	113,380	1
1979	19,401	22,698	42,098	-54	113,875	0.4
1980	157,768	87,909	245,676	>200	114,349	0.4
1981	150,665	6,268	156,933	-36	118,098	3
1982	90,771	69,967	160,738	2	132,479	12
1983	220,748	149,510	370,258	133	142,697	8
1984	260,791	48,911	309,702	-16	149,325	5
1985	40,912	143,895	184,807	-40	153,386	3
1986	64,024	155,576	219,600	19	148,898	-3
1987	10,548	55,377	65,925	-70	146,608	-2
1988	34,388	46,123	80,511	18	145,936	-0.5
1989	28,638	32,818	61,456	-24	149,214	2
1990	2,879	59,002	61,881	-1	155,536	4
1991	75,707	31,004	106,710	75	160,007	3
1992	71,032	66,998	138,031	29	161,150	1
1993	70,464	160,119	230,582	67	164,659	2
1994	26,512	48,090	74,602	-68	166,707	1
1995	15,295	52,707	68,002	-9	166,550	-0.1

* The general fund includes oil revenues; spending is unrestricted.
** Includes federal funds. See Volume 1, Table II.B.1.
***Includes full and part-time; workers may hold more than one job. Source: USDC, BEA. See Volume 2, Part 3.

While construction employment generally grew, the retail industry also underwent rapid growth during this period. Unemployment rates reflected the generally strong economy, ranging from a low of 6.6 percent in 1981 to 7.2 percent in 1985.

The next five-year period, from 1985 to 1990, is characterized by the dramatic economic recession brought on by the construction downturn, and worsened by falling oil prices. The recession was particularly felt in Anchorage. 1987 saw declines in every employment sector with the exception of the civilian federal government. The construction industry was the hardest hit, losing over half its jobs in this same period. Anchorage employment started to rebound, along with other components of the economy, in 1989. By this time oil prices had stabilized and many of the jobless had left the state, lowering the unemployment rate.

Anchorage regained its economic health in the years 1990-1995, with steady employment growth at an annual average rate of 1.4 percent. The oil industry was cutting back on production and workforce, but these losses were offset by major employment gains in the retail and service sectors.

C. The Recession

"Accelerated by the oil price crash, an abrupt reversal of riotous economic growth hit the state like a rabbit punch last year ... Looking back at 1986, it might be hard to imagine how it could get worse."[34]

Anchorage was punched harder than other parts of the state by 1985-86 recession. Not only did half the state's population live in Anchorage, but the real estate crash and resulting construction downturn were centered there.

The severity of the crash is demonstrated in one simple statistic: Between 1986 and 1989 the total value of Anchorage housing fell by half.[35] But the market's problems had started far earlier, and essentially planted the seeds for the entire recession.

In the construction boom of the early 1980s, developers were in a frenzy of building; homes, condominiums, and shopping malls were springing up like weeds. State capital appropriations for projects in Anchorage jumped from $156 million in 1981 to a peak of $370 million in 1983. By 1986 the market was effectively flooded. Everyone had been depending on continued explosive growth in the city, as well as ever-increasing state funding. Both of these expectations proved wrong. Construction came to a grinding halt due to an oversupply of existing structures, as well as a sharp decline in state-funded projects (capital appropriations fell to $65 million in 1987).[36] Anchorage was left littered with empty homes and malls, and a disastrous downturn in real estate value. The market's roller coaster can be seen in assessed value statistics: in January 1986, Anchorage taxable real estate had an assessed value of $13.9 billion, up 38 percent from two years earlier. In January 1988, the value was estimated at $8.3 billion, down 41 percent in two years.[37]

While this situation would not bode well in any city, Anchorage was in an exceptionally poor position.[38] Its new, relatively young population would typically translate into more renters and fewer homeowners; but in Anchorage many residents had taken advantage of an Alaska Housing Finance Corporation program that allowed them to buy new homes and condominiums with very low mortgage rates.[39] After the real estate crash, many found that the principal owed on the mortgage exceeded the market value of their home.[40] Often this led to foreclosure: in 1988 there were eight times as many foreclosures in Anchorage as there were in 1985.[41]

The Anchorage Daily News chronicled the plights of many Anchorage residents caught in the real estate crash. While readers did not always know the outcome of each story, the daily problems were well described. For example, the Hawkins' predicament:

David Hawkins and his wife had moved to Anchorage in 1982, lured by high-paying construction work. They

[34] Jim Erickson, "Economy hasn't hit bottom yet, experts say slower and slower," *Anchorage Daily News*, Jan. 11, 1987, p. F1.
[35] Ben Speiss, "Real Estate Market Believed Ready to Weather Oil Slump," *Anchorage Daily News*, Feb. 28, 1999, p. A6.
[36] See Volume 1.
[37] Gregg Erickson, "The Recession, The Real Estate Crash and Alaska's Economic Prospects," Division of Policy, Office of the Governor, March 1988, p. 1.
[38] Erickson, p. 2.
[39] For further discussion on the Alaska Housing Finance Corporation, please refer to Volume 1, p. 53-54.
[40] Erickson, p. 2.
[41] George Frost, "Owners Lose Property at Record Rate in 1988," *Anchorage Daily News*, Feb. 9, 1989, p. A1.

bought a house in the Hillside area and Hawkins worked for a specialty construction firm. When he lost his job, along with thousands of other construction workers in 1987, he was ready to sell his house and move away, but felt trapped in Anchorage – his house was worth less than the mortgage owed.[42] The couple decided to take a chance and wait for the real estate market to recover and didn't sell. Meanwhile, they rented out their house and moved outside Alaska.

Carol Blanco, a 35-year-old single parent in Anchorage, also was hard hit by the crash.[43] She owned a condominium – a market where prices plummeted even faster and farther than single family homes during the recession. In January 1987 she was laid off her job. While she found another one, it paid $12,000 less and she could no longer afford her condo payments. Nor could she sell it, as the value had decreased by as much as half of what she had paid. Four months later, she faced foreclosure. The conclusion to her story was not available, but Blanco's immediate problems were familiar to hundreds of Anchorage condo owners.

Anchorage's population started to gradually rebound in 1989, increasing by 1 percent for two years, then by 4 percent in 1991. Unemployment rates were also improving, dropping from 1987's high of 9.9 percent to 7.4 percent in 1988, then 5.1 percent in both 1989 and 1990.[44] These growth indicators translated into a turnaround in the real estate market. Demand for housing crept upward in 1989, and by early 1990 the Anchorage Daily News was reporting a "healthier housing market." Prices were rising little by little, while available space became more scarce.[45] In 1991, Anchorage was assigned $107 million in state capital appropriations, up from 1990's low of $61 million.[46] The recovery was slow but sure. After the roller coaster of the 1980s, the relative calm was welcome to everyone in Anchorage, from homeowners to construction workers.

While the Anchorage real estate crash was devastating for many property owners, it eventually led to an improvement in the quality of life for most residents with respect to housing. This is due to the huge housing surplus created by the overbuilding of the early 1980s as well as the population drain during the recession. With falling real estate prices, families that might not have had the financial means to buy earlier in the decade suddenly found affordable homes. In 1989, AHFC's average sales price on foreclosed property was 45 percent below the average loan balance at foreclosure.[47] Anchorage Daily News correspondent and real estate broker Connie Yoshimura remarked that "for those Anchorage residents who are still here, this economic recession has been a blessing when it comes to improving the quality of their living arrangements."[48] On average, the real estate crash allowed families to move up the housing scale.[49]

D. The Construction Industry

Predictably, the real estate crash translated into disaster for Anchorage's construction industry. The boom years of the early 1980s set the industry up for a sharp fall – construction employment had been climbing 25 percent every year, and the number of housing units increased from 65,000 in 1981 to 89,000 units in 1985, when construction jobs were beginning to disappear. With 1986 came a drastic oversupply of existing structures, as well as a decline in state-funded construction projects.

The bottom line for construction workers was less work, and less pay for the work. Jobs disappeared at an astounding rate: from 13,200 total jobs in 1984 to 6,500 total jobs in 1988. The average construction wage fell $626 a month, or 16 percent, from the 1982 peak of the industry boom to 1987.[50]

Construction workers who lost their jobs had three options: leave the state in search of work, find a new career, or wait until the industry recovered. David Hawkins was only one of thousands who faced unemployment and headed South. Morley Coven of Anchorage opted for a new career – he took classes at

[42] Ron Engstrom, "Alaska's Economy Signs Indicate Exodus is Still Under Way," *Anchorage Daily News*, July 3, 1988, p. E1
[43] Jim Erickson, "A Market in Despair," *Anchorage Daily News*, May 24, 1987, p. D1.
[44] See Volume 2, Part 3.
[45] Chris Stephens, "Tide Has Turned," *Anchorage Daily News*, Oct. 14, 1990, p. E1.
[46] See Volume 1.
[47] See Volume 2, Part 1.
[48] Connie Yoshimura, "1987 Shows Housing Problems Reflect Other Anchorage Troubles," *Anchorage Daily News*, Jan. 2, 1988, p. D1.
[49] See Volume 2, Part 1.
[50] Bill White, "Construction Fades As Major Workforce," *Anchorage Daily News*, Jan 1, 1989, p. C1.

the Anchorage Barber College and opened his own barber shop.[51]

Doug Teninty, a steamfitter, considered himself lucky to have worked for eight consecutive months before his layoff in 1988. Down at his union hall, Plumbers and Steamfitters Local 367, about 85 percent of the members were unemployed. When a Daily News reporter asked if he had thoughts of moving away, Teninty replied, "I'll go if I have to, but I don't want to."[52]

The construction industry was slow to recover from the recession; slower than most other sectors of the economy. From the industry's low of 6,500 jobs in 1988, employment crept upward year by year: 7,000 total jobs in 1989, and 7,900 total jobs in 1990.[53] The numbers reflect the gradually recovering real estate market. Considering the industry's high of 13,000 jobs in 1984, these were small gains indeed.

E. The Oil Industry

While the construction industry lost the most jobs, many former ARCO and BP employees would attest to the severity of the recession in the oil sector. When prices plunged in 1986, oil companies and support services had to make major cutbacks in order to stay in business. Even so, many companies went bankrupt. As the Daily News reported, "work on the Slope slowed to a near halt. The oil producers began stacking rigs, stopping drilling programs, laying off their own people and restructuring their own companies to cut costs."[54] Anchorage felt the crunch in the form of laid off North Slope commuters and oil industry executives, as well as shrinking salaries.

Ronald Placko of Anchorage was one of those squeezed out during the cutbacks.[55] The geophysicist had two decades of oil industry experience when he found himself out of a job. He tried to get lower-level technical positions, jobs he could do "with his eyes closed," to no avail. For a while he worked as a building manager assistant – until he realized he was getting paid $3.41 an hour. It was hard for Placko to take, psychologically; he had training, skills, and experience, but was working for a third of what maids were earning.[56]

Chris Osowski of Eagle River had commuted to his job with the PINGO Corporation, a North Slope oil services firm, for four years. After being laid off when the company went into bankruptcy, Osowski faced the added frustration of not being paid for his last month of work – a much-needed $4,800 paycheck. Instead of seeking a new job in Alaska, he was one of those who looked Outside for salvation: He found a position with a firm in Arizona and planned to move there.[57]

The stories are not all negative, however. Both George Petering and Richard Tesch of Anchorage found a bright side to their respective layoffs with Placid Oil Company and Standard Alaska Production Company.[58] The two friends collaborated and bought an office equipment and repair company. While they weren't coming close to matching their $60,000 paychecks of past years, they felt positive about the future, and were relieved to get out of the volatile oil industry.

The oil industry was the first sector to rebound from the recession. In nominal dollars, 1988 prices crept back up to $16/barrel from their low of $10/barrel in 1986, and oil companies started hiring back workers. Service company work picked up in response. Slowly but surely optimism returned to the industry. This translated into more oil jobs opening up for Anchorage residents, both for executives and North Slope workers. Anchorage mining employment (of which virtually all jobs are oil-related) increased 4 percent in 1988, 6 percent in 1989, and another 6 percent in 1990.[59] The Daily News acknowledged the widespread effects of such a recovery, pointing out that "the oil and oil services revival [were] a bellwether of better times: as these relatively high-paying industries grow, they will help pick up the rest of the economy."[60]

[51] Heidi Bohi, "Changing Careers at 60: It Takes Style," *Anchorage Daily News*, July 10, 1988, p. F5.
[52] Bill White, "Construction Fades…"
[53] See Volume 2, Part 3.
[54] Patti Epler, "The Oil Industry's True Survivors," *Anchorage Daily News*, August 21, 1988, p. F1.
[55] E.W. Piper, "Never Beyond Hope," *Anchorage Daily News*, August 14, 1987, p. D1.
[56] Piper, D1.
[57] Hal Spencer, "Sign of Hard Times: for More Alaska Workers, Payday Never Comes," *Anchorage Daily News*, April 12, 1986, p. A1.
[58] Hal Spencer, "Alaskans Making it in Hard Times: Oil Executives Bounce Back," *Anchorage Daily News*, January 27, 1987, p. A1.
[59] See Volume 2, Part 3.
[60] Epler, p. F1.

F. "The Ripple Effect"– Other Sectors

The layoffs and shrinking salaries that hit oil and construction workers during 1986 and 1987 soon spread to the trade, service and financial sectors. A major loss of purchasing power, was felt everywhere "from dry-cleaning establishments to bowling alleys."[61] In her article on the city's real estate crash, Connie Yoshimura points out that "undercapitalized mom-and-pop businesses" in neighborhoods filled with vacancies were especially hard hit in the recession.[62] The statistics support these impressions: In 1986 the trade sector lost 5 percent of its jobs, while the services sector lost 3.5 percent.[63]

The 50 percent drop in oil prices in 1986 added state and local government workers to the list of endangered species. The municipality was forced to lay off city workers, close fire stations and libraries and sell city-owned utilities. Between 1985 and 1988, local government employment dropped 11 percent. The state felt the dwindling oil prices as well – in 1987 and 1988 alone, 9 percent of state jobs were lost.[64]

An example of the recession's "ripple effect" can be found in the story of Arcy's Rabbit Creek Kennels, located in Anchorage. Before the recession, the business had no problem finding clientele among North Slope oil field workers or wealthy residents taking vacations. "But when the state economy stumbled into recession, [the proprietor] watched helplessly as her regular customers lost their jobs, stopped traveling or left the state."[65] In May 1987 the kennel's profits fell to 1977 levels. Making matters worse was the fact that the owner's husband was an unemployed construction worker. While the kennel was managing to stay in business, its two employees were laid off – becoming two more victims of the recession – and the owners were uncertain about their economic future.

Mike Miller and Mark Cruver, co-owners of the downtown Anchorage Army/Navy store, can also attest to the hard times of the recession.[66] The business specialized in Slope work clothes and had contracts to supply several oil companies. Business was booming through the 1980s, and a new expansion store on Benson Boulevard was opened. Then the price of oil fell in 1986, and the store lost many of its clients and customers. While the store managed to stay in business, the owners were forced to close the new expansion store.

Vern and Jan Lapp are examples of how many businesses managed to survive the recession, but at a price.[67] The couple owned an auto repair shop and a flower shop in the same building in Anchorage. As the recession hit, they saw their customers and cash flow start to disappear. To cut back on costs, the Lapps worked seven-day weeks and long hours. They cut their employees' paychecks by ten percent; when one left in protest, he was not replaced. Recognizing that their clients' resources were likewise shrinking, they reduced both flower prices and auto repair charges. Through cuts like these, as well as "watching every dime," the couple was staying in business while some competitors floundered. The Lapps claimed to miss their former lifestyle of shorter hours and annual vacations Outside, but were thankful to have found ways to weather the storm.

The Anchorage economy started to rebound in 1989, with the addition of 4,500 new jobs. The service sector accounted for the lion's share of this growth. From 1986 to 1990, service sector employment in Anchorage increased by 6,700 jobs, 19 percent overall. (The service sector includes such industries as health care, hotel/lodging, auto repair, and social service.) Increased population, maturation of the service sector, and expansion of the tourism industry all spurred growth in this sector. The retail sector also showed strong gains. Federal, state, and local government all enjoyed employment gains in 1990 and 1991, in part due to rising oil prices. As noted above, the recovery of the oil industry helped pull the economy out of its rut.

G. "The Exodus"-- Out-migration from Anchorage

The recession drove thousands of people out of

[61] Jim Erickson, "The Economic Blues," *Anchorage Daily News*, May 10, 1987, p. C1.
[62] Connie Yoshimura, "Vacancy Rate Survey Shows More Bad News," *Anchorage Daily News*, October 10, 1987, p. B5.
[63] See Volume 2, Part 3.
[64] See Volume 2, Part 3.
[65] Erickson, "The Economic Blues," p. C1.

[66] Ben Speiss, "Oil Industry Gears Up for Hard Times," *Anchorage Daily News*, Feb. 28, 1999, p. A1.
[67] Hal Spencer, "Alaskans Making It In Hard Times," *Anchorage Daily News*, Jan. 26, 1987, p. A1.

Anchorage – and out of the state. The city's population fell from 235,133 in 1986 to 222,950 in 1988, a loss of 12,000 residents.[68] However, even more than that actually moved out of the city, as there were still people arriving (though fewer than before), and babies being born. The Department of Labor estimates the total number of those who left at 25,000 from 1986 to 1988.[69] A number of factors contributed to this drastic out-migration.

The most obvious reason for leaving the city was its dismal employment scene: In just three years, 12,400 jobs were lost. Many who managed to keep their jobs were faced with shrinking paychecks. A survey conducted by Institute of Social and Economic Research at University of Alaska Anchorage in 1987 showed that those who left the state were more likely to be out of a job, and to have lower incomes, than those who stayed.[70]

In one sense, it was easy for many Anchorage residents to leave the state: They hadn't been there very long. Statistics show that a high proportion of those who left had come to the state during the boom.[71] They hadn't had time to set down roots, making it easier to pull out when times got rough. The Anchorage Daily News cites a typical case: a construction worker from Arizona who had moved to Anchorage in the early 80s. In 1988, after a year of unemployment, he made plans to "hit the road" and head to California, where the construction industry looked healthy.[72] Those leaving Anchorage had several other common characteristics: male, blue-collar worker, single, and between 18 and 34 years of age.[73]

The exodus out of Anchorage worsened an already faltering economy. With fewer people in the city came bigger problems – as reporter Bill White stated, "the significance of a smaller population is obvious: less money churning through local businesses, more bankruptcies, more vacant houses and apartments, more foreclosures."[74]

While the exodus certainly didn't help the economy, it might have helped ease crime rates. While 1986 saw an increase in crime (see below), the serious crime rate dropped 15 percent between 1986 and 1987, and according to the Daily News, "officials attribut[ed] the decline to the population exodus."[75] While the population declined about 8 percent in the same period, the crime rate fell faster because most of those that left were in a "crime-prone" group – single males aged 18 to 34. In the news article, police also attributed the lower petty crime rates to the poor economy: Simply, there was less stuff to steal, and fewer wealthy people from whom to steal.[76]

By 1989 people had started to trickle back into the city, stimulating the stagnant economy as well as the real estate market. After two years of population losses, Anchorage's population increased 1 percent in both 1989 and 1990, then by 4.2 percent in 1991.[77] Among the city's attractions to Outsiders: a recovering oil industry, booming tourism, and relatively healthy service and retail sectors.

H. Social Issues

The severe recession in Anchorage did not just affect the incomes and employment of residents — it had social ramifications, as well. The loss of jobs and homes led to a loss of emotional stability for many victims of the recession. Social problems such as alcoholism and domestic violence worsened, according to the Daily News.[78] In fact, reports of child abuse and neglect rose 23 percent between 1987 and 1988.

The number of cases of mental illness also rose, as people had difficulty coping with their financial situations, according to professional counselors. "They're being stressed by the economy…Mental problems that may have been there anyway hit crisis proportions."[79] These sorts of problems could be linked

[68] See Volume 2, Part 3.
[69] *Alaska Population Overview*, Alaska Department of Labor, September 1990, p. 47.
[70] Karen Foster, Linda Leask, and Teresa Hull, "The Effects of Alaska's Economic Recession on Anchorage Households," *Alaska Review of Social and Economic Conditions*, May 1988, Vol. XXV, No. 2, p. 3.
[71] Ibid.
[72] Engstrom, p. E1.
[73] Bill White, "Anchorage Economic Survey," *Anchorage Daily News*, March 21, 1988, p. A1.
[74] Bill White, "Alaska's Economy," *Anchorage Daily News*, July 3, 1988, p. E1.
[75] Marilee Enge, "Decline in Crime – Population Drop Makes City Safer," *Anchorage Daily News*, Feb. 2, 1988, p. B1.
[76] Ibid.
[77] See Volume 2, Part 3.
[78] Elizabeth Pulliam, "Poverty Still Gnaws at Families and Hope," *Anchorage Daily News*, November 24, 1988, p. A1.
[79] Sylvia Condy of the South-central Counseling Center, as quoted by Pulliam "Poverty Still Gnaws..."

to the rise in violent crime during the recession as well — 1986 saw 20 percent more crimes like assault and murder than 1985.

The situation was exacerbated by the loss of state funding for social service programs. In the words of one reporter, "the old and new poor [were] overloading a system that [was] less and less able to afford them."[80] For example, treatment centers such as the Salvation Army's Clitheroe Center had to deal with less state funding and an increased caseload. As a result, "clients wait[ed] an average of six to eight weeks for admission" in 1988.[81] Programs that depended on state grants were losing funding, sometimes even getting the ax. Planned Parenthood, for example, received $39,544 in 1996 – a third less than it received in 1995, and less than half of the $99,885 the organization requested.[82] A program providing eyeglasses and hearing aids to low-income elderly got cut off from funding altogether.

The imbalance between need and available service was felt in the health care industry, as well. More and more people were seeking assistance from the state for their health care bills, while state funds were shrinking.[83] In 1987 Providence Hospital wrote off more than $5 million in unpaid bills, twice as much as the year before.[84]

Cori Long of Anchorage was proof that the recession created some "big cracks" in the health care system – she almost slipped through.[85] The 29-year-old widow was working part-time as a housekeeper, struggling to pay the bills, when she was plagued by persistent pain in her abdomen. She tried to forget about it, knowing she couldn't afford to get sick, but eventually was driven to contact hospitals. No one would take Long without knowing how she planned to pay. When one doctor performed a biopsy out of charity, she was in an advanced state of cancer with three months to live.

Desperate for treatment, she started applying for state aid. As the Daily News reported, "there [were] three ways to get government help for medical disasters and Long didn't qualify for any of them. There used to be more, funded by the state, but the governor and the legislature denuded or killed them."[86] When Long tried to get an appointment at a welfare office (being on welfare might help qualify her for aid), she had to wait weeks – and when she arrived, she had to wait another three hours for her turn. Since she was too weak to stand in line, a friend took her place as she lay outside in a van. All this, only to be told that she wouldn't be eligible for any aid.

Through loopholes, loans, help from friends, and charity from doctors and hospitals, Long eventually received the treatment she needed (and was recovering, at the time the article was written). If she had waited for treatment until she was deemed qualified for it, "she doubt[ed] she would have made it."[87]

I. Youth in Anchorage

As state oil revenues dwindled, so did school funding. Anchorage youth bore the brunt of a 10 percent decrease in school funding in FY87, and real per-student funding fell to 1980 levels. This inevitably translates into a decline in the quality of education youth were receiving. For two years in a row, the state cut spending on special education, affecting everything from art supplies to classroom size.[88] To make matters worse, in 1988 the federal money for special education was cut by $750,000 – because of a stipulation that if base budgets fell for two years in a row, supplements would cease.[89] And special education was just one of the programs which were affected.

Anchorage youth also felt the recession in the job market, where they had to compete with adults. As unemployment climbed, adults in Anchorage started turning toward low-pay, low-skill work to make ends meet – jobs usually held by teenagers.[90] For example, it became difficult for kids to find work at fast-food restaurants because so many wives of laid-off construction workers were in the marketplace. In 1987, it took Heather Postlethwait, a 17-year-old Anchorage

[80] Elizabeth Pulliam, and Sheila Toomey, "Poverty Has a Long Reach This Year," *Anchorage Daily News*, Nov. 27, 1986, p. A1.
[81] Pulliam, "Poverty Still Gnaws..."
[82] Don Hunter, "Social Services Face Cuts," *Anchorage Daily News*, Aug. 11, 1986, p. C1.
[83] Pulliam and Toomey, "Poverty Has a Long Reach..."
[84] Pulliam, "Poverty Still Gnaws..."
[85] Sheila Toomey, "While Fighting for her Life, Woman Fights for Help: The Safety Net Gives Way," *Anchorage Daily News*, Dec. 12, 1986, p. E1.
[86] Ibid..
[87] Ibid, p. E1.
[88] Larry Campbell, "Special Students: Budget Cuts Threaten Special Ed Program," *Anchorage Daily News*, Jan. 25, 1987, p. A1.
[89] Larry Campbell, "Schools Take Cut in Funds," *Anchorage Daily News*, Feb. 6, 1988, p. D1.
[90] Robin Mackey Hill, "Young Job Seekers Face Competition From Adults," *Anchorage Daily News*, June 5, 1987, p. F1.

resident, four months of leaving applications at clothing stores and other businesses before she finally was hired at a bagel shop.[91] As Joan Larson of the Anchorage Youth Employment indicated to the Daily News, "the openings [weren't] there" for job-seeking teenagers in the midst of the recession.[92]

J. Conclusion

While many of these stories paint a grim view of the city during the recession, it is important to point out that the majority of Anchorage residents escaped the downturn relatively unscathed. Certainly, there were those who lost jobs, suffered foreclosure, lost money in investments, were forced to move Outside, or didn't receive the health care they needed; but these sorts of misfortunes were by no means epidemic.

The recession in many ways was necessary for the city. As economist Gregg Erickson noted, the recession "erod[ed] two longtime barriers to Alaska's development – high wages and inflated prices."[93] With regard to housing, most Anchorage residents actually benefitted from the recession, as they were allowed to move up the housing scale when prices plummeted. Anchorage's economy also became more diversified, and therefore more stable, as a result of the recession. Dependence on the oil industry diminished as the retail and service sectors broadened. The city, and its residents, emerged from the recession bruised, but in better shape for the future.

[91] Larry Campbell, "It's a Lean Summer for Teens Wanting Work in Anchorage," *Anchorage Daily News*, June 19, 1987, p. A1.
[92] Hill, p. F1.
[93] Erickson, p. 8.

Chapter III: Kenai

Oil companies put down rigs along the Kenai Peninsula long before Alaska's North Slope. Oil and gas were well-developed industries in the Kenai, and the Peninsula's population surged than shrunk with local industry activity. When oil development became statewide business, the Kenai Peninsula Borough's economic cycles reflected the rest of Alaska, and the region experienced the great highs of the pipeline boom and the deep plunge into recession.

A. Population

The Kenai Peninsula Borough's population followed a path similar to Anchorage between 1975 and 1995, with ups and downs mirroring the economy. Over the 20-year period, the borough's population more than doubled, from 21,300 to 46,092.

The late 1970s saw an 18 percent increase in population as thousands streamed into the state to work on the pipeline. Post-pipeline out-migration was less pronounced on the Peninsula than in Anchorage, with a population loss of only 200 between 1978 and 1980.

During the boom years the area's lucrative oil and construction jobs, and high quality of life helped lure thousands of people from the Lower 48. Population on the Peninsula increased 61 percent over five years.

The Peninsula had a net loss of 1,700 people during the recession years of 1987-88.

Population picked up in 1989 and enjoyed steady growth over the next six years. This trend reflects the recovery and subsequent growth of the economy in the early 1990s, helped by booming tourism and a growing service sector.

B. Employment

The KPB has always had one of the highest unemployment rates in the state, a characteristic of the area throughout the study period. Unemployment rates fluctuated from 8.7 percent in 1975, to 15.3 percent in 1982, to 9.3 percent in 1989, to 12.3 percent in 1995.

While the Alaska Department of Labor does not have employment numbers until 1977, indicators suggest that employment surged during the pipeline construction in the late 1970s. The area lost 1,000 jobs with the completion of the pipeline, but employment quickly picked up in 1979.

The KPB was among the fastest growing economies during the oil boom of the early 1980s. Construction employment jumped from 900 jobs in 1980 to nearly 2,200 jobs in 1985, an average annual rate of 20 percent. Oil industry employment also gained, but at a much slower rate of 2.5 percent. The average annual growth rate in full-time and part-time employment in the KPB for the five-year period was an impressive 8.5 percent, much higher than the Alaska average of 5.5 percent. The retail and service sectors contributed to the region's growth (see Volume 2, Part 3).

During the 20-year study, government spending on Kenai area construction varied according to available general fund revenue, local need, the amount of state dollars required to collect federal funds, and the region's political clout. Capital budgets remained higher in the 1980s, despite the recession, and decreased in the 1990s. From 1979 to 1985, employment steadily increased despite dips in public expenditures, due to a strong private sector. While the Kenai Peninsula had one of the highest unemployment rates during the recession, total full and part-time employment did not drop precipitously, and recovered quickly.

The following table shows the fluctuations in public expenditures compared to total borough employment.

Table III.1

Kenai Peninsula Borough
Capital Budget Appropriations and Total Employment, 1975 - 1995.

Fiscal Year	General Fund*	Other Funds**	Total Funds	Percent Change	Total Employment***	Percent Change
July 1-June 30	(nominal dollars) (000s)					
1975	$198	$0	$198		n/a	
1976	849	2,151	3,000	>200%	n/a	
1977	699	0	699	-77	n/a	
1978	1,069	7,724	8,793	92	n/a	
1979	446	205	651	-93	12,845	
1980	22,478	28,880	51,358	99	13,113	2%
1981	57,597	0	57,597	12	14,131	8
1982	20,511	0	20,511	-64	15,202	8
1983	26,921	500	27,421	34	17,649	16
1984	26,015	3,036	29,051	6	18,942	7
1985	58,844	11,097	69,941	141	19,663	4
1986	110,817	919	111,736	60	19,095	-3
1987	1,965	12,889	14,854	-87	18,992	-0.4
1988	16,266	14,790	31,056	109	20,095	10
1989	4,982	24,289	29,181	-6	22,060	10
1990	9,081	26,823	35,904	21	22,414	2
1991	13,036	4,199	17,235	-51	23,190	3
1992	7,146	17,451	24,597	43	23,259	0.3
1993	9,119	39,770	48,889	99	24,539	6
1994	1,200	18,124	19,324	-60	25,226	3
1995	440	9,949	10,389	-46	25,422	1

* The general fund includes oil revenues; spending is unrestricted.
** Includes federal funds. See Volume 1, Table II.B.1.
***Includes Full and part-time; workers may hold more than one job. Source: USDC, BEA. See Volume 2, Part 3.
^Bradley Lake reappropriation.

While the KPB's economy was more diversified than Anchorage, the higher rate of growth during the early 1980s set up the borough for a steeper economic fall.[94] As in Anchorage, the construction industry was the biggest loser. Employment in that sector began falling in 1986 and by 1987 had experienced a loss of almost 900 jobs. The oil industry also saw employment declines, losing almost 200 jobs in 1987. The retail and service sectors suffered slight losses during the recession.

The early 1990s were a time of recovery for the Peninsula. Construction and oil industry employment enjoyed gradual but steady growth. The retail sector, spurred by booming tourism, grew from 3,000 jobs in 1990 to 4,300 jobs in just five years. In the same period, the service sector (including such industries as health care, social service, auto repair, and hotel/lodging) went from 5,300 to 6,400 jobs. The KPB ended the study period in strong economic health, with a shrinking unemployment rate and expanding population.

C. Kenai – The Recession

The KPB has always enjoyed one of the most diverse private sector economies in the state, supported by fishing, tourism, oil and gas extraction and manufacturing. While this would normally indicate a more stable economy, the KPB was one of the hardest hit areas during the recession. This is due to the riotous economic growth it experienced during the oil boom of the early 1980s, a result of the expenditure of state oil revenues. The average annual growth rate in full- and part-time employment for the five-year period was an impressive 8.5 percent, higher than the statewide average of 5.5 percent. This growth was, according to the Department of Labor, "extremely vulnerable to a decline in oil prices."[95]

The inevitable recession was felt on many levels, from corporations to mom-and-pop businesses. The major hits were taken in the central Peninsula towns of Kenai and Soldotna, where 70 percent of the borough employment was concentrated. Towns like Homer and Seward were not as affected by the downturn, as they were more dependent on tourism and fishing industries. This chapter examines how the lives of Peninsula residents were affected by the economic slump.

D. Oil Industry

The economy of the Kenai Peninsula has been greatly influenced by oil and gas production since the Swanson River discovery in 1957. Oil and gas development expanded population, increased the tax base, and increased the demand for high-skilled and high-wage jobs. Earnings for oil and gas production and manufacturing are among the highest of any industry in the borough.[96]

When oil prices fell to $10 a barrel in 1986, the Kenai companies curtailed production and reduced the workforce. Most of the jobs lost were in oil- service contracting,as the oil corporations used employees to do the work previously done by independent contractors. By 1987, Kenai petroleum sector employment, including service companies, was down 29 percent.

When the recession hit the Kenai, Larry Porter of Phillips Petroleum Company was a company executive.[97] Porter was shifted into management and hiring new workers became part of his responsibility. "I really had a hard time when Philips would have a job opening and would get 400-500 applications. Sadly, about 95 to 98 percent of the applicants would never be able to get a job like they were applying for, because many were simply unqualified," he said. Although the stability of the plant ensured that Porter kept his job through the recession, he noticed the downturn in other ways. He believed the community had higher crime activity; indeed, his own house was robbed.

By 1988, KPB's oil industry rebounded, largely due to an increase in exploration activity on the Peninsula. In May of that year ARCO announced plans to drill a deep well near the Swanson River, spurring renewed confidence in the industry.[98] Between 1988 and 1990, employment in the industry grew by 20 percent. In 1989 the Valdez oil spill cleanup spurred recovery.

[94] Neal Fried, "The Kenai Peninsula Borough: An Economic Assessment," *Alaska Economic Trends*, February 1988, p. 11.
[95] Ibid.
[96] Executive Summary, Kenai Peninsula Borough Economic Development District, p. 2.
[97] Interview, Larry Porter, Superintendent, Phillips Petroleum Company, June 1999.
[98] Associated Press, "Arco Plans to Drill Peninsula Well," *Anchorage Daily News*, May 11, 1988, p. D2.

The fact that Kenai's manufacturing sector had remained relatively stable during the recession also helped the industry rebound.

E. The Real Estate Crash

While the real estate crash was not as drastic in Kenai as Anchorage, the area still faced a huge downturn in market value, as well as record foreclosures. The early 1980s had seen an explosion of building, both residential and commercial. As in Anchorage, developers had been counting on continued growth, and continued state funding. When their expectations weren't realized, the market became flooded, and there was a huge oversupply of structures in the KPB. In 1986, there were twice as many real-property tax delinquencies as 1985.[99] State capital appropriations fell from $70 million in 1985 to $15 million in 1987.[100] Two brand-new schools were even moth-balled in 1987, because the district lacked funds to staff and operate them. In the Kenai-Soldotna area (where 70 percent of the borough's employment is concentrated), the price of single-family homes fell 35 percent to 40 percent, while commercial space fell as much as 50 percent.[101]

One Peninsula couple, Chuck and Linda Simpson, had a tough ride through the crash.[102] They owned a home on the Kenai River and operated a successful used car business in Soldotna. In 1986 Chuck Simpson fell into debt from a business venture which turned sour. "He tried to collect from customers who still owed him for the cars they had purchased, but many simply could not pay," the Anchorage Daily News reported. After local banks refused to help, the couple decided in August 1986 to put their house on the market. They couldn't have chosen a worse time. For months they watched as the value of their home plummeted in the midst of the real estate crash.

When the Simpsons found a buyer, the mortgage company told them they needed to spend $12,000 to bring the house up to code. Banks again refused to help, and friends stepped in to loan them the cash. The Simpsons felt lucky to have sold their home at all. In the meantime, they found ways to get by – stockpiling fish in the freezer, getting road killed moose from the state, and renting out their guest cabin. The hard times took its toll on the family of eight, causing arguments and tensions that hadn't existed before. They looked forward to a new start in Ketchikan, where Chuck Simpson hoped to break into the fish-net hanging business.

F. Construction Industry

The construction industry started feeling the real estate crash in 1986, and by 1987 employment had fallen to 1980 levels. As in Anchorage, construction in KPB was the hardest-hit sector of the economy during the recession. Nine hundred construction jobs disappeared between 1985 and 1988, about 40 percent of the construction workforce.

Construction worker Bill Hall of Anchor Point tells a story of his temporary move to California to make some much-needed cash.[103] He and a dozen of his out-of-work construction buddies flew down to Los Angeles to work on a new apartment complex for $20 an hour. After six weeks, Hall was ready to come home – in his words, "it's better to be in Alaska, scratching for a living, than rolling in dough in L.A."[104] But many of his friends, worried about the lack of construction jobs on the Peninsula, decided to stay outside, where work opportunities were better.

Mike Treat, owner of a cabinet-making company, found ways of surviving the recession.[105] His company had grown in the boom years, producing custom-made cabinets for many of the new homes that were springing up around the Peninsula. When the recession hit and the bottom fell out of the housing market, "he should have gone broke… Instead, he expanded his product line and created new markets."[106] He lowered the cost of his cabinets by building them with less expensive materials and adding the option of modular units in standard widths. Instead of floundering in the poor economy, he found ways to accommodate it, and even managed to buy a small Apple Computer franchise in November of 1987.

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[99] Tim Ellis, "Time running short for those on foreclosure list," *Peninsula Clarion*, Jan. 28, 1986, p. 2.
[100] See Volume 1.
[101] Fried, p. 13.
[102] Ronnie Chappell, "They're Moving Out, But Not Giving Up," *Anchorage Daily News*, Aug. 28, 1987, p. B1.
[103] Hall, Bill, "An Alaskan Comes Home," *Anchorage Daily News*, Dec. 21, 1986, p. O13.
[104] Ibid.
[105] Ronnie Chappell, "Alaskans Making it in Hard Times," *Anchorage Daily News*, Nov. 22, 1987, p. C1.
[106] Ibid.

In 1989, the Kenai's construction industry picked up slightly, gaining 200 jobs, only to lose 150 the next year. The industry had a very slow recovery over the next few years, and would not even come close to matching the huge number of jobs available in the boom years. At the peak of construction in 1985, employment stood at 2,156; in 1992, after most other industries had recovered from the recession, there were still only 1,273 jobs.

G. The Ripple Effect

Inevitably, the losses experienced in the construction and oil industries were felt elsewhere in the KPB economy. The struggle of Chuck and Linda Simpson illustrates the "ripple effect" of the economy. If Chuck Simpson's clients hadn't been going through hard times themselves, they would have paid their debts to him, and he in turn might not have been forced to sell his house and move to another part of Alaska.

Much of the secondary sector (services, finance/ insurance and real estate) did not experience losses until 1987, as the initial declines in the economy caught up with these industries. The borough's already high unemployment rate climbed even higher, jumping from 13.8 percent in 1985 to 17.1 percent in 1986, the highest rate in urban Alaska. When unemployment rates began to fall in 1987, the Department of Labor reported that it was "not as a result of an improved economic picture, but because many of the unemployed decided to leave Alaska or drop out of the labor market."[107] 1987 saw a 7.5 percent decline in gross sales, which indicates that people were spending less on big ticket items such as large household furnishings, snow machines, construction materials, and automobiles. The Labor report speculates that financial uncertainty was causing KPB residents to pinch their wallets and forgo certain luxury items.

State and local government did not feel the recession as much as other sectors. Combined, fewer than a hundred jobs were lost in this sector in the downturn, and these were regained within a couple of years. The numbers, however, do not reflect the actions local governments had to take to avoid massive layoffs. In 1987 for example, the KPB cut employees' pay by 10 percent, but managed to keep them working.[108]

Unlike other areas of urban Alaska, KBP's service sector actually grew by 14 percent during the 1986-87 period, and by another 11 percent in 1988. Tourism-related growth in the borough likely saved the region from the service-sector decline that hit other Alaska communities during the recession.

Rene Azzara, who has lived in Kenai for almost 30 years, also experienced the reverberations of the recession firsthand. In the early 1980s, she worked in the mortgage lending department of First National Bank, when "things were booming and life was good."[109] In 1986 the bank started to feel the real estate crash and Azzara lost her job through layoffs. She found work for the next year and a half at the Chevron Bulk Plant, but again was caught in a series of layoffs. She could not return to banking, because the jobs there had simply disappeared.

Meanwhile, her husband was not faring any better. In the early 1980s he had enjoyed steady work as a cement worker, when schools and airports were being built on the Kenai. With the slump in construction, he also faced unemployment. For a while he drove a truck, transporting Prince William Sound herring to market, but that job disappeared along with the herring fishery during the 1989 Exxon Valdez oil spill.

Azzara said "things were pretty dire" in their household, and they very nearly lost their house. Then her husband got a job working on the Bradley Lake Hydroelectric Project. His six-week-on, one-day-off schedule was tough on the family, but the couple needed the money. They survived the recession, but as Rene Azzara recalled the frustration and pain, she said the family "was crazy not to leave" the Kenai, "because the people who did leave and then returned seemed to recover faster."

Now, every time she hears about another precipitous drop in the price of oil, she gets nervous. "I really don't think me and my husband could go through another bust. It was that hard," she said.

H. Other Effects

As in Anchorage, the KPB experienced out-migration during the recession. While the population dip was proportionally less than in Anchorage – 4 percent for

[107] Fried, 12.
[108] Ibid.

[109] Interview, Rene Azzara, Administrative Assistant, University of Alaska Mineral and Petroleum Training Services, June 1999.

KPB, compared to 5 percent in Anchorage – it may have had a deeper impact, because KPB is so much smaller. Between 1986 and 1988, the borough's population fell from 41,653 to 39,949. Rene Azzara remembers watching a lot of friends and neighbors pack up their belongings and head South – "it was very rough to see the community break up."[110]

The Kenai police reported a sharp increase in property crimes in 1986: 117 burglaries were committed, compared to 76 the previous year.[111] The perpetrators tended to go for cash, even coins in vending machines, rather than property. Similar problems arose in Soldotna, and police blamed the poor economy. Kenai Police Chief Rick Ross told the press at the time that more adults were being arrested for burglary, a crime dominated in the past by juveniles.

School budget cuts had significant impact on KPB youth. The borough had taken advantage of the state's policy of paying for 80 percent of school construction costs. When the price of oil crashed, the borough faced "massive" cuts in state aid to local school districts. School officials were forced to reduce funding for extracurricular activities, close an elementary school, eliminate more than 50 teaching positions and cut the salaries of all school district personnel by 5 to 10 percent.[112]

Kenai youth felt the budget cuts in the form of larger classes. Fourth-grade teacher Connie Gates told the Anchorage Daily News that her "effectiveness was way down" because she had 37 kids in her classroom, compared to 20 the year before.[113] She was forced to change her teaching style, and had little time to help kids with individual problems. Teachers across the Peninsula reported a similar dilemma.

Education cuts were also felt on the collegiate level. Enrollment at Kenai Peninsula Community College declined by 24 percent in 1987, and university officials attributed the drop to budget cuts.[114]

I. The Oil Spill

When the Exxon Valdez dumped oil in Prince William Sound in 1989, it provided thousands of cleanup jobs to residents and attracted outside money to the area. But the environmental disaster had significant social ramifications. The oil spill had a major effect at the household level in some KPB communities, especially those in the fishing industry and Native villages dependent upon subsistence.[115]

Fisherman saw their livelihoods disappear in a matter of days as oil engulfed hundreds of miles of fishing grounds in Prince William Sound and beyond. According to a Minerals Management Service report, the Sociocultural systems of such villages as Nanwalek, Port Graham, and Seldovia experienced major disruptions. As a result of the new money and cleanup jobs pumped into the area by the spill, households shifted from subsistence to cash-dependent living. Children, in particular, participated less in subsistence activities, and families reported lower consumption of subsistence foods.

In the small Native village of English Bay, near Seldovia, most able-bodied adults accepted clean-up jobs for the summer, instead of participating in their traditional subsistence activities.[116] While at first the money seemed like a miracle to the community where many families are on welfare, things turned sour as the summer came to a close and the full effects of the spill became apparent.

"They [clean-up workers] came home with wads of cash, but they were also exhausted, depressed and anxious about the future… Instead of hunting or fishing the last salmon runs of the season, people in English Bay are installing satellite dishes and shopping in Anchorage for expensive stereo equipment and furniture… In communities where people thought they had finally overcome alcoholism, some are drinking again, sometimes in long, reckless binges…Reports of family violence, child neglect, suicide threats and public drunkenness are up sharply…"[117]

[110] Ibid.
[111] Associated Press, "Property Crimes Increase Sharply on Kenai Peninsula," *Anchorage Daily News*, March 24, 1987, p. B1.
[112] Ronnie Chappell, "New Kenai Schools Might Remain Closed," *Anchorage Daily News*, Nov. 3, 1987, p. B1.
[113] Ronnie Chappell, "Kenai Classes Start to Feel the Budget Cut Pinch," *Anchorage Daily News*, Sept. 1, 1987, p. B1.
[114] Polly Crawford, "Enrollment Dropping at Kenai College," *Peninsula Clarion*, Jan. 19, 1987, p. 1.
[115] Minerals Management Service, US Department of the Interior, "An Investigation of the Sociocultural Consequences of Outer Continental Shelf Development in Alaska," 1995, Introduction.
[116] David Hulen, "The Summertime Blues: Villagers Seek a Cure for Spill-altered Lifestyles," *Anchorage Daily News*, Sept. 26, 1989, p. A1.
[117] Ibid.

While the oil spill may have helped pull the KPB out of the recession, it clearly had adverse effects on many communities. The new found jobs and money were fleeting. Once the clean up was done, the jobs went away and the income dried up.

J. Conclusion

The Alaska Department of Labor reported in 1988 that the Peninsula had lost 1,000 jobs since 1985, "despite the fact that the peninsula has one of the most diverse private sector economies in the state."[118] While the KPB was one of the hardest-hit areas in the state during the recession, it was also the quickest to recover.

The region's resiliency may stem from its diversification. Petroleum is not just pumped out of the ground, it is also manufactured. Plants produce liquid natural gas; aviation, diesel and heating fuels; gasoline; asphalt; urea; fertilizer, and ammonia. Product is marketed in Alaska, and exported to the Lower 48 and foreign countries. The central peninsula/ Cook Inlet are home to the petroleum industry. In other parts of the region, commercial fishing and tourism have been mainstays of the economy. Seward, for example, was one of the few areas of the state to stave off the 1986-87 declines. Construction of the Spring Creek correctional facility helped bolster Seward, as well as its fishing industry. Homer got a boost from its strong commercial fishing fleet, tourism, and the construction of the Bradley lake hydroelectric project.[119]

As the economy settled down after the recession, the hardships and disappointments began to fade. While it had taken its toll on many, the Kenai's population and employment picked up quickly, and both continued to rise rapidly through the early 1990s.

[118]Neal Fried, "the Kenai Peninsula Borough: An Economic Assessment," *Alaska Economic Trends*, February 1988.
[119]Ibid.

Chapter IV: Northwest Arctic Borough

The cycles of Alaska's oil-driven economy have much less direct impact in rural than urban Alaska. Assessing the impact of the recession and the consolidation of Alaska's oil industry is difficult to do in many rural regions where unemployment is high, jobs are scarce, and subsistence is a cultural as well as an economic priority.

A. Population

Fewer than 7,000 people live in the Northwest Arctic Borough, a Native American region that straddles the Arctic Circle, with rich fish and game resources, and the largest zinc deposit in the world. Its Inupiat Eskimos are a very cohesive people.

Economists describe this vast 36,000-square mile region as "one of the most economically and culturally unified political subdivisions in the state."[120] It is the second largest borough in Alaska and has the largest concentration of Alaska Natives.[121] The Arctic's Inupiat residents share a common language, common customs, and value their traditional subsistence lifestyle.

Northwest Arctic Inupiats are organized under the Alaska Native Claims Settlement Act into the NANA Regional Corporation. Ten of the borough's 11 village corporations have merged with NANA, which plays an increasingly significant role in the region. The Northwest Arctic Borough was incorporated in 1986.

The population of the region fluctuated little during the study period, growing about 2.4 percent annually since 1980 when population statistics were available. Most of the growth has been from births. Kotzebue, with nearly 3,000 residents in 1998, is the largest of the 11 communities and the only one to retain a village Native corporation. The two other communities in this study, Noorvik and Kiana, have much smaller populations. In 1998, the Department of Labor indicated 598 people lived in Noorvik, an increase of 67 residents since the 1990 U.S. Census. Kiana's population increased from 385 to 402 during the same period.

The region has one of the youngest populations in the state, with a median age of 23 years, almost 10 years younger than the statewide median age. Nearly one-third of the population is school-aged, 11.5 percent are under age 5, and more than 51 percent are of adult working age. But there are very few jobs for the adults in the region: The average unemployment rate in 1997 was over 16 percent. In 1992, it reached 20.8 percent.

1996 personal per capita income was less than $18,400, compared to about $24,600 statewide.[122] Personal income, however, has increased 56 percent in the region since 1984, when it averaged $11,822, compared to $17,550 statewide.[123]

In 1984, the Department of Labor reported that one in five Alaskans lived below the poverty line, many of them in rural Native villages. The Inupiat on the North Slope, along the Prudhoe Bay oil fields, ranked at the top of the state's personal income level in 1984, with an annual average personal income of $26,077. By contrast, personal income in the Northwest Arctic ranked 19th out of 23 census areas of the state.

B. Borough Employment

Few full-time year-around jobs are available in the Northwest Arctic. Only Kotzebue offers a variety of employment opportunities. Noorvik and Kiana offer a few jobs in the local school, city government, local store, or Maniilaq Association.[124]

At the time of this report in May 1999, the public sector was the region's largest employer, providing nearly a third of the jobs. Most of those were located in Kotzebue, in federal, state and borough government offices, and the Northwest Arctic School District. The regional nonprofit social service agency, Maniilaq

[120] Neal Fried and Brigitta Windisch-Cole, "A Profile: Northwest Arctic Borough," *Alaska Economic Trends*, Alaska Department of Labor, January 1998, p. 3-9.

[121] Inupiats comprise 87 percent of the borough population; by contrast, Alaska Natives are less than 17 percent of the state's total population.

[122] Fried and Windisch-Cole, "A Profile…"

[123] Greg Huff and Judy Hallanger, "Income Measures," *Alaska Economic Trends*, Alaska Department of Labor, September 1987, p. 11. Before the borough was organized, the region was called Kobuk.

[124] Alaska Department of Labor statistics, 1998.

Association, was the second largest employer, operating a senior citizens center, women's shelter, and the Regional Hospital in Kotzebue,[125] as well as drug and alcohol abuse programs and public health clinics in each village.

The Kikiktagruk Inupiat Corporation (KIC), Kotzebue's village corporation, had become the fifth largest employer in the region and the third largest in the private sector. The NANA Regional Corporation accounted for one in five jobs in the borough.

Employment increased or declined seasonally, sometimes fueled by federal and state government spending on construction projects. While these jobs and projects usually give the local economy a temporary boost, that is not always the case in rural Alaska. Depending on the project, local residents may not be hired and more highly skilled workers will be brought in from outside the region. For many years, full and part-time employment in the Northwest Arctic seemed to have little to do with public expenditures, as the following table illustrates.

Table IV.1 compares trends in state capital project funding with employment trends in the NWAB. Capital project appropriations were wildly variable during the 1975 to 1995 period. The largest single-year increase in employment occurred in 1981 (when employment jumped 20%), during the peak capital appropriation years. However, employment did not drop off as appropriations declined. In fact, as a result of development of the Red Dog Mine, employment continued to climb slowly through the 1988-95 period. The recession that hit urban Alaska so hard in 1987 included a sharp drop in capital appropriations for the NWAB but total employment dipped an insignificant 0.3 percent (seven jobs were lost). (See Volume 2, Part 3 for additional employment data and analysis.)

[125] Maniilaq operates the hospital on contract with the Indian Health Service.

Table IV.1

Northwest Arctic Borough
Capital Budget Appropriations and Total Employment, 1975 - 1995.

Fiscal Year	General Fund*	Other Funds**	Total Funds	Total Funds Percent Change	Total Employment***	Percent Change
July 1-June 30	(nominal dollars) (000s)					
1975	$412	$0	$412		1,450	
1976	1,043	6,452	7,495	>200%	1,468	1%
1977	30	0	30	-100	1,659	13
1978	13,202	16,193	29,395	200	1,565	-6
1979	1,308	75	1,383	-95	1,520	-3
1980	24,676	8,299	32,914	200	1,609	6
1981	25,431	2,340	26,461	-20	1,937	20
1982	9,681	0	9,681	-63	2,047	6
1983	15,952	0	15,952	64	1,866	-9
1984	20,135	3,280	23,415	47	1,956	5
1985	5,662	8,820	14,482	-38	2,023	3
1986	10,636	4,235	14,871	3	2,075	3
1987	2,111	2,610	4,721	-68	2,068	-0.3
1988	5,524	4,150	9,674	105	2,155	4
1989	4,502	3,900	8,402	-13	2,317	8
1990	1,940	5,370	7,310	-13	2,560	10
1991	4,756	510	5,266	-28	2,594	1
1992	6,129	4,725	9,880	88	2,623	1
1993	6,844	20,019	26,863	172	2,641	1
1994	1,888	2,463	4,351	-84	2,828	7
1995	1,965	4,592	6,557	51	2,873	2

* The general fund includes oil revenues; spending from it is unrestricted.
** Includes federal funds. See Volume 1, Table II.B.1
*** Includes full and part-time; workers may hold more than one job. Source: USDC, BEA. See Volume 2, Part 3.

Region wide, the number of construction jobs increased from 2 percent of employment in 1975 (22 jobs) to 10 percent, 183 jobs in 1981. When construction began on the Red Dog, the number of construction jobs peaked at 73, falling to 25 jobs in 1994. In Kotzebue, construction averaged 3 percent of total employment, with negligible jobs reported in Kiana and Noorvik for the entire 20-year study period.

The transportation industry grew from 173 jobs in 1975, to about 263 in 1995. Red Dog Mine development contributed to that increase, as well as state and federal transportation revenues. During the oil boom of the early 1980s, airstrips were built in more and more rural communities, including the Northwest Arctic (See Volume 2, Part 1). This resulted in at least one or two jobs in each community, as small air carriers hired local representatives, and a city government employee would oversee airstrip operations. Most transportation sector employment was in Kotzebue, the regional hub for air, ocean and river transport companies.

The retail sector was also greatest in Kotzebue, which had an Alaska Commercial Co. store, a hardware store, hotel and restaurants, and other retail services found in small communities. Ten percent of all Kotzebue jobs in 1995 were in trade. Region-wide, retail grew two and a half times in 20 years, from 124 jobs in 1975 to 309 jobs in 1995 -- about 12 percent of all employment. Kiana and Noorvik each had a small grocery and general merchandise store run by the village Native corporation.

Kotzebue offered some work in commercial fishing and processing, sometimes attracting summer employees from surrounding communities. Some Northwest Arctic residents found seasonal employment in other regions of Alaska fighting forest fires. (See Volume 2, Part 3).

With so few jobs, the 1986-87 recession was hardly noticed in the region. KIC, NANA, and state spending generally created employment increases. The latter two were more susceptible to booms and busts in the oil industry, but the impact was hard to measure. Even as employment grew throughout the study period, subsistence activity remained an important source of non-cash income, helping offset the high cost of living and high unemployment.[126]

[126] Fried and Windisch-Cole, "A Profile…," p. 7.

C. NANA Regional Corporation

The NANA Regional Corporation businesses generated about 10 percent of all personal income in the Northwest Arctic Borough in 1998.[127] The corporation wholly owned some subsidiaries and was a business partner in several joint ventures within and outside the borough, primarily in Anchorage.

The Red Dog Mine, a joint venture between NANA and Cominco Alaska, Inc., was the single largest employer in the region. A majority of its employees were NANA shareholders. Red Dog was the largest zinc concentrate producer in the world.

"Red Dog is our crown jewel for our future," said Joe Mathis of NANA Development. "It's providing high quality, high paying jobs for the region; it's clearly our future."

But Red Dog could not yet replace the oil industry as the corporation's more significant business. Since 1975 NANA has been a contractor on the North Slope, operating a camp facility at Deadhorse, an electrical utility, an oilfield service company, a security service, and maintenance and janitorial services. NANA is one of the few Native corporations not in the pipeline corridor that invested in the oil industry.

The corporation's focus is Native hire and Alaska hire, according to Mathis. "NANA's philosophy has always been to give them (shareholders) a job and not a dividend," he said. "I don't know that we've ever hired people from out of state."

NANA may well provide the region the most direct impact of the oil industry, but not necessarily in the form of jobs. How many shareholders worked on the North Slope and actually lived in the region was not known. Since the Red Dog mine opened, NANA had been hiring Northwest Arctic shareholders to work at the mine and not on the Slope. Anchorage and Fairbanks had become the hiring points for the oil industry operations because NANA provided transportation from those cities. Approximately three village residents worked for NANA Oilfield Services, and two worked in a North Slope maintenance

[127] McDowell Group, *The Economic Impacts of NANA Regional Corporation*, prepared for the NANA Regional Corporation, May 1998.

operation, on a two-week on / two-week off schedule.

After NANA started operating on the North Slope, village shareholders tended to move to Anchorage. The same trend was apparent for Red Dog employees, who could more easily board the Cominco jet at Anchorage International than fly from their Northwest Arctic village.[128]

"Once people start getting higher incomes, use flush toilets and get a taste of movie theaters, McDonald's, Costco and Sam's, they say, 'I'd rather live here,' " Mathis said.

A cursory look at demographic data for the 1990s indicated a consistent flow from borough communities to Anchorage, according to state demographer Greg Williams. Using Permanent Fund Dividend applications, the average net loss was 46; IRS data, however, pinpointed the average net loss at 34. Williams warned against trying to attribute the movement out of the village to particular reasons. He noted a reverse flow in 1996-97, when some residents returned to the borough to live.[129]

A January 1993 Minerals Management Service study found that a high proportion of North Slope Natives also migrated from their village to Anchorage or Fairbanks after they got jobs in the oil industry. The study indicated movement back and forth between the cities and their village, primarily for subsistence.

According to the report, less than one percent of the 6,000 workers at Prudhoe Bay and Kuparuk were North Slope Natives.[130] The study did not indicate what percentage of workers on the Slope were Alaska Native, and the Department of Labor did not track employment by race.[131] With several Native corporations like NANA R involved in joint ventures on the North Slope, it was expected that employment in the oil industry had increased for shareholders.

D. Historical Trends

Looking back, Native employment during pipeline construction was quite high overall, but short-term. Throughout the entire construction period, more than 5,770 Natives were hired to work on the pipeline between 1974 and 1977. A study by the Institute of Social and Economic Research showed that 51.5 percent of all Natives hired worked for eight weeks or less.[132] Most Natives worked in low or non-skilled jobs and did not make large sums of money. For the half working about eight weeks, the gross pay was less than $8,000. Slightly more than 37 percent earned $4,000 or less.

The further removed the Native corporation was from pipeline recruiting centers the fewer the number of shareholders working on the pipeline. The NANA Regional Corporation recruited 379 shareholders, 6.6 percent of all Native workers on the line. According to ISER, 28 workers came from Kiana, 130 from Kotzebue, and 36 from Noorvik. Many of the Natives hired held more than one job during the construction phase. For example, the NANA workers held an average of 2.5 jobs during their employment.[133]

The study was representative of the first direct impact of oil development on Alaska Natives, and the first time that NANA Inupiats worked in the industry. These Natives left their village and traveled to the North Slope for pipeline employment, disrupting their families and their subsistence activities. While

[128] Interview, Hilda Haas, NANA human resource director.

[129] Interview, Greg Williams, demographer, Alaska Department of Labor.

[130] David Marshall, "Migration and Oil Industry Employment of North Slope Alaska Natives, " Minerals Management Service, Department of Interior, Alaska Region, January 1993.

[131] The author suggested that turnover was high due to subsistence and work attitudes. Native employees tended to be less tolerant of routine than non-Natives and found the workplace an artificial environment. When subsistence harvesting time arrived, many quit to return to their village and participate in the traditional and cultural harvest.

[132] Larry L. Naylor and Lawrence A. Gooding, "Alaska Native Hire on the Trans-Alaska Oil Pipeline Project," *Alaska Review of Social and Economic Conditions*, Institute of Social and Economic Research, University of Alaska Anchorage, February 1978.

[133] Naylor and Gooding, p. 19. The study indicates a number of reasons for termination, ranging from layoff to high absenteeism and alcohol problems. Quitting a job to participate in subsistence activities did not appear to be a reason. Many Natives cited homesickness and feelings of isolation as reasons for leaving their job. Employment counselors suggested the camp environment, job regimentation, an inability to adapt to the 10-hour day, and poor use of Native workers by employers were problems. The report noted that unions hiring Native workers did not have much understanding of the Native culture. The study concludes: "…we still know relatively little about how the experience affected human lives…In short, the experience of Native hire has primarily produced more questions than answers, especially concerning its Sociocultural and economic impacts."

employment was short, wages were certainly much more than pre-pipeline earnings, which would have had a major effect on most families. The study suggested that once the villagers returned to their homes, they had learned few skills that would adapt to their current lifestyle.

The oil industry was directly involved in the Northwest Arctic for a brief period, exploring the Chukchi Sea for deposits. The impact of oil on the region and employment was negligible, however. The McDowell Group study team found little evidence of hiring, or oil company contributions to the nonprofit private sector, especially outside of Kotzebue. (See Volume 2, Part 2). The companies using the airlines and barges during exploration may have temporarily boosted employment, but did not lead to any permanent employment.

E. Government Spending

Kiana and Noorvik were representative of most Northwest Arctic villages, where jobs were few and the traditional way of life was very important. Public sector jobs were mostly in city government and the local schools. In the private sector, Maniilaq ran a public health clinic in each village, the local store employed several residents, and the village Native corporation offered some work and youth programs.

Each community in Alaska gets state grants through municipal assistance and revenue sharing, which primarily funds government programs and services. (See Volume 1). In rural Alaska, where there is no tax base, municipal assistance and revenue sharing have been very important to maintaining services. Both programs grew steadily from 1975 to 1992. Also during the oil boom years the state started the Power Cost Equalization program, a subsidy to keep energy costs affordable in rural Alaska.

With the decline of oil revenue to the state's treasury, the Alaska Legislature continually reduced these assistance programs in the 1990s and were contemplating their elimination. Eliminating the programs would have tremendous impact on rural households. In communities like Noorvik and Kiana, the state heavily subsidizes the cost of water, sewer, fuel and electricity. Rural communities would have to raise revenues on their own, such as user fees or a sales tax.

It is likely the public facilities infrastructure in rural Alaska would fall into disrepair due to the limited abilities of communities to raise revenues. Former Nome Rep. Jack Fuller recognized this in 1985, when that Legislature authorized five years of enormous funds that enabled rural villages to build public facilities. Fuller acknowledged that the communities would probably not be able to financially support the facilities when oil revenues declined, and that the Legislature tacitly understood this.[134]

During the oil boom, much of the building of infrastructure in the Arctic was fueled by government spending, due to high oil revenues to the state, and federal assistance. It was also based on need. Alaska's rural areas needed infrastructure such as housing, water and sewer, airstrips, community buildings, schools, electricity. The Northwest Arctic received its share of these kinds of capital projects, but certainly not enough to "put the honey bucket in the museum" or provide adequate housing for everyone who needed it.

F. Summary

The impact of the oil industry in the Northwest Arctic comes to most in the form of a dividend check. The Alaska Permanent Fund pays each qualified resident an annual dividend. When the money comes in, the cash flows out as many village residents travel and spend.

NANA Regional Corporation shareholders also share in the oil wealth generated from the corporation's contracts with the industry. From 1990 to 1997, NANA paid $18.4 million in dividends to shareholders, an annual average of $2.44 per share. The impact is greatest in the Northwest Arctic Borough, where two-thirds of NANA shareholders reside. Dividend payments to shareholders in Noorvik were $1.4 million, 12 percent of the total; Kiana shareholders realized 8 percent, $1 million.[135]

Between 1993 and 1997, NANA shareholder equity gained 39 percent, rising by nearly $10 million in 1997. Gross revenues increased 56 percent and the corporation's investment portfolio grew 61 percent in the same five-year period. Much of the growth was attributed to tremendous performance in the stock

[134] Tim Holder, Minerals Management Service.
[135] McDowell Group, *Economic Impacts*…., p. 14-15.

market. Royalties from the Red Dog Mine were continuing to increase; income from operations and partnerships totaled $3.1 million in 1997.[136]

As the oil industry declines in Alaska, NANA will depend more on other ventures for its profits. The Red Dog Mine, the "crown jewel" of the region, will soon likely supplant the importance of NANA's joint ventures on the North Slope.

For the most part, the Northwest Arctic Borough is "a ways away from the pipeline," making the effect of oil development on households in the region hard to assess.[137]

[136] Ibid., p. 18.
[137] Pete Schaeffer, president, Kotzebue IRA.

Appendix A

Key Informants

Key Informants

Azzara, Rene, Administrative Assistant, University of Alaska, Mineral and Petroleum Training Services.

Brennan, Tom, oil industry historian and communications consultant, Anchorage.

Carter, Reba, Wright Management Consultants, Anchorage.

Cowan, Bob, owner, S & S Engineering, Anchorage; former ARCO engineer.

Coward, Karen, Alaska Support Industry Alliance.

Evans, Jim, Kenai Operations Manager, Air Liquide.

Gallagher, Jerry, Manager, Government Relations, ARCO.

Gallagher, Tom, Assistant Director, External Affairs, BP Amoco.

Haas, Hilda, Human Resource Director, NANA Development Corp.

Hadland, Jeff, Research and Analysis, Alaska Department of Labor.

Haugen, Dave, Lynden Inc. Vice President; former Alyeska Pipeline Service Co. employee.

Holder, Tim, Contracting Officer's Technical Representative, Minerals Management Service, U. S. Department of the Interior, Alaska Outer Continental Shelf Region, Anchorage; former Coastal Management Planner, City of Nome.

Kahklen, Craig, Division of Public Assistance, Alaska Department of Health and Social Services.

MacDowell, Dave, Director of External Affairs, BP Amoco.

Mathis, Joe, Manager, Business Development, NANA Development Corp.

Mueller, Tracey, VECO Corp., Anchorage.

Packham, Don, Human Resources Integrator, BP Amoco; former BP Human Resources Manager, Anchorage.

Parker, Rebecca, Providence Alaska Medical Center, Anchorage; former ARCO Director of Community Relations.

Porter, Larry, Superintendent, Phillips Petroleum Company, Kenai.

Rogers, George, Ph.D., Alaska economist, Juneau.

Sinz, Roxanne, Public Relations Consultant, Unocal, Anchorage.

Slack, Jamie, Vice President and Manager, Personal Services, VECO Corp., Anchorage.

Springer, Henry, Associated General Contractors of Alaska.

Stamps, Bill, Cook Inlet Area Manager, Peak Oilfield Service Company.

Walder, Stephanie, Vital Statistics, Alaska Department of Health and Social Services.

Webb, Bill, Webb's Consulting and Management Services, Inc., Anchorage; former board president, general manager, Alaska Support Industry Alliance.

Williams, Cathy, General Manager, Marketing and Customer Service, Alaska Supply Chain Integrators, Anchorage; former BP supply manager.

Williams, Greg, State Demographer, Alaska Department of Labor.

Willis, Karen, Wright Management Consultants, Anchorage.

Windisch-Cole, Brigitta, Labor Economist, Alaska Department of Labor, Anchorage.

Appendix A

Key Informants

Key Informants

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Economic and Social Effects of the Oil Industry in Alaska 1975 to 1995

Volume 2, Part 5

Mitigation Options

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INTRODUCTION

A. Introduction to Volume 2, Part 5

Alaska has been a unique test tube during the period 1975-95. Few other democracies have been able to fund their government with so little taxation of their households and local businesses. In real dollars, 86 percent of the State's general fund appropriations during this period came from petroleum revenue.

The State's uniqueness vividly stands out in the Permanent Fund Dividend program, as well as the Longevity Bonus and a slew of subsidies. No other state government has paid its citizens just for being residents. Most Alaskans receive more in dividends than they pay in State taxes and fees. In fiscal year 1997, Alaska was the only state that had neither a state individual income tax or sales tax[1]. Alaska also has practically no state general obligation debt. Only $2.3 million was outstanding June 30, 1999.

What have oil revenues done to the economy and government spending? How did State and local government know how much spending was enough? Presumably, if programs did not measure up, legislators would find ways to pass on oil revenues to citizens rather than let the State use them.

In fact, this did happen. The creation of Permanent Fund dividends, the longevity bonus program, rural electricity subsidies, home mortgage and business loan subsidies, and tax exemptions and renters' payments provided either direct payments to individuals or reductions in personal or business expenses. And, much of the State aid to municipalities flowed through to taxpayers' pockets as local taxes were reduced.

Even the elevated State spending on local capital projects benefitted local taxpayers. Relatively less municipal general obligation debt, and local taxes to pay the debt, were required. Still, debt per capita levels increased.

A main cause was the State's school debt program, which raised reimbursement to municipalities from the original 50 percent of debt service in 1970 to 90 percent by 1982, at the height of the State spending boom. This bargain was hard to resist.

When the portion of debt to be reimbursed by the State is factored out, municipal GO debt levels are substantially less. For example, in 1985 municipal GO debt, net of the reimbursable portion, was only $1,386.4 million, 2/3 of total debt of $2,084.1 million. This knocks 1985 per capita debt down to $3,530.

[1] State Government Tax Collections: 1996-97, U.S. Bureau of the Census.

TABLE O. 1

Alaska Municipalities
General Obligation Debt Per Capita

Calender Year	Municipal GO Debt ($ Millions)	Municipal Population	Debt Per Capita ($)	Real Debt Per Capita (State FY 1995 $)	Real Debt Per Capita Net of State Reimbursement (State FY 1995 $)
1975	351	325,749	1,079	2,734	NA
1976	421	342,243	1,230	2,813	NA
1977	512	378,922	1,371	2,937	NA
1978	545	389,516	1,400	2,829	NA
1979	768	403,806	1,903	3,508	NA
1980	827	377,028	2,194	3,659	NA
1981	1,091	436,066	2,502	3,827	NA
1982	1,316	381,789	3,447	4,910	NA
1983	1,619	436,937	3,706	5,162	NA
1984	2,106	488,488	4,311	5,779	3,908
1985	2,084	515,581	4,042	5,283	3,530
1986	2,674	540,653	4,945	6,262	4,668
1987	2,455	550,385	4,460	5,642	4,152
1988	2,170	550,446	3,943	4,962	3,529
1989	1,967	525,450	3,743	4,661	3,323
1990	2,002	524,573	3,817	4,582	NA
1991	1,855	550,089	3,372	3,811	NA
1992	1,730	558,655	3,096	3,369	2,450
1993	1,814	574,026	3,160	3,326	NA
1994	1,760	583,510	3,016	3,089	NA
1995	1,902	599,156	3,174	3,174	NA

Sources: Alaska Taxable, Alaska Department of Community & Regional (DC&RA) Affairs and personal communication from DC&RA Division of Municipal and Regional Assistance. Alaska Public Debt, Alaska Department of Revenue.

Would government spending have been even less if all oil revenue had gone to citizens in the first place? The answer is apparent from the record of this 20-year period. Giant capital improvement programs came to a halt in the mid-80's with the crash in oil prices. 10 years later, declining production and continuing erosion of real oil prices are squeezing State spending on operations. The point is not yet in sight at which the body politic appears willing to step up to the plate and pay taxes for the current roster of State programs.

The heights and depths of this roller coaster ride may or may not be seen again. The impact of oil production was, and in the future still could be, magnified in Alaska compared to any other state. Alaska had, and still has, a tiny population and gross state product compared to any other state contiguous to the Outer Continental Shelf (OCS). Yet, Alaska's potential OCS petroleum resources are vastly larger than any other state.

B. Scope of Work

This report tries to shed some light on two questions. What are the consequences of petroleum development for:

- economic stability in Alaska; and,
- net economic benefits to the state and the nation?

The report looks at potential losses in economic benefits from four kinds of allocations inherent in the distribution of petroleum revenues to State and local government:

- temporal allocation—inefficiencies from the timing of revenues: booms and busts;
- public sector allocation—inefficiencies in dividing revenues between public and private spending;
- geographic allocation—inefficiencies from channeling the revenues into a specific geographic region, the State of Alaska; and,
- savings allocation—inefficiencies in dividing revenues between spending and saving.

These are inefficiencies in a macroeconomic sense. In other words, with a different allocation of petroleum revenues, the total value of goods or services received could have been greater. These are not necessarily inefficiencies in the sense that actual goods and services received could have been obtained with less revenue. But, in several instances there clearly was such waste.

In terms of an input-output model, people usually think of efficiency as achieving a given set of outputs with the minimum amount of inputs. Here, we are concerned with maximizing output (over time) with a given set of inputs.

In gauging petroleum's impact on economic stability and benefits, the report looks at the nature of petroleum development and revenues. It then assesses the likely impact of OCS revenues, in comparison to oil revenues during 1975–95.

The report then addresses ways to mitigate the impacts. These take two approaches to the economic stability problem. One is to make natural market adjustments to booms and busts work better. The other is to flatten out the revenues or their spending over time.

Finally, the report examines inefficiencies in the allocation of petroleum revenues to the public sector and proposes ways these might be overcome. These proposals focus on deposit of petroleum revenues in a permanent fund, with income paid directly to Alaska residents. The proposals are briefly analyzed with respect to the geographic and savings inefficiencies produced by petroleum revenue.

Chapter I discusses the nature of OCS economic impacts and the economy's response, unaided by any mitigation efforts. Chapter II discusses the probable scope of future OCS impacts. Chapter III discusses ways to soften the direct impacts of development. Chapter IV discusses impact mitigation as a concern in the legislative history of OCS leasing. Chapter V deals with government spending and what might be done to mitigate the problems associated with it.

CHAPTER I:
IMPACTS ON THE STATE ECONOMY

Alaska's marriage to the oil industry introduced volatility into the economy that was more dramatic than anything since the Korean War build-up from 1950 to 1953. The extraordinary fluctuations of the Prudhoe era were a product of swings in:

- direct industry spending on oil development;
- oil prices;
- State spending of oil revenues; and,
- accelerator effects of investment spending.

When these factors are in phase, they reinforce each other and create marked crests and troughs in the economy.

During the early 1980's, all four factors were in an upswing—the last three, incredible ones. The Iran-Iraq war allowed OPEC to almost triple prices between 1978 and 1982. OPEC average F.O.B. prices peaked at $36.61 in March 1981, up from $13.23 in August 1978.[2] Real State general fund appropriations doubled in one year, from fiscal year 1980 to 1981, and increased another 25 percent in 1982.

1. Flooring It

These tremendous leaps would by themselves produce extraordinary accelerator effects on the Alaska economy. An accelerator effect is the additional economic activity that arises from investment spending to maintain a steady ratio of capital stock (infrastructure) to output (economic activity).

But, the State put the pedal to the metal when it capped AHFC mortgage rates at 10 percent in 1980, in the midst of rampant inflation. The result was an interest rate subsidy of 6 percent that produced a 1983 peak in residential building permits that was over five times the number of permits issued in 1980. This poured the coals on a construction sector already stoked by State and business investment spending.

The accelerator effect is the result of expectations. Business, consumers, and government will increase their investment spending on construction and plant and equipment if they anticipate growth in the economy. Of course, that investment spending adds to the growth. It can also raise expectations about subsequent growth. Thus, the accelerator effect is just as it implies. It can magnify, and even outrun, increases in economic activity.

Unfortunately, accelerator effects also take place when the economy contracts. Investment also contracts. Thus, a shrinking economy can pick up speed downhill, if there are not other events to stop the decline or at least dispel pessimistic expectations.

2. Oil Price Lever

Oil prices' leverage on profitability and wellhead value in Alaska can either magnify or temper booms and busts from industry or government spending. It depends on whether the price movements are in, or out, of phase with planned spending.

Changes in prices can affect the level and pace of oil company spending on exploration and development. The biggest effect of prices on existing production is to either delay or hasten the shutdown date.

But, industry spending has been less sensitive to oil price fluctuations than Alaska state government spending. This is because the state has chosen to depend heavily on oil revenue and prices on a current basis, rather than rely on its pre-Prudhoe tax structure or save all oil revenue. Oil companies' long lead times for bringing new production on line requires that they plan and spend for development based on longer-range price expectations, rather than current market prices.

Oil price swings have a particularly potent effect in Alaska. High capital and operating costs for production squeeze wellhead profit margins from below, while high transportation costs from Alaska to refinery markets squeeze wellhead values and profit margins from above.
As a result, wellhead values and profits can soar or collapse with price movements that are of less consequence to producers elsewhere.

[2] Historical Monthly Energy Review 1973–1992, Energy Information Administration, U.S. Department of Energy, p. 252.

Of course, the incredible size and oil flow rates of the main reservoir at Prudhoe Bay—Sadlerochit—has provided a profit margin that has weathered all the oil price gyrations to date. But, as it enters the later stages of its producing life, its profits will be more at risk to price changes. Development spending on, or production of, smaller fields and those with low rates of flow can be traumatized by low oil prices. To an extent, the State's economic limit factor in its severance tax offsets some of the slimmer profitability for declining, small, and less prolific fields.

Oil prices are set by supply and demand at the refinery markets. But, Alaska's primary government petroleum revenues—royalties and severance taxes—are based on wellhead values. In Alaska, these are substantially less than refinery prices because of the high transportation costs to market, namely Trans-Alaska Pipeline System (TAPS) and tanker tariffs.

From fiscal year 1979 to 1981, refinery prices for Alaska North Slope (ANS) crude increased 138 percent, from $14.35 to $34.10. But, ANS wellhead prices increased 250 percent, from $5.88 to $20.58. The leverage created by transportation costs made wellhead prices almost twice as volatile as market prices at that time.

3. Boom

OCS development can directly impact the state economy by industry spending on exploring, developing, and producing oil, or indirectly by government spending of OCS revenues. Some government expenditures of OCS revenues may be necessary to provide the public infrastructure and services needed for the increased economic activity.

The classical effects of a boom include rapid growth in population, employment, and—among those in the affected industries—real wages and business income. But, the sudden surge in demand created by the spike in people and economic production causes rapid inflation. This can erode the real wages and incomes of those not participating in the boom and increase income inequality. Unemployment may increase if enough excitement and slow times elsewhere launch a wave of immigration. And, the increased dependence of the economy on the booming sector increases the risks of widespread distress from a bust.

Government revenues increase with the additional economic activity and construction, but,

> "…requirements for social infrastructure are large, and the "boom town" or "boom region" ordinarily finds it difficult to finance public services, since requirements for infrastructure generally precede the flow of boom-related taxes (c.f. Alaska in 1974). The quality of life in the affected region, therefore, declines until revenues provided later in the boom period allow extensive infrastructure construction. "[3]

Left to its own devices, a booming economy will eventually right itself. Inflation will restrain demand and encourage supply. Inflation will erode the purchasing power of dollars coming from outside the state economy—such as oil revenues—and the sectors left behind. Higher wages in affected sectors will attract immigrants to the state and cause others already in the state to shift employment, undergoing training if necessary. The additional economic demand of people and businesses will attract capital investment and entrepreneurial talent. But, all this may not occur before speculative fever has exaggerated the boom—and possibly a subsequent bust.

4. Industry Booms

OCS development will not likely directly trigger a boom in Alaska. The remoteness of most potential OCS development would lead to workers staying in oil company camps near the work site and commuting from major population centers. This enclave development has been the model to date for North Slope oil development. Workers typically work two weeks on site, followed by two weeks off. Thus, much of the economic impact would shift to areas that can more easily absorb it, principally Anchorage and Kenai.

In camps, services that would ordinarily be provided by municipalities either may be provided by the oil company—e.g., water and sewer, security, and transportation—or are not required, such as education, because of the absence of families.

Only in Cook Inlet would workers be likely to reside in municipalities. But, given the depressing effects of declining production in the area, OCS development would only help sustain current economic activity,

[3]"The Effects of In-State Investment: Lessons from Oil-Fired Development in Other Parts of the World", Malcolm Gillis, Harvard Institute for International Development, p. 40, in The Trustee Papers, Alaska Permanent Fund Corporation, March 1982.

rather than overheat it.
Multiplier effects of industry spending may boost some outlying regional centers, but much of it will concentrate in Anchorage. Given the larger, more diversified Alaska economy of today, compared to 25 years ago, such secondary spending should not disrupt local economies.

Alaska's big boom and bust as a result of direct oil industry activity was associated with construction of TAPS. It is not clear that another pipeline the size of TAPS would ever be necessary to accommodate OCS production. Much of any North Slope OCS production would likely flow to TAPS through a network of feeder pipelines that would be gradually constructed. About 90 percent of the conventionally recoverable oil in the Alaska OCS resides in the Chukchi and Beaufort shelf provinces adjacent to the onshore Arctic Alaska province.[4] Current TAPS throughput, at about 1.2 million barrels per day (MBPD), is well below capacity. Throughput peaked at 2.0 MBPD in fiscal year 1988 and is projected to decline to 1.0 MBPD in 2005.

The drilling and construction activity that went into North Slope oil field development was spread over time much more than TAPS construction activity. It was TAPS that produced Alaska's legendary oil construction boom. Field development occurred on top of TAPS construction and contributed to the boom. But, without TAPS, the largest construction project in the world to that point in time, Prudhoe Bay development would have been a much more sedate affair.

TAPS was constructed on an accelerated schedule to meet start-up of Prudhoe Bay production. It had been delayed a number of years by Alaska Native land claims. The waste and lack of cost control was notorious. In the Report to the Alaska Pipeline Commission by the Commission's Special Counsel, Terry F. Lenzner, the Special Counsel's conclusion stated:

> "Of the $8 billion spent to construct the Trans-Alaska Pipeline System, $1.5 billion represents excessive expenditures—principally as a result of mismanagement and indifference to project costs."[5]

5. Industry Busts

Oil and gas activity in the OCS can directly produce busts at the end of the exploration, development, or production stage. Generally, exploration involves smaller amounts of expenditures, more spread over time. It is less likely to produce a boom or bust.

In the early years of an oil field's life, as development activity nears completion, there can be a post-construction bust. This is particularly true because petroleum development is highly capital intensive. Construction employment is likely to lead the downturn and suffer the most.

The end of TAPS construction produced a bust in the construction sector. Construction employment fell from 33,000 in 1976 to 13,000 in 1979, a 60 percent drop. But, total Alaska employment declined from 243,000 in 1976 to 237,000 in 1977—a modest 2.5 percent decrease of 6,000 jobs.

Population fell less than employment. It only declined 1.5 percent, from 418,000 in 1977 to 411,600 in 1978. Many of those leaving the state were single construction workers. Many of those coming in to fill jobs in other growing sectors had families. And, natural increase (births – deaths) offset some of the job losses.

6. Industry Decline

In the long-term,

> "…as oil resources are depleted, large numbers of the now aging population are left jobless and are, in any case, not well adapted to the economic conditions of the post-boom period. Further, the social infrastructure (schools, roads, hospitals, etc.) built up during the boom period is now

[4] Endowments of Undiscovered Conventionally Recoverable and Economically Recoverable Oil and Gas in the Alaska Federal Offshore, As of January1995, Kirk W. Sherwood, James D. Craig, and Larry W. Cooke, U.S. Department of the Interior, Minerals Management Service, Alaska OCS Region, May 1996, p.1.

[5] "The Management, Planning and Construction of the Trans-Alaska Pipeline System", Terry F. Lenzner, August 1, 1977, Executive Summary.

excessive (relative both to economic activity and to the post-boom population). Underutilized, this infrastructure becomes accordingly expensive to operate and maintain."[6]

As economic activity declines, property values decline, and government sales, property, or income taxes decline.

Alaska is now beginning to feel the effects of depletion of its principal producing fields. Record low oil prices and a resulting wave of corporate consolidations have accentuated the economic cutbacks in the oil industry. The proposed merger of BP Amoco and ARCO would further depress the direct employment and business spending of the industry in Alaska.

But, the isolation of lot of the production workers in oil field camps is sparing Alaska communities some of the agonies of slow death. Also, the rather gradual retrenchment is providing time for economic growth in other sectors to alleviate some of the classical problems of a declining industry.

7. Government Spending

Petroleum development can also cause booms and busts as a result of government spending of oil revenues. If a state's economy and tax structure is large and diverse, and OCS production is slow and steady, there is little problem. But, giant gushers in Alaska, onshore or offshore, pose major risks to the state's economy.

There are two main dangers—destabilizing the economy and squandering resources. Spending oil revenues can create or contribute to booms and busts. And, it can happen just to keep the money from burning a hole in our pocket. The resources that may be wasted by spending "mad money" is the critical OCS impact issue. What to do about these two problems is the subject of Chapter V.

8. Economic Character of Petroleum Production

In this section, we explore the economic character of petroleum production and its implications for government revenues and spending. Key economic features of petroleum production are:

- a finite, non-renewable resource,[7] whose production must eventually cease;
- a production curve that typically includes large volumes of peak production in early years, followed by a gradual decline until production ceases;
- the commodity nature of petroleum;
- the capital intensive nature of production; and,
- a global market characterized by oligopoly, including formal collusion by OPEC members and increasing cooperation with OPEC by some non-member producing nations.

The first two features produce a pattern of production revenue that generally is quite large in early years of production, and tails off until the reservoir reaches the end of its economic life.

Crude oil is a raw material. This makes it a commodity. Prices of commodoties can fluctuate for a number of reasons. They have no product differentiation or brand loyalty. Forces of nature can result in large disruptions in supplies of raw materials, as with agricultural products. Long lead times for additions to supply (agricultural growing seasons, exploration for mineral resources) can cause upward price spikes when demand exceeds supply.

The capital intensive nature of petroleum production contributes to a long lead time for incremental supplies.[8] It also makes operating costs the minor portion of the long-term costs of supply. This permits prices to collapse in soft markets, down to the level where operating costs are covered. Producers will keep producing, and competing on price, as long as prices

[6]"The Effects of In-State Investment: Lessons from Oil-Fired Development in Other Parts of the World", p. 40.

[7]Thomas Gould and some other scientists theorize that petroleum resources are a product of planetary formation of the Earth, rather than dead organic matter. They cite evidence of the replenishment of some producing reservoirs from deeper sources. If true, petroleum would be a renewable resource, though not infinitely so or necessarily on a short enough time scale to treat it as such.

[8]Though still relatively long, lead times for incremental petroleum supplies have shrunk markedly in the last two decades with technological improvements in seismic testing and modeling, directional drilling, and multilateral completions.

provide a margin over operating costs. A small contribution to recovery of capital investment is better than stopping production and having no recovery at all.

If OPEC controlled enough of the oil market and could maintain internal discipline, it could stabilize prices. But in 1998, OPEC produced 30.7 million barrels per day, only 40 percent of total supply of 75.6 million barrels per day.[9] Cheating by members on production quotas periodically causes prices to collapse, followed by redoubled efforts to limit production and partial success in supporting prices.

As with most oligopolies or monopolies, maintenance of prices above long-term costs of supply can cause swollen supplies if new producers can enter the market. The high price umbrella of OPEC has caused rapid growth of oil production among non-OPEC members. And, it provided a period of incubation for substitute forms of energy. Technological progress in alternative energy, such as solar power and fuel cells, is now being pushed forward by environmental mandates, in spite of historically low oil prices.

The economic character of petroleum production produces a pattern of revenues that typically has a large bulge at the outset, declines over time, and eventually ends. In the short-run, prices can be expected to be highly volatile. In the long-run, prices may rise or fall, depending on the speed with which a finite resource is exhausted compared to technological progress in alternative forms of energy.

The flow of revenues going to governments is even more heavily weighted toward the front-end with the use of cash bonus bidding. Thus, direct government dependence on petroleum revenue is a recipe for disaster downstream, with intermittent crises along the way.

The implications of the life and pattern of petroleum revenues, are that mega-sized finds onshore in Alaska will inexorably lead to booms and busts if the revenues are spent. Whether this holds true for OCS discoveries is examined in Chapter II.

[9] "Fall 1998 Revenue Sources Book", Alaska Department of Revenue, December 1, 1998, p. 33.

9. The 1980's Boom and Bust

Alaska has already experienced a major boom and bust as a result of Prudhoe Bay revenues. The boom and bust of the 1980's were basically products of capital spending by the State. It was abetted by OPEC's market gouging prices. But, it basically was a response to the steep ascent of revenues when the valves were opened on oil wells flowing 10,000 barrels per day.

With more money than government operating programs knew what to do with, the State spent it on capital projects. But, the flow of dollars was so great that the check valves of the capital budget machinery burst. The only way to expend billions was to jettison deliberations and dispense the money with wish lists. The political accommodation was the "1/3, 1/3, 1/3" deal. The Governor, State House, and Senate each got 1/3 of the surplus cash to spend as they wished. The two legislative bodies' portions were further allocated to individual legislators to designate the projects to be funded.

> "Things were so wild the Legislature actually voted money to build a harbor and airport on an uninhabited island (there was a real estate speculation involved)."[10]

The State only threw fuel on the fire when it subsidized highly leveraged investment in residential construction. Mortgages were available through AHFC at loan-to-value ratios up to 95 percent.

The rate of growth in spending could not be sustained. Once Prudhoe was at full production in 1980, growth in oil production stopped. When OPEC prices peaked in March 1981, price escalation stopped. This ended the colossal spurt in State revenues.

Real general fund petroleum revenues began to edge down in fiscal year 1983. But, real general fund appropriations remained at a fairly high level through FY 1985 because spending lagged behind revenues during fiscal years 1980–83. FY 1985 spending of $4,785.7 million was only about $120 million below peak real general fund spending of $4,907.2 million in

[10] "Juneau Report", BP Exploration, Summer 1997, p. 16.

1982.

Nevertheless, growth in spending commitments had stopped in FY 1982. State spending was not falling significantly. But, with no growth in government spending, zero private sector investment spending was required (except to replace depreciation and loss of existing structures, plant, and equipment). In other words, without growth in jobs, population, business, etc., no new homes, shopping centers, etc. were needed.

Thus, private sector investment spending fell hard. Acceleration up turned to acceleration down. Statewide building permits for residential units dropped 42 percent, from 11,248 in 1983 to 6,486 in 1984. Lags of up to three years between State appropriations and completion of construction projects helped sustain construction employment through December 1983. But then, construction employment began to decline, even
though State spending for the fiscal year was almost at peak levels in real dollars.

Nine months later, in September 1985, total employment turned down. By November 1985, OPEC prices had gradually eroded 41 percent in real dollars from their March 1981 peak. Between November 1985 and March 1986, they plunged 62 percent.[11] But, Alaska was already in recession.

State employment bottomed out in July 1987, with a loss of 25,300 jobs, down almost 11 percent from September 1985. But, construction employment did not hit bottom until June 1988 with a loss of 13,800 jobs, down 61 percent from the December 1984 peak[12].

By comparison, on a calender year basis, other oil states experienced milder recessions. Texas' total employment declined by 1.8 percent from 1985 to 1986. By 1987 and thereafter, Texas employment had surpassed its prior peak (1985). Louisiana also experienced a smaller loss of employment—5.8 percent from 1984 to 1987. But Louisiana did not regain its 1984 peak until 1991. Alaska had regained its 1985 peak in 1988.[13]

The severity of Alaska's recession is the product of a smaller, less diversified economy, flooded by unsustainable spending of a relative deluge of new government revenues.

[11] Historical Monthly Energy Review 1973–1992,, pp. 252–253.

[12] Statewide, seasonally adjusted total nonagricultural and construction monthly employment from Research & Analysis Section, Alaska Department of Labor.

[13] U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Information System, Total Full-Time And Part-Time Employment By Place Of Work (SA25) 1969 - 1997 for the States and Regions of the Nation, September 1998.

TABLE I.1

THE 1980'S ALASKA BOOM AND BUST

Fiscal Year	Real GF Petroleum Revenues (FY 95 $ Millions)	Real GF Appropriations (FY 95 $ Millions)	Real ANS Wellhead Oil Price (FY 95 $ per Barrel)	Construction Employment (Calendar Year)	Total Employment (Calendar Year)	Residential Building Permits (Calendar Year)
1979	1,514.3	1,995.2	10.84	12,852	240,914	2,661
1980	3,763.5	1,935.2	23.20	13,423	244,126	2,230
1981	5,054.3	3,957.1	31.48	16,734	253,145	4,514
1982	5,091.6	4,907.2	30.08	21,628	277,888	8,242
1983	4,215.7	3,966.5	26.41	27,114	297,505	11,248
1984	3,836.3	4,138.3	23.51	27,724	310,225	6,486
1985	3,585.5	4,785.7	22.70	25,590	318,073	4,029
1986	3,365.0	3,585.6	16.92	19,615	311,337	1,353
1987	1,764.1	3,033.1	8.75	15,822	311,664	731
1988	2,453.5	2,838.2	13.25	14,528	319,133	802
1989	2,291.7	2,962.0	11.66	15,161	330,885	637

Sources:

1. General Fund Petroleum Revenues from Fall 1998 Revenue Sources Book, Oil and Gas Audit Division, Alaska Department of Revenue, December 1, 1998, p. 41.
2. General Fund Appropriations from "FY79-00 Per Cap Spending" spreadsheet, provided by Brad Pierce, Office of Management & Budget, Alaska Office of the Governor.
3. ANS Wellhead Oil Prices from http://www.revenue.state.ak.us/oga/prices.
4. Real FY 95$ conversion based on Anchorage CPI-U, all items.
5. Employment from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Information System, Total Full-Time and Part-Time Employment by Place of Work (SA25) 1969 – 1997.
6. Building Permits from Bureau of the Census, Housing Authorized by Building Permits and Public Contracts: Annual (1975 through 1979) and http://www.census.gov/const/C40/Table2.

The key lesson here is that spending inherently finite, nonrenewable resource revenue inexorably leads to recession, if not a downright crash. The spurt of growth that occurs when the spending of such resources begins, cannot continue indefinitely. It is unlike the general growth in the economy. Capital formation, labor supply, and technological improvements can grow indefinitely. But nonrenewable resource revenue growth must eventually turn to contraction.

There is almost bound to be a downturn following the initial spurt of growth. It's like trying to turn a car around when you are hurtling down a road. You have to throw on the brakes to get the economy to turn and follow the downward path of production. The bigger the initial surge of production and the smaller your car (economy), the faster you are going to be hurtling down that first stretch of road. You'll have to slam on the brakes harder to keep your momentum from carrying you off the production path.

Economist Gregg Erickson neatly summed up the situation in his review of the boom and bust,

> "When the state government doubled its real per capita spending between 1980–1981, a recession became virtually inevitable…The oil price collapse was not an important cause of the recession…When state spending stopped growing, a recession resulted from falling demand for investment goods."[14]

He quotes Scott Goldsmith, economics professor at the University of Alaska's Institute of Social and Economic Research,

> "It is critically important to recognize that we brought this recession on ourselves, and that it was not primarily the result of weakness in the markets for the goods and services which Alaska sells to the rest of the world."

It is worth restating these roots of the state's greatest economic calamity. There is still a widespread myth that the 1986 crash in oil prices triggered the bust.

An example of the perpetuation of this myth is a statement by Dr. Thomas Stauffer, an international oil and finance consultant, in the Alaska Permanent Fund Corporation's recent publication, "Alaskans Speak Out on Public Policy Choices", subtitled "The Role of the Permanent Fund in Alaska's Future: The *Principles & Interests* Project"

> "Then came…another boom when oil prices peaked in the early 1980s. The ensuing bust after 1985, when oil prices collapsed, destroyed local real estate markets, bankrupted a number of the banks and sent many of the "carpet-baggers' back home. It is still a bitter memory, not just part of local lore."[15]

10. And the Bust Goes On

Having turned the corner of peak oil production, State spending now more or less tracks the downward curve of production and revenues. Though now headed in the right direction, the downward trajectory of State spending erodes State programs and is a drag on the economy. This would perhaps be tolerable if it were not for occasional collapses in oil prices that threaten to wash out any bridge to a sustainable level of spending.

In the long-run, one way or another, the state must adjust to life without oil. David Reaume, a University of Alaska Southeast economics professor, quoted at the time of the mid-80's crash, put it this way:

> "In the long run the economy is still living on borrowed time. We continue to artificially stimulate the economy by selling off the assets of the state – our petroleum wealth. How we adjust to a sustainable level of government will affect us all as surely as this recession."[16]

This is the soft landing problem, well recognized by most Alaska political and economic observers and much of the public. The biggest bust so far wrung most of the capital spending out of the State budget. If there is a next bust, the operating budget will be the casualty.

11. Is There a Problem Here?

The social and economic distress experienced by individuals thrown out of work or bankrupted by business, investment, or real estate losses in the 1980's crash was real and severe. To some extent, the losses spread throughout the population and economy. But, many real estate losses were paper losses that did not diminish homeowners' livelihoods.

More importantly, the bust paid real dividends to much of the economy. Erickson and Goldsmith comment,

> "Alaska's recession isn't likely to spawn an economic miracle, but it is eroding two longtime barriers to Alaska's development – high wages and inflated prices. Whatever one may feel about these changes – and there are many who are hurt by them – "[t]he bonus…is an increase of competitiveness of our economy both in the

[14]"The Recession, The Real Estate Crash and Alaska's Economic Prospects", Gregg Erickson, Division of Policy, Alaska Office of the Governor, March 1988, pp. 2-5.
[15]"Alaska's Nest Egg", Thomas Stauffer, The Trustee Papers, Volume No. 6, Alaska Permanent Fund Corporation, February 1999, p. 28.
[16]"The Recession, The Real Estate Crash and Alaska's Economic Prospects", p. 15.

production of basic commodities, and in the local production of support services," ..."[17]

The empty homes, see-through office buildings, and vacant retail space caused rents and the value of real estate to plummet. From a 1986 peak of $38.2 billion in 1995 dollars, the real statewide full value of assessed real property fell 45 percent to $21.1 billion in 1991. Although the owners of these properties were hurt, the reductions in residential and commercial rental rates benefited a multitude of household and business renters. On the whole, Alaska gained because a greater percentage of tenants than property owners live inside the state. The excess capacity in realty represented opportunity for many, and disaster for a few.

Even owners were largely insulated from the losses on their properties. Because so much of the real estate boom was highly leveraged, lenders absorbed most of the losses in property values. Mortgage insurance, federal housing agency guarantees, borrower refinancing and loan extension programs, non-judicial foreclosures and lender write-offs on bad loans, and FDIC-supported bank and savings & loan (S&L) mergers and acquisitions shifted losses from borrowers to lenders. Much of the lenders losses ultimately were shifted outside Alaska by the mortgage insurance and guarantees, and by bank and S&L bailouts. Of course, many Alaskan owners still lost everything. But, this was often a minor part of the total loss in property values.

The 1980's Alaska boom and bust was, at its core, a real estate boom and bust. It became a rogue wave partly because, in addition to its Alaska roots, it was reinforced by national tax, monetary, and financial institution regulatory policies. The Reagan tax reform act had created tremendous tax incentives for real estate investment. Record post-war inflation and high leverage made it deliriously profitable. And, regulatory relaxation of commercial lending restrictions on banks and savings & loans opened the financing floodgates. Nationally, as well as in Alaska, bitter medicine followed. Repeal of tax incentives, Paul Volcker's strong hand on the printing presses, and the Financial Institutions Regulatory Reform and Enforcement Act (FIRREA) threw real estate into a tailspin everywhere in the country.

The property owners and lending institutions most hurt were in many cases the most highly leveraged and engaged in the most speculative lending. From this standpoint, the cleansing fires of the real estate conflagration were a much needed discipline, both nationally and in Alaska. The number of banks and S & L's in Alaska were cut in half, dropping from 21 to 10. The survivors had been either much more conservative in their lending to start with or were severely chastened.

The excess labor supply was a spur to business formation, entrepreneurship, and diversification of the economy. It also pushed or held down wages. This made new and existing businesses more competitive and more profitable. It had a stimulating effect in most of the private economy outside the construction and finance, insurance, and real estate (FIRE) sectors. Employment in manufacturing, transportation and public utilities, trade, and services registered only mild dips or kept growing throughout the recession.

Much of the stability outside the construction and FIRE sectors is due to the continually increasing importance of the support sectors of the economy. Defining support sectors as those that sell products and services primarily to consumers, Scott Goldsmith and Alexandra Hill of ISER, found that their share of total employment during the 1980's increased from 34 percent to 39 percent. This is up from 16 percent in 1961.[18]

There are a number of reasons for the growing prominence of the support sector:

- growth in population and aggregate disposable income provides a larger market; this provides for economies of scale; the larger, more profitable markets create more competition in providing new and existing goods and services;
- the greater competition lowers prices, channeling disposable income into, and stimulating, other

[17] "The Recession, The Real Estate Crash and Alaska's Economic Prospects", p. 8.

[18] Appendix: Alaska's Economy and Population, 1959–2020, Scott Goldsmith and Alexandra Hill, Institute of Social and Economic Research, March 1997, p. 6.

markets; this increases economic diversification;

- import substitution occurs in trade and services, as well as in the manufacturing sectors; larger, more profitable markets allow local businesses to produce goods and services formerly supplied from outside Alaska; again, the Alaska economy diversifies;
- although support sector jobs may be lower paying ones, the employees more likely reside in Alaska, compared to employees in many of the state's basic industries such as oil and gas, timber, fishing, and seafood processing; so more of the salaries and wages recirculate in the economy; and,
- there is an on-going shift in the nation's economy from the manufacturing and resources sectors to services; this shift has speeded up in the last decades with the increasing globalization and computerization of the economy.

The increased role of the support sector is not as detrimental to the economy as their lower wages and salaries would imply. In a review of pulp mill closures in Southeast Alaska, Gregg Erickson pointed out that:

> "Support sector growth typically increases business incomes and the incomes of the self employed, neither of which are counted in the wage data…Personal income earned in the service sector in Sitka during the decade from 1986 to 1996, for instance, increased at more than 10 percent a year, far outpacing the 4 percent increase indicated in the wage data."[19]

Support sector growth has given the Alaska economy a resiliency. The post-TAPS construction bust, the 1980's real estate crash, and the closures of pulp mills in Sitka and Ketchikan were all mitigated by support sector growth.

> "During periods of expansion, there is a tendency for the rate of increase in the support sector to lag behind the rate of growth in the basic sector… . In periods of stability or decline, the reverse is true. After rises in the basic sector cease, the support sector employment continues to increase in order to catch up and in periods of decline in the basic sector, the support sector similarly lags behind as businesses attempt to "weather out" the bad times."[20]

All of Alaska's recent economic dislocations have been far more limited in scope, severity, and duration than anticipated.

> "The state's past boom/bust cycle has flattened because the state's economy is diversifying, according to state labor economist John Boucher."[21]

The support sector of the economy—trade, services, and FIRE—grew from 40.7 percent of total employment in 1981 to 44.3 percent in 1985, to 50.9 percent in 1997. State and local government employment shrunk from a peak of 15.3 percent of total employment in 1986 to 13.8 percent in 1997. The most volatile sector, construction, shrunk from a peak of 9.1 percent of employment in 1983 to 5.1 percent in 1997. Together, the sectors most sensitive to oil revenues—state and local government—and the sector that most feels the accelerator effects in the economy—construction— shrunk from a high of 23.8 percent of employment in 1983 to 18.9 percent in 1997. 1997 employment of 71,707 in these sectors was less than their peak of 73,676 in 1985, even though total state employment grew by 61,554 during this time[22]. The diminished role of these sectors that were the principal culprits in destabilizing the economy in the mid-1980's should temper any future oil booms or busts. As the economy continues to diversify, it should be even more resistant to future economic shocks.

[19] "Beyond Tongass Timber", Erickson & Associates, Juneau, Alaska, 2nd edition, April 1999, p. 22.

[20] "The Southeast Alaska Regional Economy and Communities: Evolution and Structure", George Rogers, ISER, 1985, quoted in "Beyond Tongass Timber", Erickson & Associates, Juneau, Alaska, 2nd edition, April 1999, p. 20.

[21] "State's Economy Slow But Sure", Mike Hinman, Anchorage Daily News, page A1, May 11, 1999.

[22] U.S. Department of Commerce, Economics and Statistics Administration, SA 25

CHAPTER II: FUTURE OCS IMPACT

The economic and social impacts of petroleum development on a regional economy are a product of the:

- natural endowment of petroleum resources—the oil and gas in the ground in the region;
- timing of petroleum development;
- economic character and pattern of petroleum production, including the effects of technology;
- world petroleum market conditions;
- state and local governments' piece of the pie—petroleum taxes and lease revenues;
- spending decisions of state and local governments with regard to petroleum revenues;
- employment and business activity generated in the region by petroleum development; and,
- size, diversity, and petroleum infrastructure of the regional economy.

The impact of future OCS development on Alaska as a whole will be nothing like the petroleum impacts of 1975–95. The main reason is that Alaska State and local governments will receive a far smaller share of gross revenues from production. This is because OCS development would occur in Federal waters. Most Alaska production during 1975–95 was on State lands. Alaska OCS production would be outside State tax jurisdictions[23]. And, without ownership of the leased acreage, the State would get none of the lease revenues, were it not for OCS revenue sharing provisions. Sections 5 through 7 of this chapter discuss the modest contribution OCS revenues would make to state finances.

Estimated undiscovered recoverable OCS resources are comparable to resources discovered to date on State lands. But, only a fraction of them are thought to be economical to produce with current technology and costs. Forecasted production from Alaska OCS lands is minimal. But, it includes production only from discovered reserves. Even with a significant find of economically recoverable oil or gas, the State's revenues from production, if any, are likely to be insignificant.

Impacts also are likely to be muted because the state is much larger, somewhat more diverse, and now supports important petroleum infrastructure. Thus, the relative impacts of a given amount of petroleum development will be smaller compared to 1975–95. There would be greater local availability of resources to directly support petroleum development—such as a trained labor supply and local businesses engaged in the petroleum support industry. There would also be a greater capacity to absorb any general population increase that might be triggered by petroleum development.

Furthermore, OCS revenues may be unlikely to boost State and local government spending. The State currently has a yawning gap between its expenditures and its politically accessible revenues. Until the State brings its budget into balance with budget cuts, tax increases, or access to Permanent Fund revenues, OCS revenues would only help plug the gap. Once budgets are balanced on a recurring basis, State spending decisions may remain chastened by the effort required to balance the budget and by the experiences of 1975–95.

And, in real dollars the price of oil is near the bottom of recorded prices. Current forecasts of petroleum prices are not bullish for the next few years. Real prices may surge in the long-run, as petroleum supplies are depleted. But, concerns about global warming and a more advanced stage of development of alternative energy resources may hasten a transition to less oil-dependant economies. This might limit the run-up in future oil prices.

Thus, low real oil prices, a smaller State share of gross revenues, entrenched budget deficits, and a larger, more robust state economy will limit the economic stimulus of any future OCS development in Alaska.

Only in the particular municipalities where development physically occurs would there be the possibility of localized booms. Property tax revenues on petroleum production or transportation equipment, or direct or support industry employment, could propel local economies upward if OCS development took place in a new province. But OCS development is most

[23] 43 USC Sec. 1333 (a) (2) (A).

likely to occur off the North Slope, where existing infrastructure and operations would mute its impacts.

1. Alaska OCS Region

The Outer Continental Shelf is the area offshore of the U.S. that is under Federal jurisdiction. By law, it consists of all submerged lands seaward of State jurisdiction, out to the farther boundary of Federal OCS planning areas or the U.S. Exclusive Economic Zone ("EEZ"). The State of Alaska's jurisdiction extends out to 3 nautical miles from the coastline. State offshore lands total 14,656,000 acres. The U.S. territorial sea extends out to 12 miles from the coastline. The EEZ extends from the territorial sea out to 200 nautical miles from the coastline[24]. Thus, the OCS encompasses the territorial sea outside State waters, all of the EEZ, and OCS planning areas outside the EEZ.

The Alaska OCS is divided into 17 assessment provinces, totaling 945,569,883 acres. Potential undiscovered conventionally recoverable oil and gas is confined to 11 of these provinces that comprise the continental shelf. These 11 provinces total 646,569,883 acres[25].

From 1975 through 1995, OCS lands offered for lease in Alaska totaled 135,558,739 acres[26]. This is 21.0 percent of Alaska OCS lands in the 11 provinces with potential petroleum reserves.

2. Reserves and Undiscovered Resources

Estimates of Alaska OCS petroleum resources that are economically recoverable are small. The most recent estimates are as of January 1995.

> "Most of the oil and gas resources of the Alaska offshore occur in accumulations too small to warrant commercial exploitation within the foreseeable future. Only about 15 percent of the geologic oil endowment of offshore Alaska could be profitably recovered at prices approaching those that exist today."[27]

The mean estimate of economically recoverable oil is 3.8 billion barrels (Bbbl). There is a five percent chance that economically recoverable oil is greater than 7.7 billion barrels[28]. By comparison, 11.4 billion barrels were produced in Alaska from 1975 to 1995[29]. Most of this came from the Alaska North Slope (ANS). Known ANS commercial fields had original reserves of 16.4 billion barrels. Cook Inlet had 1.34 billion barrels, for total State proved reserves of 17.7 billion barrels.[30]

The only discoveries of oil and gas accumulations in the Alaska OCS have been in the Arctic subprovince. MMS' 1995 assessment includes five fields. But, they were classified as unproved reserves. Their potential for commercial recovery was uncertain as of January 1, 1995.

In contrast, proved reserves are discovered accumulations that can reasonably be expected to be recoverable at a profit, with existing technology under current economic conditions. The OCS estimates of economically recoverable resources are based on flat refinery oil prices of $18 per barrel and gas prices of $2.11 per thousand cubic feet (Mcf) in 1995 dollars.

[24] Under the Submerged Lands Act of 1953, Alaska's rights to the natural resources of submerged lands extend out to 3 nautical miles from the coastline. The U.S. EEZ was established on March 10, 1983 by President Ronald Reagan's signature of Proclamation 5030 (3 CFR 22). The United Nations Law of the Sea extends a nation's mineral rights out to the foot of the continental slope, where the foot of the continental slope is beyond 200 nautical miles from a nation's coast. The U.S. territorial sea was extended to 12 nautical miles from the coastline on December 27, 1988 by President Ronald Reagan's signature of Proclamation 5928 (54 CFR 777).

[25] Federal Offshore Statistics: 1995, U. S. Department of the Interior, Minerals Management Service, 1997.

[26] Federal Offshore Statistics: 1995.

[27] Endowments of Undiscovered Conventionally Recoverable and Economically Recoverable Oil and Gas in the Alaska Federal Offshore, As of January 1995.

[28] Endowments of Undiscovered Conventionally Recoverable and Economically Recoverable Oil and Gas in the Alaska Federal Offshore, As of January 1995, p. 10.

[29] Oil & Gas Audit Division, Alaska Department of Revenue http://www.revenue.state.ak.us/oga/production.

[30] Endowments of Undiscovered..., pp. 4 and 5.

TABLE II.1

MEAN ESTIMATES OF ECONOMICALLY RECOVERABLE ALASKA OCS RESOURCES

	Natural Gas (Tcf)	Oil (Bbbl)
Undiscovered		
Arctic	0.2	3.4
Bering Shelf	0.9	negligible
Pacific Margin	negligible	0.3
Total	1.1	3.8
Discovered Proved		
Reserves	0.0	0.0
Total Resources	1.1	3.8

Source: Endowments of Undiscovered Conventionally Recoverable and Economically Recoverable Oil and Gas in the Alaska Federal Offshore, As of January 1995, Kirk W. Sherwood, James D. Craig, and Larry W. Cooke, U.S. Department of the Interior, Minerals Management Service, Alaska OCS Region, May 1996.

Estimates of undiscovered conventionally recoverable OCS resources are much larger than economically recoverable resources. Mean estimates for conventionally recoverable oil are 24.3 billion barrels, with a 5 percent chance of more than 33.6 billion barrels. 90 percent of the conventionally recoverable oil and 79 percent of the gas resources are in the Arctic province.[31]

Most of the OCS gas resources are considered uneconomic because of the lack of transportation to market and the competition of huge, untapped onshore ANS gas resources. In Cook Inlet, most of the gas is thought to exist as gas caps on oil pools. That gas would likely be reinjected to maintain oil production, well into the future.

[31] Endowments of Undiscovered..., p. 6.

TABLE II.2

ESTIMATES OF CONVENTIONALLY RECOVERABLE ALASKA OCS RESOURCES

	Natural Gas (Tcf)			Oil (Bbbl)		
	Low	**High**	**Mean**	**Low**	**High**	**Mean**
Undiscovered						
Arctic	38.0	201.1	99.4	14.7	31.2	22.0
Bering Shelf	7.0	38.6	18.8	0.4	1.8	0.9
Pacific Margin	2.1	18.3	7.7	0.7	2.5	1.4
Total	58.0	229.5	125.9	16.9	33.6	24.3
Discovered Unproved						
Reserves			0.4			0.7
Total Resources			126.3			25.0

Source: Endowments of Undiscovered Conventionally Recoverable and Economically Recoverable Oil and Gas in the Alaska Federal Offshore, As of January1995, Kirk W. Sherwood, James D. Craig, and Larry W. Cooke, U.S. Department of the Interior, Minerals Management Service, Alaska OCS Region, May 1996.

Note: There is a 95 percent chance that resources exceed the low estimate and a 5 percent chance that they are greater than the high estimate.

3. Production

There has been no production from any Alaska OCS fields. The first Alaska OCS lease sales and exploration focused on large, geologic structures that might have produced the next Prudhoe Bay. These elephant hunting forays were partly a product of the times, as well as the potential for huge finds. The seismic and geophysical technology of the day could readily identify the anticlines or large structural deformities that might hold oil. The sky-high oil prices of the early eighties would have supported the drilling of expensive wells from massive concrete or other fabricated drilling structures far offshore. Oil companies envisioned North Sea-type development of massive finds tapped with wells costing as much as $70 million.

The failure to find oil in these structures and the collapse of oil prices reoriented the Alaska OCS leasing and exploration program. Current investigations focus more on close-in, stratigraphic plays. Advances in technology, such as 3-D seismic, have allowed identification of more subtle, more complex, stratigraphic traps. The American Petroleum Institute states:

> "Using traditional seismic analysis, the industry successfully completed just over 40 percent of new wells. With 3–D seismic analysis, that success rate has risen to over 70 percent."[32]

Focusing on possible fields that are close to existing infrastructure improves the economics. Being in shallower waters would more often allow use of man-made gravel islands, at less cost than fabricated drilling and production platforms.

New technology has radically improved economics of oil filed development over the last two decades. Fewer drill pads and production platforms are now required due to directional drilling technology. Onshore drilling costs per foot in Alaska in 1988 dollars fell from $836 in 1976 to $218 in 1997.[33] 4-D models that predict the response of fields over time as they are pumped can improve recovery.

It is still possible that some very large oil finds might occur, even in stratigraphic plays. But, the general expectation now is for more modest production from OCS. Stratigraphic finds will be more difficult to produce. They will generally have lower flow rates. The significant improvements in efficiencies of exploration, drilling, and production costs continue to struggle against low oil prices.

The State currently projects that OCS production will amount to barely 1 percent of production on State lands in any year during the next decade[34]. Total projected OCS production of 25 million barrels during the next ten years pales in comparison to the 11.4 billion barrels that were produced in Alaska from 1975 to 1995[35]. No OCS gas production is projected during the next ten years.

The projected OCS production would be from the Liberty and North Star fields. These are Alaska North Slope fields that are currently thought to lie entirely within six miles of the coastline. Thus, the production would be subject to section 8(g) revenue sharing.[36]

The State OCS production estimates do not include any production from fields not yet discovered or committed to development. They are a conservative, low case estimate. No estimates representing a mean

[32] "Oil Supplies – Are We Really Running Out of Oil?", American Petroleum Institute, http://www.api.org/oilsup.htm, updated June 17, 1998.

[33] "The Changing Oil Industry: Will it Affect Oil Prices?"; Arlon R. Tussing and Linda Leask; Fiscal Policy Papers, No. 11, May 1999; Institute of Social and Economic Research, University of Alaska Anchorage.

[34] The MMS December 10, 1998 document "Year 2000 President's Budget Production and Royalty Revenue Projections" shows Alaska OCS production from FY1999 through FY 2009 totaling 126 million barrels, peaking at 25 million barrels per year. The production comes only from the Liberty and North Star fields. The projections are British Petroleum estimates taken from the North Star EIS and other publicly available data. Both State and MMS projections can be viewed as conservative from the standpoint for which they were made. The State projections are for purposes of estimating State revenues available for appropriation. The MMS numbers are for the purpose of assessing potential environmental costs.

[35] Oil & Gas Audit Division, Alaska Department of Revenue http://www.revenue.state.ak.us/oga/production.

[36] 43 USC Sec. 1337 (g)(2).

case—the expected amount of production—are available from either the State or MMS.

TABLE II.3

ALASKA OCS AND ONSHORE PROJECTED OIL PRODUCTION (MILLIONS OF BARRELS)

Fiscal Year	Alaska OCS Lands	State of Alaska Lands
1999	-	440
2000	-	417
2001	-	427
2002	2	428
2003	5	431
2004	4	418
2005	4	389
2006	3	363
2007	3	340
2008	2	316
2009	2	294
Total	25	4,263

Sources: "Fall 1998 Revenue Sources Book", Alaska Department of Revenue, December 1, 1998.

4. State and Local Government Take 1979–95

During the period 1979 to 1995, the State take of the gross value of oil and gas at the wellhead averaged 32.3 percent, for all petroleum production in Alaska. See Table II.4. In addition, local governments collected $3,650.0 million during this same period in property taxes on oil and gas property used in petroleum production and transportation. This would represent another 2.5 percent in terms of wellhead value, for a total State and local take of roughly 35 percent.

The State take is comprised of taxes and lease revenues. Taxes include severance taxes, income taxes, and property taxes. A large chunk of income and property tax receipts are attributable to the Trans Alaska Pipeline, rather than oil production. Lease revenues include bonuses, royalties, net profits shares, and rent.

Almost all production during 1975–95 was on State land. As lessor, the State received 100 percent of the lease revenues

5. State and Local Government Take from Future OCS Production

On OCS lands between 3 and 6 nautical miles from the coastline, the State would receive 27 percent of

lease revenues[37]. On OCS lands outside 6 miles, the State would receive nothing.

Current MMS leasing practice for Alaska calls for bonus bidding with either a 1/8 or 1/6 royalty, selected on a sale-specific basis.

> "The 1/8 royalty rate has been used at sales north of the Aleutian chain because of high costs and long lead times resulting from the remoteness of the area and the adverse ice and weather conditions."[38]

South of the Aleutians, MMS would use a 1/6 royalty rate, except for deeper sale tracts. For deeper tracts, MMS would use a 1/8 royalty. The depth at which MMS invokes the 1/8 rate would vary, depending on the specific sale.[39]

The amounts of future bonus bids are uncertain. Bids have fallen dramatically since the early 1980's. Table II.5 shows the average bid per acre and the total high bids accepted for Alaska OCS lease sales from 1954 through 1995. Ignoring the RS-1 and RS-2 sales, which were reofferings, would reinforce the downward trend.

A 1987 MMS evaluation of bidding commented on the factors at work at that time:

> "The decline in the average high bid submitted primarily reflects market conditions, including lower oil prices and future price expectations and declining capital availability for lease acquisition as a result of mergers and takeovers to acquire proven oil and gas reserves. Other factors affecting the decline could be disappointing drilling results in frontier areas; a possible general decline in the quality of prospects available for lease (the best prospects may already have been leased in earlier sales); and the greater percentage of deepwater, high-cost offshore acreage being offered for lease."[40]

In Alaska, early OCS sales were tracts that contained a number of very large geologic structures. They held the potential to be giant oil fields like Prudhoe Bay. Each structure was drilled, but no significant amounts of oil were found. The lack of discoveries and the offering of tracts with lesser prospects of a bonanza reduced bids in the later lease sales.

Today's market conditions and, in many peoples eyes, the long-range outlook do not support high real oil prices. The world is also seeing another round of consolidations in the industry, as companies seek to defend themselves from or take advantage of low oil prices. Combinations are occurring among the largest oil companies in the world, including Exxon, Mobil, BP, Amoco, and now ARCO.

Low prices and increasing industry concentration may continue to depress bids in the future. But, advances in technology have improved finding rates and development costs since 1987. And, in the Alaska OCS, there has been a shift in leasing to close-in plays where the economics are better. So, future bonus bid levels remain uncertain.

[37] 43 USC Sec. 1337 (g) (2).

[38] FY 95 Annual Report to Congress, page 3. Minerals Management Service, U.S. Department of the Interior.

[39] FY95 Annual Report to Congress.

[40] "Outer Continental Shelf Lease Sales, Fiscal Year 1984 – Fiscal Year 1986: Evaluation of Bidding and Competition", U.S. Department of the Interior, Minerals Management Service, Offshore Resource Evaluation Division, 1987.

TABLE II.4

STATE TAKE AS A PERCENT OF TOTAL VALUE OF PETROLEUM PRODUCTION

Fiscal Year	Wellhead Value of Alaska's Production[1] ($ Millions)			Total State Petroleum Revenues ($ Millions)	Ratio of Petroleum Revenues to Total Wellhead Value
	ANS	Cook Inlet	Total Alaska Production		
1975				90.4	
1976				391.5	
1977				481.6	
1978	1,350.3			491.9	
1979	2,566.9	283.3	2,850.1	905.7	32%
1980	7,214.6	270.1	7,484.7	2,600.9	35%
1981	11,793.4	669.6	12,463.0	3,689.4	30%
1982	12,411.2	894.9	13,306.0	3,974.8	30%
1983	11,259.5	709.0	11,968.5	3,447.6	29%
1984	10,729.9	597.1	11,327.0	3,227.8	28%
1985	10,740.0	500.6	11,240.7	3,111.5	28%
1986	8,787.3	342.2	9,129.5	2,980.8	33%
1987	4,695.5	210.6	4,906.0	1,565.1	32%
1988	7,740.7	241.8	7,982.5	2,367.6	30%
1989	6,696.1	217.7	6,913.9	2,068.8	30%
1990	8,044.2	194.2	8,238.4	2,388.4	29%
1991	10,099.0	280.8	10,379.8	3,412.7	33%
1992	7,328.1	210.5	7,538.7	2,936.7	39%
1993	7,887.8	238.1	8,125.9	3,181.4	39%
1994	5,595.9	169.9	5,765.8	1,879.7	33%
1995	6,604.2	229.1	6,833.3	3,509.5	51%
Total 1979-95			146,453.9	47,248.4	32%

Sources:

1. ANS, Cook Inlet, and total value of production calculated from average wellhead prices and average daily production for the fiscal year, provided by the Alaska Department of Revenue, Oil & Gas Audit Division (http://www.revenue.state.ak.us/oga).
2. State Petroleum Revenues from Table A.1, Economic and Social Effects of the Oil Industry in Alaska 1975 to 1995, Volume I: State Oil Revenues and Local Government, Appendix A

Notes:

1. Includes natural gas liquids (NGL's).

TABLE II.5

ALASKA OCS LEASE SALES, 1954-1995

Sale	Bid Opening	High Bid Bonuses Accepted ($ Millions)	Average Bid/Acre ($)	Average Bid/Acre (FY 1995 $)
39	1976	559.8	1,369	304,964
CI	1977	398.5	804	167,909
BF	1979	488.7	5,697	11,118
55	1980	109.8	551	883
RS-1	1981	0.2	30	44
60	1981	4.4	60	89
RS-2	1982	0.0	0	0
71	1982	2,055.6	3,101	4,362
57	1983	317.9	946	1,306
70	1983	426.5	788	1,088
83	1984	516.3	556	737
87	1984	872.0	709	940
97	1988	115.3	104	131
109	1988	478.0	242	305
92	1988	95.4	784	989
124	1991	16.8	61	67
126	1991	7.1	45	50
Total		6,462.3		

Source: Federal Offshore Statistics: 1995, US Department of the Interior, 1997.

So without considering bonus bids, the State take from OCS production would at best be 4.5 percent of wellhead value (27 percent of a 1/6 royalty). North of the Aleutian Chain, where the best prospects lie, the State take would be only 3.4 percent (27 percent of a 1/8 royalty). State take from OCS lands would be only about 1/10 the 35 percent State and local take for the same production on State land.

6. State and Local Spending of OCS Revenues

To date, the state has deposited, in the Alaska Permanent Fund, approximately 25 percent of all lease revenues received since Prudhoe Bay production began. Lease revenues exclude tax revenue. But, under current law, 50 percent of most OCS revenue sharing would go to the Permanent Fund.

The Alaska Constitution mandates a minimum 25 percent Permanent Fund contribution from mineral lease revenues and federal mineral revenue sharing payments.[41] State statutes currently provide for a 50 percent deposit for leases issued after December 1, 1979 and bonuses received after February 15, 1980.[42]

Any new OCS leases and bonuses would fall under the 50 percent rule. Even production from Alaska OCS lands already under lease would be likely to fall under the 50 percent rule. Of the seventeen Alaska OCS lease sales held through 1995, only the first two were held prior to December 1, 1979. Only 904,058 acres were included in leases issued from the sales prior to December 1, 1979. Through 1995, leases for a total 8,589,280 acres have been issued.[43]

Coincidently, the state deposited 25 percent of total

[41] Section 15, Article IX, "The Constitution of the State of Alaska", effective February 21, 1977.
[42] AS 37.13.010(a)(2).
[43] Federal Offshore Statistics: 1995, pp. 8 and 10.

State petroleum revenues (including taxes) during the 1975–95 period in the Permanent Fund and the Constitutional Budget Reserve Fund (CBRF).[44] The percent saved still held at 25 percent due to special appropriations made to the Permanent Fund and the deposit of 100 percent of tax and royalty settlements into the CBRF.[45]

Together, state and local government spent something more than 75 percent of the State and local 35 percent take of wellhead value during 1975–95. This means that about 26 percent of wellhead value wound up being spent on State and local government.

If the requirement for deposit of 50 percent of lease revenues into the Permanent Fund remains in place, only about 2 percent of any OCS wellhead value (half of the 3.4 to 4.5 percent State take) would flow into the State and municipal government spending stream.

Legislation has recently passed the State House that would revert Permanent Fund deposits to 25 percent of lease revenues. This would leave about 3 percent of OCS well head values for spending.

7. Future State OCS Revenues in Relation to Total State Revenues

With current conservative projections of OCS production from only known reserves (North Star and Liberty), OCS revenue sharing would be an inconsequential part of the State's revenue and spending stream, over the next decade.

More to the point would be the impact of production of the estimated economically recoverable resources. This is 3.8 billion barrels. State revenue sharing from even this amount of production would not be a significant portion of State revenues in the years ahead. Only unpredictable amounts of revenue sharing from lease sale bonus bids might make a difference in State finances in any given year.

Larry W. Cooke, of the Alaska OCS office of MMS, points out that the 3.8 Bbbl of economically recoverable resources would tend to lie closer to shore than the rest of the conventionally recoverable resources. The economics of recovery are going to be better in shallower water, closer to existing infrastructure. Thus, assume all of the 3.8 Bbbl are subject to 27 percent revenue sharing with the State.

The State estimates the real value in 1998 dollars of ANS oil at the wellhead to be $11 per barrel over the period 2001 through 2020[46]. OCS wellhead prices are likely to be somewhat lower because of additional feeder pipeline costs from offshore. The possibility of slower production from the types of OCS fields now being targeted means depletion of the fields might take as much as 20 years.[47]

Assume OCS production of the 3.8 Bbbl occurs at $11 per barrel over this period. Assume a 1/8 royalty for production from the Arctic subprovince and a 1/6 royalty for the Pacific Margin. Then, the State would get about $1.5 billion in 1998 dollars over the 20 year period. If half went to the Permanent Fund, the amount available for spending would be $0.75 billion.

This would be less than 4 percent of projected State unrestricted general fund revenue of $19.3 billion[48] in 1998 dollars between 2001 and 2020. Permanent Fund net income under GASB accounting rules would amount to $42.5 billion in 1998 dollars over the twenty years[49]. The $0.75 billion available for spending from OCS revenue sharing would be about one percent of the combined $61.8 billion of general fund unrestricted revenues and Permanent Fund earnings.

[44] See Table A.1, Economic and Social Effects of the Oil Industry in Alaska 1975 to 1995, Volume I: State Oil Revenues and Local Government, Appendix A.

[45] Of course, amounts in the CBRF may ultimately be spent. But, section 17(d) of Article IX of the Alaska Constitution requires any amounts available for appropriation that remain in the State's general fund at the end of a fiscal year be deposited into the CBRF as reimbursement for any amounts expended from the fund. At the end of fiscal year 1995, $1,703.0 million had been expended from the CBRF, according to the State of Alaska, Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 1995, pp. 40 and 41.

[46] "Fall 1998 Revenue Sources Book", p. 38.

[47] Based on current knowledge, the only two OCS fields for which there are reserve estimates by the Alaska Department of Natural Resources—Liberty and North Star—would have projected lives of 14 years each.

[48] "Fall 1998 Revenue Sources Book", p. 37.

[49] "Monthly Financial Report", Alaska Permanent Fund Corporation, February 28, 1999, p. 4. GASB Net Income is converted to 1998 dollars using the inflation assumptions shown on the same page.

CHAPTER III:
MITIGATION OF DIRECT OCS IMPACTS

Is mitigation needed? After all, don't governments, including Alaska, exert major efforts to promote the development and location of commercial and industrial activity within the State. Yes, but this is not true of many or most small coastal communities in Alaska. They have serious concerns about social disruptions and environmental threats to fisheries and other resources on which they depend.

The enclave model of oil development limits impacts on smaller, remote Alaska communities. Company camps largely insulate small Alaska communities from socioeconomic impacts, though environmental risks remain a concern. Environmental impacts are outside the scope of this study.

What about some of the larger Alaska communities where socioeconomic impacts would be felt? There is a long history of state and local governments paying businesses to locate within their jurisdictions. State and local governments have used tax incentives and holidays, credit support or participation in financings, and outright subsidies to lure or spur development. In light of this, are state and local government cries for impact assistance just crocodile tears?

A basic problem in Alaska is that people do not pay the full cost of government services. Without tax structures that make people pay their way, growth in population will create or enlarge deficits. These will be either deficits in services or deficits in funding. Population growth dilutes the fixed oil wealth of the State. This is the situation now. In contrast, under the State's pre-oil tax structure, the broader range of taxes would generally pay for any increases in services needed for an OCS influx.. There could be some lag between the onset of services and collection of taxes.

In Alaska, the areas most likely to be affected by OCS development have municipal governments in place. This includes the areas offshore the North Slope Borough, the Northwest Arctic Borough, the Kenai Peninsula Borough, and the Municipality of Anchorage. But, Anchorage and the North Slope Borough have no sales tax. The Northwest Arctic Borough has neither a sales or property tax, though the Red Dog mine make payments in lieu of property taxes.

Thus, at the municipal as well as at the State level, current tax structures will in at least some, if not all, cases fail to capture the full costs of government services to OCS workers. The communities are still living off pass-throughs of oil revenues by the State, principally in State support for education.

The first response to OCS impacts in these towns and boroughs should be to establish or increase the scope of taxes to capture OCS costs out of increased sales and property values. If industry uses municipal services such as port facilities, water or sewer, and solid waste disposal, but is outside the tax jurisdiction, the municipality should negotiate special rates and fees contracts with them.

MMS estimates most of the economically recoverable Alaska OCS oil and gas lies relatively close to shore and existing petroleum infrastructure. This is where current leasing is focused. Production from any of the Alaska lease sales included in the current five-year leasing plan would involve pipeline landfalls and shore bases. Up to 8 landfalls and 8 bases are anticipated.[50] Thus, there would be potential property tax revenue associated with Alaska development.

In the long-run, the absence of municipal governments in some areas of coastal Alaska may cause OCS impacts to be troublesome. But, the first response to development in such areas is often to create municipal government and begin to levy taxes to deal with the problem. Witness the North Slope Borough, formed in response to North Slope oil development, and the Northwest Arctic Borough, formed in response to development of the Red Dog zinc mine. The State has long sought to encourage the formation of municipal

[50] Proposed Outer Continental Shelf Oil & Gas Leasing Program 1997 to 2002, Decision Document, U.S. Department of the Interior, Minerals Management Service, February 1996, p. 2-12.

government in the unorganized borough. It could be more forthright and aggressive in pursuing that goal. Alternatively, State tax structures and services could be extended to the unorganized borough.

There are two basic approaches to mitigating OCS impact. One is to rely on market mechanisms to restore equilibrium, but lubricate the flow of factors of production. This leaves the escalator of booms and busts in place to get from one level of economic activity to another. But, by increasing the mobility of labor, capital, technology, and entrepreneurship, the process would run more quickly and smoothly.

The second approach is to try to keep economic activity all on the same level. Then, you can say goodbye to the escalators. This approach involves smoothing out industry and government spending associated with OCS development.

Smoothing out industry spending requires adjusting leasing in light of levels of activity in the industry. It is an imperfect process that can only partially counterbalance the serendipities of oil discovery and development.

Smoothing out government spending is the subject of Chapter V. It can be attempted by trying to level production or petroleum revenues. But, it is best attacked directly.

1. Down the Up Escalator

Booms and busts can be left to do their jobs of pulling resources into the regional economy and pushing them out, as needed. But, some of the whiplash can be avoided.

Job training may restrain booms. Mobility of residents from existing jobs or unemployment to oil and gas employment is important. It can minimize immigration to fill either OCS jobs or jobs vacated by residents who take OCS jobs. But, if labor markets are tight, net migration into Alaska and a bigger boom will occur, training or no.

Special efforts should be made to interest and train local residents in occupations needed. This might include:

- presentations to schools, colleges, unions, and professional associations to acquaint people with the nature of the work, training required, likely compensation, and career potential;
- job and training fairs and counseling;
- media announcements and information;
- recruitment offices; and,
- establishment and operation of training centers, technology centers, and apprenticeship programs.

Similarly, efforts should be made to assist local small business development. This might include:

- providing information about timing of industry activity, goods and services that industry might procure locally, and industry procurement practices; and,
- establishing or contributing to the operation of small business development programs that assist businesses with management, marketing, finding financing, etc.

The labor and small business initiatives could be joint efforts between industry, schools, universities, Native corporations or organizations, or State or local government.

Local hire and local procurement, if they were legal, could smooth out some of the bumps, as long as there were unemployed workers and excess business capacity. But, aggressive use of these measures risks reducing the net benefits of OCS development to the U.S. as a whole. Some loss might be tolerable for the sake of greater stability in the Alaska economy.

It would be important to generally avoid providing special financing for business development. Any subsidy would encourage overinvestment. It would exacerbate booms and busts. The idea is to make existing businesses as efficient as possible. This would minimize adding to the boom with additional business investment. And, it would minimize the excess capacity, associated bankruptcies, and financial distress in the bust phase.

The State, and the federal government too, have a number of financing programs that may be of assistance to individuals, businesses, or communities impacted by a boom. The Alaska Housing Finance Corporation (AHFC) has a number of programs for financing home mortgages as well as multi-family

housing. Some of these are designed for persons, such as first-time homebuyers, that would have difficulty financing a home under normal underwriting standards.

The Alaska Industrial Development and Export Authority (AIDEA) can be a source for both large and small business financing. The Alaska Municipal Bond Bank is a conduit for municipal debt financing. Its credit support mechanisms, including a State aid intercept, can sometimes spell the difference in whether a small community can find a market for its debt.

Bond Bank financing support can be especially important in an OCS setting. Increases in the tax base may lag behind the need for municipal infrastructure. Borrowing mechanisms can more closely synchronize provision of municipal facilities with payment for them.

The Bond Bank has been the conduit for Coastal Energy Impact Program financing under the Coastal Zone Management Act. If this program were reactivated, the Bond Bank would have a significant role to play in dealing with OCS impact.

2. Up the Down Escalator

When things start to slide, the following can help move people, occupationally or geographically, to where they are more needed. They will be more gainfully employed and not be a depressant on wages for those that remain in the impact area. Increased labor mobility will relieve some burdens on government programs, e.g. unemployment and education.

Helpful steps might include:

- retraining and education allowances in time, money, or work schedule flexibility;
- job counseling and placement services;
- relocation expenses;
- severance pay funds for firms in the industry, actuarially funded like a retirement fund; and,
- small business development efforts as during a boom, but with an entrepreneurial and diversification focus, to get industry workers into new businesses in a new line of work.

AHFC could also help when homeowners face difficulties. Their Streamline Refinance Program allows delinquent borrowers to get a new loan with a term of up to 30 years. On all but the most recent loans, this would stretch out the existing loan balance. Other major lenders have similar programs.

In larger municipalities, government might undertake development or redevelopment efforts or promote corporate relocation to the area. In more remote areas, government resource disposals and permitting of development might offer some economic alternatives. In any case, the focus should be on diversification of the economy.

Alaska's higher cost structure, lack of a large local market, and high transportation costs to major markets limit opportunities for value-added processing of oil and gas. Under the OCS leasing statutes, lease holders must offer 20 percent of oil production at market value to small or independent refiners.[51] When justified by market costs and prices, refineries or other downstream processing would add to the net value to society. But, such refineries are likely to be limited to production for local consumption. When Alaska's oil fields dry up, it is unlikely to be profitable to ship oil here for refining, and then onward to market, even for in-state consumption. Thus, value-added processing could make for a wilder economic roller coaster ride, though a few players might pay their way.

[51] 43 USC Sec. 1337 (b)(7).

CHAPTER IV: IMPACTS AND THE LEGISLATIVE HISTORY OF OCS LEASING

National imbalances between petroleum supply and demand, and the macroeconomic and geopolitical ramifications of the resulting dependence on foreign sources of supply, have driven the pace of leasing of OCS lands.

The foundation for petroleum leasing of OCS lands was the Outer Continental Shelf Lands Act (the "Act") of August 1953 (43 USC 1338). Section 8 of the Act provided for bidding either by:

- cash bonus bid, with a fixed royalty not less than 12.5 percent; or,
- royalty bid at not less than 12.5 percent, with a fixed cash bonus.

The current framework for OCS leasing is largely a product of the OCS Lands Act Amendments in 1978 (P.L. 95-372) (the "Amendments"). Between passage of the Act in 1953 and the Amendments in 1978, the U.S. petroleum landscape changed dramatically. Rising U.S. consumption and falling onshore production created a yawning domestic oil gap. The increasing dependence on foreign oil set the stage for exploding oil prices. The domestic oil shortage and high prices pushed U.S. exploration into high-cost, offshore areas. The huge costs of OCS exploration and development, and sky-high bonus bids based on high oil prices, limited OCS competition to all but the largest firms.

There was other fallout from these changes. A number of studies suggested market concentration in OCS bidding was depriving the government of a fair price for OCS resources. Increasing OCS production and importation of foreign oil by tanker were threatening or causing oil spills. Coastal states and communities concerned about damage to the environment or marine resources were tying OCS leasing up in knots with lawsuits. Speculative withholding by producers of Gulf of Mexico gas supplies during the severe winter of 1976–77 caused public outrage.

The main objectives of the Amendments were to solve the energy crisis by speeding exploration and development of OCS oil and gas, in a way that was fair to the government, affected States and communities, and smaller oil companies. The Amendments recognized

> "the national interest in the effective management of the...human environments"

and stated that

> "such States, and through such States, affected local governments, are entitled to an opportunity to participate, to the extent consistent with the national interest, in the policy and planning decisions made by the Federal government relating to exploration for, and development and production of, minerals of the outer Continental Shelf."[52]

Human environment is defined in the OCS statutes as:

> "the physical, social, and economic components, conditions, and factors which interactively determine the state, condition, and quality of living conditions, employment, and health of those affected, directly or indirectly, by activities occurring on the outer Continental Shelf".[53]

In the legislative history of the Amendments, the deliberations about impacts—on the marine, coastal, and human environments—were focused almost entirely on environmental damage, mainly from oil spills, and the fiscal burdens and economic disruptions of an OCS boom. There is no record in the House Report or House Conference Report[54] of any discussion

[52] 43 USC Sec. 1332 (4).
[53] 43 USC Sec.1331 (i).
[54] House Report (Outer Continental Shelf committee) No. 95–950, Aug. 29, 1977 [To accompany H.R. 1614] and House Conference Report No. 95–1474, Aug. 10, 1978 [To accompany S. 9].

about the possible bust that might follow such a boom. A more complete examination of the Amendments' legislative history might reveal concerns about an OCS bust. But their omission from 310 pages of the two house reports is glaring.

A bust may have been an unanticipated event. At the time, almost all seers saw nothing but high and rising oil prices, indefinitely into the future. The power of market forces to spur supply and curb demand was woefully underappreciated.

The legislative history of the Amendments focused entirely on the direct impacts of OCS development:

> "Exploitation of potential offshore oil and gas reserves will have a severe impact on the states, particularly in the earlier years. After a discovery, offshore oil and gas will have to be brought to shore, processed, stored, and transported. The States will need Federal assistance so that they can take proper steps to minimize the adverse environmental impact of exploration and then the onshore handling of the offshore oil and gas produced. They will also need federal assistance so that they can provide a proper infrastructure—new housing, schools, roads, and expanded municipal services—in areas that are suddenly impacted." [55]

State and local governments decried the possible "boom town" effects on their coastal communities from the offshore development. The "Additional Views of Hon. William J. Hughes" contained in the House Report cites the businesses that would create a boom:

> "onshore operations bases, offices, cement and mud suppliers, warehouses, tool rental companies, helicopter pads, dockage, wireline companies, gas lift companies, logging and perforating companies, machine shops, trucking firms, supply stores, downhole equipment companies, diving services and others."[56]

The "Additional Views of David C. Treen and Don Young", the latter being Alaska's Congressman, contained in the House Report on the Amendments, elaborates on the impacts:

> "In 1953, Congress passed the Outer Continental Shelf Lands Act declaring that the taxing power of the States did not extend to that portion of the Continental Shelf more than 3 miles from a State's coastline...During the succeeding 25 years not one offshore worker has sent his child to school in Federal waters, driven a heavy truck on highways in Federal waters, gone to a hospital on Federal waters nor connected his home to sewer lines in Federal waters.
>
> The onshore impacts of Outer Continental Shelf development have been significant in gulf coast States and promise to be even more significant in States like Alaska where little local infrastructure existed prior to Outer Continental Shelf activity. Canals to accommodate pipelines from offshore rigs to tank farms and refineries, as well as canals for supply and crew boats, have caused salt water intrusion. This damages both the wetland environment in which fish and wildlife breed and the water supply of small towns. Highways in coastal areas (which were expensive to build in the first place because of unstable subsurface conditions) have been damaged by heavy trucks serving the Outer Continental Shelf industry, and the cost of repair is borne by the State when the roads are not on the Federal system. Port facilities and heliports have to be developed and schools built many years ago at lower costs have to be expanded to meet the needs of children of the offshore workers. Even if the worker does not make his home in the coastal area, hospitals to meet emergency medical needs and sewer systems capable of processing waste from the offshore facilities must be built in coastal communities. There is no assurance that a local tax base will

[55] House Report (Outer Continental Shelf Committee) No. 95-590, Aug. 29, 1977 [To accompany H.R. 1614], p.55.

[56] House Report (Outer Continental Shelf Committee) No. 95-590, Aug. 29, 1977 [To accompany H.R. 1614], p.296.

> arise in the same community which is required to furnish services and facilities needed because of Outer Continental Shelf activity."[57]

In addition, the House Report noted:

> "The onshore impacts of OCS development may have localized inflationary effects. Rapid, disorganized development is by its very nature inflationary, because it increases the demand for materials, goods, and services in the economy.[58]

There are almost no suggestions in the legislative history that revenue sharing might cause adverse economic effects. The one exception was Juanita M. Kreps, then Secretary of Commerce, who expressed the only reservation about revenue sharing noted in the House Report:

> "revenue sharing might encourage unnecessary development in fragile coastal areas."[59]

Her comment conveyed the concern of the Department's Coastal Zone Management Advisory Committee regarding environmental impacts, not economic impacts.

The 27 percent revenue sharing provisions were enacted in 1986 to settle legal disputes that arose under section 8(g) of the 1978 Amendments.[60] Section 8(g) called for the federal government and states to negotiate agreements covering disposition of lease revenues from fields that underlay both state and federal lands. If they could not agree, the Secretary could proceed with leasing and leave determination of a fair division of revenues to the courts. Thus, revenue sharing had its genesis as settlement of the drainage issue.

But, minority views in 1978 had criticized the Amendments for lack of a revenue sharing provision. There was dissatisfaction with the Coastal Energy Impact Program (CEIP) as the mechanism for federal assistance to states experiencing OCS impact. During December 10, 1976 oversight hearings of the Oceanography Subcommittee of the House Merchant Marine and Fisheries Committee on the Coastal Zone Management Act Amendments of 1976, Governor Hammond of Alaska stated in a letter submitted on behalf of the National Governors' Conference:

> "We believe that the problems shared by impacted States would be better addressed by a direct revenue sharing approach that provided funds immediately and as a matter of right whenever federally sponsored developments imposed serious fiscal or environmental burdens upon the States. In our judgment, the CEIP can best serve as a fall-back program to insure States against the possibility that their recoverable costs might out-run the revenues provided under a basic revenue-sharing formula."[61]

The OCS amendments enacted in 1986 were precipitated by the federal and state governments' desires to resolve the drainage litigation and free up $6.8 billion that had accumulated in escrow, pending resolution of the lawsuits. But, in enacting the revenue sharing, Congress changed the purpose of it, stating.

> "…the distribution of a portion of the receipts from the leasing of mineral resources of the outer Continental Shelf adjacent to State lands…will provide affected coastal States and localities with funds which may be used for the mitigation of adverse economic and environmental effects related to the development of such resources"[62],

Now representing a minority view, Secretary of the Interior Donald Hodel registered his dissent, attacking analogies to state revenue sharing from development of onshore federal mineral leases,

> "…unlike production on the OCS, onshore leasing activities actually occur within State boundaries. Therefore, there is a greater potential for federal onshore leasing activities to affect certain State

[57] House Report (Outer Continental Shelf Committee) No. 95-590, Aug. 29, 1977 [To accompany H.R. 1614], p.316.
[58] House Report (Outer Continental Shelf Committee) No. 95-590, Aug. 29, 1977 [To accompany H.R. 1614], p. 89.
[59] House Report (Outer Continental Shelf Committee) No. 95-590, Aug. 29, 1977 [To accompany H.R. 1614], p. 232.
[60] OCS Lands Act Amendment of 1985 (P.L. 99-272).
[61] House Report (Outer Continental Shelf Committee) No. 95-590, Aug. 29, 1977 [To accompany H.R. 1614], pp. 320-321.
[62] 43 USC Sec. 1332 (4) (B).

> prerogatives, such as the right to free use of the surface estate, where the Federal Government only holds rights to the minerals.
>
> Moreover, the Mineral Leasing Act of 1920 was always intended as a general revenue sharing measure. It was meant to provide funds to States because of their inability to tax Federal lands within their borders. Since the 8(g) areas are outside State borders, no similar loss of tax revenue occurs. Section 8(g) was never designed as a general revenue sharing provision, but was included in the OCS Lands Act Amendments of 1978 to address the particular problem of drainage."[63]

This shift in the purpose of the revenue sharing could promote its expansion to cover all OCS leasing, rather than just that between 3 and 6 miles offshore. S. 25, introduced in the First Session of the 106th Congress, would share 27 percent of all OCS revenues. For the first time, local governments would receive a portion of this shared revenue directly from the Federal Government. Formulas would determine the states' and local governments' shares, based on factors that include shoreline miles, onshore acreage, and population. These factors confirm the shift in purpose from one of compensating for drainage to mitigating OCS development impacts. A companion bill, H.R. 701, has been introduced in the House.

With the possible exceptions of Alaska and Louisiana, OCS revenue sharing or economic activity is unlikely to provoke a boom of such size that a devastating bust could follow. Other coastal states have much smaller OCS resources relative to their population, economies, and petroleum infrastructure. Their government revenues are less dependent on petroleum.

In 1998, 73 percent of the State of Alaska's unrestricted general fund revenue came from petroleum taxes and royalties. But, this overstates Alaska's dependence on petroleum. It ignores the State's investment revenues from the Permanent Fund and Budget Reserve Fund. When these are considered, along with federal and other restricted funds, petroleum accounted for only 28 percent of State revenues in 1998.

To date, the use of the Permanent Fund investment earnings for government purposes has been politically off limits. But, when faced with the alternatives of massive budget cuts or new taxes to balance the State's budget, use of investment earnings looks very attractive to many people. Among other things, advocates believe that use of investment earnings would avoid the depressing effects on the state economy that budget cuts or most new taxes would have. This is true in the short-run. It's just that the hangover is the next day.

The following indicators suggest that Alaska would be more vulnerable to an oil-driven boom and bust than other major OCS states. But, as the discussion in chapter II showed, state revenues from OCS are not going to be large enough to topple economic stability in Alaska. It would take some truly giant finds or radical changes in oil markets to disrupt economies in OCS states. And even then, probably only Alaska or Louisiana might feel any hiccups.

[63] House Report (Outer Continental Shelf Committee) No. 95-590, Aug. 29, 1977 [To accompany H.R. 1614], p. 267.

TABLE IV.1

INDICATORS OF POTENTIAL OCS IMPACT AND PETROLEUM DEPENDENCE

State	Population	Gross State Product (GSP) (Millions)	Undiscovered Economically Recoverable Resources (Barrels of Oil Equivalent)				Petroleum Revenue as % of 1998 Total State Revenue
			Billions of Barrels	Per Capita	Per $ 000 GSP	Thousands of Barrels Per 1997 Worker in Oil & Gas Extraction	
Alaska	614,010	$ 24,161	3.95	6,433	163	465	28%
Texas	19,759,614	$ 551,830	5.81	294	10	24	3
Louisiana	4,368,967	$ 121,143	7.5	1,716	62	126	12
Florida	14,915,980	$ 360,496	2.35	158	6	423	<1%

Sources

1. Population Estimates Program, Population Division, U.S. Bureau of the Census.
2. U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Analysis Division, Released June 2, 1998.
3. Summary of the 1995 Assessment of Conventionally Recoverable Hydrocarbon Resources of the Gulf of Mexico and Atlantic Outer Continental Shelf, Gary L. Lore et al, Minerals Management Service, Gulf of Mexico OCS Region, Table E-2. Mean estimates including exploration costs (full-cycle). Texas is Gulf of Mexico (GOM) Western Planning Area. Louisiana is GOM Central Planning Area. Florida includes the GOM Eastern and Straits of Florida and the South Atlantic Planning Areas.
4. Fall 1998 Revenue Sources Book", State of Alaska, Department of Revenue, December 1, 1998.
5. Comparative Statement of Official Revenue Forecasts and Actual Revenue, Fiscal Years 1993/1994 through 1999/2000", http://www.state.la.us/opb/exec-bud00/00-yellow/EconomicData.html.
6. Texas Revenue History by Source, 1978-1998", http://www.cpa.state.tx.us/ misc/revenue.html.
7. State and Local Tax Receipts, DOR Administered Taxes/ DOR Accounts, Office of Research & Analysis, FY 1998 Statistics", http://sun6.dms.state.fl.us/dor/tables/f21998.
8. U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Economic Analysis, Regional Economic Information System, Total Full-Time And Part-Time Employment By Place Of Work (S25) 1969 - 1997 for the States and Regions of the Nation, September 1998.

CHAPTER V:
MITIGATION OF OCS REVENUE IMPACTS

This section examines the two main impacts of OCS revenues and what might be done to mitigate them. The impacts are instability and inefficiency in Alaska's economy.

1. Stabilizing the Economy

In Alaska, the main economic instability associated with petroleum development has been due to the spending of government oil revenues. Thus, this section focuses mainly on measures that would ultimately stabilize State spending. It also looks briefly at government efforts to diversify the economy. This would mitigate to some degree both the impact of state spending of oil revenues and the direct economic activity associated with petroleum development.

Smoothing out production, revenues, or expenditures could mitigate petro-fueled booms and busts. Of course, a steady level of production would not flatten out economic fluctuations due to price volatility. More importantly, trying to stabilize either production or revenue could play havoc with the efficiency of finding, developing, and producing the nation's oil supply.

Thus, measures that smooth out expenditures best perform the task of mitigation. This leaves MMS free to conduct leasing according to schedules and bidding systems that best provide for the nation's energy supply.

Some instability can arise from the direct economic activity of exploring for, developing, and producing oil and gas, particularly in local communities within the state. Methods discussed in this section for stabilizing production could help tame the direct economic impact in Alaska communities. Staging leasing over time and geography would be the biggest help. Methods for stabilizing government revenues or expenditures would not alleviate direct impacts.

2. Stabilizing Production

Measures to smooth out production include:

- stage leasing over time or geography;
- control rates of production; and,
- royalty relief to extend production.

The key planning exercise regarding OCS leasing is the preparation by the Secretary of a leasing program consisting of five-year schedules of lease sales. The program shall be consistent with the following principle, among others:

> "Management of the outer Continental Shelf shall be conducted in a manner which considers...the potential impact of oil and gas exploration on...human environments."[64]

States have two opportunities to comment during the development of a proposed leasing program. Sixty days prior to publication of a proposed program, the Secretary is to solicit suggestions from each governor of affected states. The Secretary must respond in writing to any request by a governor for modification of a program, stating his reasons for granting or denying the request.[65]

Within ninety days after publication of a proposed program, any state or local government may submit comments and recommendations on any aspect of the program. At least sixty days prior to approving a program, the Secretary must submit the proposed program to the President and Congress, stating why any specific recommendation of a state or local government was not accepted.[66]

The Amendments' recognition of "the national interest in the effective management of the...human environments" may allow the Secretary to consider, or a state to propose, regional economic stability as a national goal. If so, MMS would need to evaluate it along with, and trade it off against, other OCS national goals. But, if avoiding disruptions to state economies

[64] 43 USC Sec.1334 (a) (1).
[65] 43 USC Sec. 1344 (c) (2).
[66] 43 USC Sec. 1344 (d) (1) and (2).

does not rise to the level of a national goal, the Secretary would still be obliged to consider it, as long as it would not compromise other OCS goals.

3. Staging Leasing over Time

Assuming all OCS acreage would eventually be offered for lease, staging leasing over time is the same as reducing the size of lease sales, in terms of total acreage offered. It does not imply reduction of tract size. Decreasing tract size could be harmful to the exploration, development, and production of OCS resources.

Staging leasing over time would not smooth out the initial bolus of production and its ultimate decline, which is an inevitable feature of petroleum production. But, it could avoid piling the period of peak production of one field on top of another. With perfect information and no uncertainty about the amounts of oil and gas in place or economics, MMS could schedule lease sales to maintain a more or less stable plateau of production until all the recoverable resources in a region had been leased.

With real world information and uncertainty, MMS could still stage leasing to take a more approximate stab at stability. In fact, this is what MMS does for a whole host of reasons, including maximization of net benefits to society as well as dealing with political opposition from some affected states and communities.

A number of economic arguments favor staged leasing. They include allowing an avenue for government to redress the tendencies of industry to:

- under-invest in exploration and development and unduly accelerate production. Both effects arise because of a higher discount rate for private capital than public capital.

- In the past, some economists viewed a lower public discount rate as appropriate to reflect not only the firm's greater aversion to risk than that of society as a whole, but also beliefs that saving and investment and therefore economic growth are less than optimal, that intergenerational equity is given short shrift, that government must serve as the guarantor of social security in old age, etc.

  Today, there is greater tendency to deal explicitly with costs and benefits and less willingness to use the social discount rate as a proxy for supposed shortcomings of the market. The pre-tax return on private capital is also generally recognized now as the opportunity cost of public spending, though private discount rates may be higher to reflect risk aversion. Thus, under-investment and accelerated production may be less serious problems than once believed;

- produce booms and busts in petroleum prices and aggregate supply. Government could try to stage leasing in a contra-cyclical manner; and,
- under-invest in exploration because of the difficulty of controlling the information generated. There are advantages to letting others go first. The results of other firms' exploration, whether known in technical detail or only informally, are a costless external benefit to the firm that demurs.[67]

Staging leasing for the purpose of stabilizing revenue sharing would be in harmony with these goals. The only harm would be in leasing too slowly at a time of scarcity and high prices. A more compressed leasing schedule might also be appropriate for regions with excess capacity in their petroleum infrastructure and work force.

4. Staging Leasing over Geography

Spreading leasing more widely across geographic regions may, for any given amount of acreage leased, reduce the tendency to under-invest in exploration. For one thing, there would be fewer opportunities to wait for someone else go first.

Also, fewer tracts offered in a given region may increase the odds of a firm retaining the benefits of its exploration. There would be a better chance that any acreage adjoining a successful prospect would not yet be leased. The firm could subsequently bid on such acreage. The better prospects for controlling the results of exploration and holding back competition would make a firm more willing to acquire leases, pay top dollar for them, and invest in their exploration.

[67] An economic Analysis of Alternative Outer Continental Shelf Petroleum Leasing Policies, Hayne E. Leland, National Science Foundation, September 1974, Chapters IV and V.

5. Control Rates of Production

Under current statutes, lessees of OCS lands generally must produce oil or gas at the "maximum rate of production which may be sustained without loss of ultimate recovery".[68] Controlling production to achieve more constant flow over the life of a field would usually improve physical recovery. Of course, the statute in theory limits production to a rate that maximizes recovery.

Stretching out production would cause severe damage to the economics of a field. A slower return on invested capital would reduce the present value of the expected recovery. Less exploration and development would occur. Given the nature of reservoir mechanics, achieving the same physical recovery would likely require an extended period of production. This would increase costs, hasten shutdown, and decrease the actual recovery. There may be greater environmental risks with extended production.

6. Royalty Relief

Reductions or elimination of royalties or net profit shares can extend the economic life of a field. But, this action ordinarily would flatten production or revenues only marginally. Relief would normally occur beyond the tail end of the original productive life, when production had already fallen far below its peak. Or, MMS might allow it in the event prices collapsed. But, staving off a shutdown in the face of a price collapse will presumably not change the originally anticipated production curve.

7. Stabilizing Government Revenue

Even if it would be hard to achieve level production, are there ways to structure the government's take in a more level manner? This might be done by changing the terms of the bidding systems used to lease OCS acreage.

A number of OCS statutory objectives guide OCS leasing:

- "To promote orderly and timely development of the Nation's OCS petroleum resources.
- To ensure the public a fair and equitable return on the disposition of its resources.
- To ensure that oil and natural gas resources are assessed at the earliest practicable time.
- To promote competition in the petroleum industry."[69]

To accomplish all this, the Amendments authorized the use of alternative bidding systems. It amended section 8(a) of the Act to allow bids on the basis of work commitments and net profit share (of at least 30 percent), in addition to cash bonus and royalty bids. The Amendments permitted the use of cash bonus, royalty, sliding or suspended royalty, net profits share, or work commitment as fixed requirements in various combinations with whichever factor was chosen as the bid variable.

The Amendments also allowed the Secretary of the Interior to use, subject to Congressional veto, any other system or bid variables useful for accomplishing the purposes of the amended Act.[70] And, they permitted the Secretary to reduce or eliminate royalties or net profit shares on producing leases to extend production.[71]

During the five-year period beginning September 18, 1978, the Amendments required a test of bidding systems other than cash bonus bid with fixed royalty. The alternative systems had to be used on at least 20 percent, and not more than 60 percent, of the total area offered for lease each year .[72]

Three alternative bidding systems have been tested. During the five-year mandated tests, the bonus bid with sliding-scale royalty and bonus bid with fixed net profit share were used on 25 percent of tracts offered. Prior to 1978, the royalty bid with fixed bonus had been tried in two lease sales.

Also tested were traditional bonus bid systems, but with royalties set at 1/3 or 1/8, as opposed to the normal 1/6.

[68] 43 USC Sec.1334 (g).

[69] "Outer Continental Shelf Lease Sales, Fiscal Year 1984 – Fiscal Year 1986: Evaluation of Bidding and Competition", p. 4.
[70] 43 USC 1337(a)(1).
[71] 43 USC 1337(a)(3)(A).
[72] 43 USC 1337(a)(5)(B).

8. Results of Bidding Systems Evaluations

MMS found that none of the alternative systems offered a clear advantage over the traditional bonus bid with 1/6 royalty. Most jeopardized exploration, development, recovery, or government revenues. Otherwise, with respect to competition, "general performance of the alternative bidding systems tended to be similar to that of the conventional systems."[73] "In general, the perceived value of any tract is probably the single most important factor in determining how many and for how much bids are made."[74]

Not tested were:

> Net profit share bid and work commitment bid because of readily apparent inefficiencies. They would have provided incentives to discontinue production too soon or to incur unnecessary exploration costs.
>
> Cash bonus bid with fixed royalty **and** net profit share because of unnecessary paperwork it would create, without providing extra benefits over a fixed royalty **or** fixed net profit share, and because of incentives to goldplate investments, which would hurt government receipts.

Tested were:

> Royalty bid with fixed cash bonus. It had significant risks of nondevelopment or early abandonment. Of 38 OCS tracts leased under this system, only one went into production. The rest were relinquished. Firms hoping for a giant find will offer high royalty bids, for small up-front costs. This will make all but the biggest finds uneconomic. This is similar to what happened with State net profit share bidding on North Star. State legislation had to be passed to reduce the heavy net profit share, before BP would proceed with development.
>
> Bonus bid with sliding-scale royalty. It did not significantly change the government's take or competition. The scale is set to generate higher royalties only in the case of large, easily produced reservoirs or sudden price increases. The particular scheme tested adjusted the royalty rate depending on the value of production. Thus, the royalty rate depended on both the volume and price of production. The main drawback is a risk that firms would delay production to avoid higher royalty payments.
>
> Bonus bid with fixed net profit share. As tested, it did not seem to affect competition or pace of exploration. But, the difficulty of defining what is "profit", including an appropriate rate of return on invested capital, can cause inappropriate amounts of exploration, development, or production. Goldplating of costs may reduce government revenues. Administrative and accounting burdens make it inefficient to administer.
>
> Bonus bid with 1/8 royalty. It decreased minimum economic field size and as a result, increased ultimate recovery. But, the effect was only pronounced in the case of deepwater, high-cost areas. Competition was similar to that with 1/6 royalty.
>
> Bonus bid with 1/3 royalty. It increased the minimum economic field size and as a result, reduced ultimate recovery. In deepwater or high-cost areas, minimum field size doubled. Competition was not significantly affected.

9. Evaluating Bidding Systems as Stabilization Mechanisms

The Amendment's goals to promote early assessment and timely development of OCS resources were a product of the 1973 OPEC oil embargo and energy crisis. An economic analysis referenced in Congressional deliberations on the Amendments stated:

[73] "Outer Continental Shelf Lease Sales, Fiscal Years 1978 through Fiscal Year 1983, Evaluation of Alternative Bidding Systems", U.S. Department of the Interior, Mineral Management Service, p.27.
[74] Ibid., p. 75.

> "The federal government is by far the largest holder of energy resources in the U.S. and will have a substantial impact on energy markets as these resources are developed in the future. There is some optimal path of production over time depending on OCS supplies, other fossil fuel supplies, investment in energy R&D, and demand factors. Clearly, considerable information about potential OCS supplies is critical to determining such an optimal path of development and production. Improved knowledge of the resource potential of the OCS, furthermore, would be valuable in timing coal and oil shale leases and in setting energy R&D policy."[75]

Since the Amendments, the glut of supply and erosion of real prices have removed the urgency of 1978 for exploration and development of OCS resources. This has not only slowed the pace of OCS leasing, but it has stunted energy R&D and development of alternative energy. Shale oil cannot compete at foreseeable prices. Environmental concern is pushing the country away from coal, towards plentiful gas supplies, for utility generation and industrial processes.

It might be time to reevaluate bidding systems, with reduced emphasis on the goals of early assessment and timely development of resources. The supremacy of the goals of a fair return to the public and promotion of competition would have to be maintained. But, consideration might be given to bidding systems that stretched out, levelized, or deferred production or revenues. The goal of doing so would be to avoid destabilizing the government finances and economies of affected states. But, such systems could not compromise efficiency of supply.

MMS found that the only alternative bidding systems that did not compromise total recovery were the cash bonus bid with 1/8 royalty or sliding-scale royalty. For that reason, MMS today relies on a bonus bid with 1/6 royalty or, in the case of deepwater or high-cost frontier areas, a 1/8 royalty.

Both the 1/8 royalty and sliding-scale royalty would tend to move the governments' take forward in time, compared with a 1/6 royalty. With a 1/8 royalty, more of the government take would come from higher bonus bids. With a sliding-scale royalty, more of the take would come from the early years of peak production when royalty rates would tend to be higher. But, rising real prices or the temptation to defer production to reduce the royalty rate might limit the front-loading of government take under a sliding-scale.

Some of the other bidding systems offer the opportunity to provide more level government revenues over field life. Those involving net profit shares, royalty bidding, or a 1/3 royalty would all tend to shift government take into later years.

Of these systems, only

> "profit sharing will not lead to inadequate exploration and development, early shutdown, or other production inefficiencies if the profit base is adquately defined[76] (emphasis in original) But, as a practical matter, it may not be possible to define profit so as to avoid inefficiencies. Then,
>
> "If the government's definition of the profit base does not coincide with a firm's true profits, there will be misincentives to the firm. This could lead to either under or over-exploration, development, and production."[77]

For example, allowing too high a rate of return on capital can cause overinvestment or goldplating of costs. Too low can lead to less than optimal exploration, development, or production.

Stabilizing or deferring government revenues is not a goal per se of current OCS statutes. MMS did not evaluate bidding systems with respect to such a goal. But, even if they had, alternative bidding systems' serious threat to production efficiency and recovery suggests MMS would still not have adopted any of them.

[75] Leland, p. 18.

[76] Leland, p. 46.

[77] Leland, p. 46.

It may be that MMS could devise bidding systems could be devised that would backload government revenues without compromising production goals. But, by definition higher government payments in later years raise the marginal costs of production and cause earlier shutdown.

The Secretary's authority to reduce or eliminate royalties or net profit shares could provide an escape valve from too high a government take in a field's declining years.

But, in many cases, little or nothing would be gained by deferring payments, only to grant relief to avoid early abandonment. Only in the case where prices rose over time might a system of deferred payments work to everyone's advantage. Such a system could be administratively burdensome to the point of being infeasible.

To date, the evaluation of alternative bidding systems suggests that those that defer the governments' take either harm the nation's oil supply or are administratively unworkable. It would be far more effective to keep the mechanisms for dealing with the expenditure of petroleum revenues separate from those for generating such revenues. Then, both generating and spending petroleum revenues can be handled in ways that best meet their objectives.

10. Stabilizing Expenditures

A number of devices exist to wring the bumps out of state and local government spending. The State of Alaska and some Alaska municipal governments have tried several of them. They include:

- budget reserve funds
- permanent funds
- spending limits
- sustainable expenditure limit or guideline

All involve saving—some by decreeing what to save, some by decreeing what to spend. Saving can smooth out spending in three ways. Assuming saving occurs during revenue peaks, it chops off some of the upper reaches of the spending peaks that would otherwise occur. This also helps fill in the valleys, with investment earnings from the savings. And if the savings themselves are later spent during lean years, it further smooths out the peaks and valleys.

How well a savings device works as a counterweight to spending fluctuations depends primarily on the percentage of variable revenues saved. Saving a portion of a stable revenue stream would introduce a decrease in spending, followed by growing earnings and spending as saved revenue accumulates. Governments could save for reasons other than stabilizing spending, such as transferring benefits to future generations or meeting some growing demand.

11. Budget Reserve Funds

Whether some of the savings can be spent affects the degree to which savings can get rid of ups and downs in spending. Budget reserve funds and rainy day funds are examples of savings meant to be spent. Looked at over a short time-frame, they clearly can iron out spending variations. Over the mid-term, they can serve as a bridge to sustainable spending plans. But, an element of discretion in when to spend such savings, and uncertainty about how high future revenues will be, mean such funds cannot eliminate variation over the long-run.

The more volatile a government's revenue stream, the more helpful a budget reserve fund can be. But, if a high percentage of variable revenues are saved permanently, budget reserves are less important.

12. Permanent Funds

> "'Endowment' funds are funds the principal of which must be kept intact in perpetuity; only the income may be spent to meet current operating expenses."[78]

In this sense, permanent funds are endowment funds. But, the use of the term "endowment" often has three

[78] Modern Investment Management and the Prudent Man Rule, Bevis Longstreth, Oxford University Press, 1986, pp. 24-25.

connotations that are not always true of permanent funds. Endowments traditionally are thought of as funds whose income is spent for a specific educational, religious, or charitable purpose. They also may be thought of as providing all the resources necessary to accomplish their purpose. This is the sense in which the verb "endow" is used. And, the modern practice of many leading endowments is to set distributions as a percent of the fund's market value, rather than in terms of income.

The Alaska Permanent Fund is not currently an endowment fund in any sense but its perpetuity. Referring to it as an endowment can raise the political hackles of those who oppose any spending of its income, other than for Permanent Fund dividends. To them, "endowment" connotes spending—government spending, not dividends for Alaskans.

Permanent funds may or may not be trust funds. Trust funds:

- are legally created as a trust—by law, trust agreement, will, etc.;
- have a specific purpose for use of trust income (or principal, in the case of expendable trusts); and,
- identify beneficiaries, who have legal rights under the trust.

The Alaska Permanent Fund is not a trust.[79]

The Alaska Permanent Fund's key feature from the standpoint of economic stabilization is that the state saved only 17 percent of State petroleum revenues during 1975–95 in the Fund.[80] This was clearly inadequate to avoid the boom and bust Alaska experienced during this period.

13. The Cremo Plan

The only sure way to avoid a spending boom-bust is to save 100 percent of variable revenues. When the revenues come from depletable resources, this idea is reinforced. Proponents would argue that spending such one-time revenues is inherently imprudent or profligate. Advocates may also assert that the revenues belong to future generations as well as those alive today.

Roger Cremo, an Anchorage attorney, proposed this radical approach of sequestering all highly volatile State of Alaska revenues[81]. Known as the Cremo Plan, it would have placed all revenues from land, marine and timber resources, as well as nonrenewable resources, in the Alaska Permanent Fund. It would have included taxes, as well as sale or lease revenues. Tax revenue would have applied to downstream economic activities of transportation and processing, as well as production.

The difficulty is that, if spending of nonrenewable resource income has already begun, this type of plan would require a pronounced reduction in spending for a period of time. A plan like the Cremo plan has more of a chance before the horse has left the barn.

The Alaska Permanent Fund was in place when Prudhoe Bay production began[82]. But, the State budget had already ramped up, from spending of the $900 million Prudhoe Bay lease bonuses and almost $500 million of a reserves tax. The state temporarily enacted the reserves tax, a property tax on oil in the ground, to sustain spending at a non-sustainable level, until an even higher level of non-sustainable spending would be initiated with Prudhoe production. With the horse already out of the barn and a backlog of still unmet needs for public improvements and services, dating from the State's austere beginnings, it was too late for a complete set-aside of resource revenues a la

[79] Memorandum re: "Transfer of Securities Pursuant to the Proposed Appropriation of $4 Billion of Permanent Fund Income to the Constitutional Budget Reserve Fund" to Eric Wohlforth, Chair, Board of Trustees, Alaska Permanent Fund Corporation, from Morrison & Foerster LLP, March 3, 1999, pp. 6-8.

[80] Table A.1, Economic and Social Effects of the Oil Industry in Alaska 1975 to 1995, Volume I: State Oil Revenues and Local Government, Appendix A.

[81] Senate Joint Resolution No. 38 and House Joint Resolution No.48, introduced during the Second Session of the Eighteenth Alaska Legislature.

[82] The Fund was created by amendment to the State Constitution effective February 21, 1977.

Cremo. The Permanent Fund began with a modest 25 percent of lease revenues as the savings rate.

The State is still trying to deal with the budget imbalances created by spending of depleting oil revenues. Fiscal year 2000 State income and assets are largely adequate to cover expenditures, except for Permanent Fund dividends. But, dividends have thus far been politically sacrosanct. In addition, growing Permanent Fund income will be in a race against declining petroleum revenues. The State's budget problem is as much political as fiscal. Probably, the State will have to resolve it before any significant OCS production begins.

Thus, in Alaska, OCS revenues could be cordoned off in a permanent fund, without exacerbating the State's current fiscal problems. The same reasoning would suggest that the State place all revenues from production of fields as yet undiscovered into a permanent fund. The investment earnings on revenues from OCS or other new fields would help meet future budget demands, without building up unsustainable expenditures. The State could decide to direct OCS revenues to a permanent fund on its own, or OCS statutes could be amended to require it.

14. Permanent Fund Precedents

A few other states, including Texas, Louisiana, and New Mexico, have permanent funds made up of oil and gas royalties or severance taxes. The New Mexico Land Grant Permanent Fund dedicates 100 percent of royalties from federal land grants to the fund. The New Mexico land grants consist of 13 million acres granted by the Federal government for educational, hospital, correctional facilities and other purposes.

In Alaska, the State also received Federal land grants. Originally, lands had been reserved to support public schools, an agricultural college and school of mines (later to become the University of Alaska), and mental health. Section 1 of the Act of Congress of March 4, 1915 reserved lands for schools with language that read:

> "...when the public lands are surveyed...sections numbered sixteen and thirty-six in each township...(are) ...reserved from sale or settlement for the support of common schools in the Territory of Alaska...(and) ...the entire proceeds or income derived by the United States from such sections...and the minerals therein...are hereby appropriated and set apart as separate and permanent funds in the Territorial treasury, to be invested and the income from which shall be expended only for the exclusive use and benefit of the public schools of Alaska..."[83]

The Alaska Statehood Act converted these reservations to grants of the land to the State for the purposes for which they were reserved. The Alaska Supreme court held that "The grant and its acceptance created a trust."[84] The trust came into being because the use of the property was constrained to benefit only a particular purpose. The Statehood Act also repealed section 1 of the March 4, 1915 Act, giving the State a free hand to sell the land, with compensation to the trust, and to use lease or other income from the land directly in the support of education.

Most western states received similar land grants. They suggest a precedent and model for disposition of OCS revenues, not only for those shared with affected states, but for those deposited in the general fund of the U.S. Treasury.[85] Of course, immobilizing U.S. OCS revenues in a permanent fund would have imperceptible effects on national economic stability. In fiscal year 1995, total OCS revenues were $2.6 billion, of which $1,371.5 million went to the U.S. Treasury.

15. Sustainable Revenues

Another approach to stabilizing State spending and the economy is to spend no more than the amount of sustainable revenues. Scott Goldsmith, an economist

[83] Section 1, Act of Congress of March 4, 1915, 38 Stat. 1214, 43 USC 353.
[84] *Wessells v. State, Dept. of Highways*, 562 P.2d 1042, 1051 n. 34 (Alaska 1977).
[85] A portion of OCS revenues go to the Land & Water Conservation Fund and the National Historic Preservation Fund of the U.S. Government.

with the University of Alaska's Institute of Social and Economic Research, has articulated this idea.[86]

In essence, it permits the spending of a portion of depletable resource revenues. The portion spent is calculated so that earnings on the amount saved will offset the decline in the resource dollars spent. The portion that can be spent depends on the rate of decline in the resource revenues versus the rate of return on invested savings, all other things being equal. Of course, other things are never equal. Fluctuations in non-oil revenues and in the price of oil would change the sustainable level from year to year.

The level of sustainable revenue under this approach would start off higher than a Cremo-like permanent fund that saved all the resource revenue. The level of sustainable revenue would remain constant indefinitely. But, the Cremo approach would eventually overtake the "sustainable revenue" level. This is because all depletable resource revenue would be saved, rather than a portion. The Cremo plan would eventually produce spending at a constant plateau once the resource was depleted.

Analysis of sustainable revenue levels by Goldsmith shows that they are very sensitive to three factors:

- the rate of decline in production;
- the rate of return on invested savings; and,
- the price of oil.[87]

The sensitivity is great enough that in the real world this approach might not stabilize revenues enough to avoid economic disruptions. In June 1998, Goldsmith estimated Alaska's sustainable revenue and expenditure level to be about $3.0 billion dollars, based on a long-term average real oil price of $18 per barrel and a production decline rate of 2 percent per annum. These were the State of Alaska's official forecast estimates at the time, as contained in the Alaska Department of Revenue's "Fall 1997 Revenue Sources Book". By April 1999, a year and a half later, the Department's forecasts for real prices had fallen to less than $15 per barrel and the production decline increased to more than 3 percent per annum. This price and depletion rate would drop sustainable revenues to about $2.4 billion.[88]

Given the uncertainty about oil prices, depletion rates, and investment rates of return, the sustainable expenditure level will be a moving target. It may also be a little too complex to be anything but a general guide. Alaska has already enacted even simpler spending limits. But, they have proved to be irrelevant.

16. Spending Limits

The State of Alaska has adopted both a Constitutional and statutory spending limit. Section 16, Article IX of the State Constitution, effective December 24, 1982 established a spending limit of $2.5 billion, adjusted by the cumulative change in state population and prices since July 1, 1981. The statutory limit, AS 37.05.540(b), capped appropriations at 5 percent, plus the percentage change in population and prices, over appropriations for the prior year.

In retrospect, it is easy to see that any limit that provides for growth in spending, when revenues are derived from depleting resources, will be meaningless. Adoption of limits usually occurs at cyclical peaks in prices, when the reality and risks of bloated spending are becoming readily apparent. Subsequent price collapses render them inoperative, even if new resources come into production.

When confronted with a depletable resource, the only meaningful limit would be one that declined more rapidly than, or was set well below, the revenue curve. In Alaska, we can view the revenue curve as that revenue available for spending, recognizing that

[86] "Permanent Fund Policy Questions & an Informal Review of Proposals for Change", Scott Goldsmith, Institute of Social and Economic Research, University of Alaska Anchorage, November 20, 1997, pp. 5-8.

[87] "From Oil to Assets: Managing Alaska's New Wealth", Scott Goldsmith, Fiscal Policy Papers, Number 10, Institute of Social and Economic Research, University of Alaska Anchorage, June 1998, p. 5.

[88] "From Oil to Assets: Managing Alaska's New Wealth", p. 5.

Constitutional dedications already limit access to some revenue. A meaningful limit imposes a steeper decrease in short-term spending for the sake of higher, more stable long-term spending. It would be more destabilizing in the short-run than letting nature (and revenues) take their course. The distress caused by sharp spending contractions may be worse than a slow adjustment to a gradual decline in revenue. A gradual spending squeeze also occurs further in the future, providing more time for corrective action.

The level of sustainable revenues can be a floor, be it ever uncertain, under any spending limit. Pushing spending below sustainable revenues would not increase stability. It would trade off greater short-term instability for growth in long-term sustainable revenue and expenditures.

17. Diversifying the Economy

State government could attempt to diversify the economy as a means of stabilizing its revenue and spending. With respect to the private sector, the State should provide traditional government infrastructure and services that support emerging or developing industries in Alaska. Basically, this comes down to education; transportation; job training, retraining, and placement; technical support to small business and entrepreneurs; and disposition of state resources.

But, diversifying the economy will be of limited value unless the State also diversifies its own finances. The State is directly and heavily dependent on oil revenue. Local government depends significantly on oil revenue, indirectly through State aid for education.

State and, to a degree, local spending and employment, are potentially as volatile as Alaska's basic industries. Of even greater concern is the fact that State revenues are highly correlated with the State's main economic engine —the oil industry. Thus, main drivers of the State economy—the oil and gas and state and local government sectors—are not only highly volatile, but move in the same direction at the same time.

State and local government payroll in 1995 made up 21.5 percent of total payroll in Alaska. Basic industry payroll in 1995, defined here as agriculture, forestry, fishing, mining, and manufacturing, made up 14.1 percent of Alaska's total payroll.[89] The State can make a significant contribution to statewide economic stability by diversifying its revenue structure. A personal income tax and tapping Permanent Fund income are the two most prominent possibilities. Section 20 of this chapter and the subsequent sections discuss these options.

Much of the discussion in Chapter III on how to mitigate direct OCS impacts would be applicable to long-term efforts to diversify the private sectors of the economy. What the state must not do is substitute its judgment for that of the market. The state should not attempt to decide what industries, projects, or businesses to develop, where, or when. It lacks the information, contacts, expertise, experience, and judgment to make such decisions. Even if it could, politics would get in the way.

The state has had its misfortunes when it attempted to do so—from the Alaska Renewable Resources Fund that was eventually dissolved because of bad investments to failed State projects to directly kick-start a barley export or dairy industry. As discussed in Chapter III, attempts to foster diversification through subsidies in whatever form will produce inefficient businesses, often directed at the wrong markets, that are dependent on State financing and are often first on the chopping block when State finances head south. This kind of diversification has as good a chance of increasing economic instability as suppressing it.

The most important area for the State to focus on to spur economic diversification is education and training. In our increasingly specialized, technological society, human capital is the key to development more than ever. In the U.S.,

> "total investment in the education of the population—the "stock" of educational capital

[89] Figure II. 6, page 15 , Economic and Social Effecte of the Oil Industry in Alaska 1975 to 1995, Volume 2 Part 3: Employment and Earnings, Minerals Management Service, U.S. Department of the interior, prepared by The McDowell Group, September 1999.

> has grown much more rapidly than has the stock of plant and equipment. Whereas the stock of physical capital was about 4 times as big in 1956 as in 1900, the stock of educational capital was about 8 times as big. These enormous and rapidly growing investments in human capital have unquestionably increased the productivity, versatility, and adaptability of our labor force. They have certainly made a major contribution to economic growth."[90]

Not only is advanced training a necessity in many industries today, a society without it will find one business after another subjected to ever increasing competition. The communications and computer revolution are turning the world into a global marketplace. Accountants in India can do the bookkeeping for businesses in Alaska over the Internet.

On the positive side, those governments that arm its citizens will education and technical skills will be able to do business all over the planet. Even without new lines of business, globalizing the clientele of businesses in a state diversifies the economy. It is more insulated from booms or busts in basic industries in the state.

The information age is dissolving one of the main obstacles to doing business in Alaska—transportation costs. Businesses that take advantage of telecommunication innovations and the Internet—from software development, to design, to data services, to professional services such as investment management, engineering, and consulting in various fields, to Web site management and marketing services—will be able to compete with other regions on a much more level playing field than can natural resource-based or manufacturing industries. The State needs to underwrite the necessary education and training and regulate telecommunications to assure that Alaskans can compete.

Disposition of some state-owned resources could help diversification. Leasing of petroleum rights generally would not. Rather, it would increase concentration economically, and probably geographically in existing oil provinces as well. Few, if any, state-owned resources would lead to economic activity on the scale of the oil industry. But, no one action can be expected to achieve economic nirvana.

Disposition of resources tied to value-added processing may have something to recommend it. But, usually it means sacrificing resources at less than market rates to build an industry that cannot compete when the acquired resources are gone. Witness the pulp mills in Southeast Alaska. Where value-added processing makes sense economically, firms will undertake to do so. Anything that the State might do to artificially support such processing is likely to trade short-term stability for long-term instability, at some cost to the public purse.

18. Maximizing the Benefits from OCS Revenues

What is the best possible use of OCS revenues? Does spending them on government programs provide the greatest benefits to society? How much government spending is too much?

The previous sections discussed how to achieve a stable level of government spending. But, at what level?

The history of State and local government spending during 1975–95 suggests that much of the spending financed by depletable resources was more than the social optimum. The downdraft in spending as oil income crashed suggests taxpayers were not willing to pony up taxes to maintain State spending. If so, why did all this spending take place?

One source of the problem is the open access, common property nature of the ownership of Alaska's resources and resource revenues.

> "Alaska's citizens own the oil lands and they own the oil revenues. But what they have is common property ownership: the citizens own the oil revenues in common, as a group, and no individual can single out any part of them as his

[90] Economics USA, page 501, Edwin Mansfield and Nariman Behravesh, W.W. Norton & Company, 1986.

private property. To understand what typically happens under common property ownership, consider the familiar case of an ocean fishery. Assume the fishery is owned as a common property resource, an open access resource, where anyone who wants to can exploit it at no charge. We know what happens in such an unregulated fishery. The "rule of capture" holds. You can convert valuable common property fish to your own private property by catching them. Trying to do this, people overinvest in boats and gear. There is too much fishing effort…more people fishing more hours than is really necessary. Thus some real resources are wasted. In addition, overfishing can occur and the fishery can be driven down far below its sustainable level, and, in the extreme, can be completely wiped out.

This is precisely the case of Alaskan oil revenues. They start as a common property resource, then people attempt to capture them, to convert them to private property, through political action. That is what is really taking place each legislative session…Elimination of income taxes turns part of the oil revenues into the private property of those who get to keep the money they would ordinarily have paid in taxes…Provision of subsidies, hidden or open, to various groups converts part of the oil revenues to their private property, and so on.

Obviously, the people who win the most at this game are the politically powerful and astute. Also, it should be obvious that a certain amount of the oil money is dissipated in paying the costs of political activity, in bureaucratic waste, and production of negative net value projects for special interests."[91]

It's the gold rush all over again. The lines of stampeders going over the Chilkoot Pass in the dead of winter are testimony to the economic waste that occurs with an open access, common property resource.

The government decision-making process of majority rule is often at odds with economic efficiency, whether it is common property or other resources being spent. The budget process is not a market transaction. It is not a perfect means for choosing between or among public and private goods.

"…simple majority rule ignores the intensity of the voters preference…The real danger in such voting is that a majority with little at stake can outvote a minority with much at stake. This means voting can lead to situations where the losers lose more than the winners gain…Voting can, and in the real world frequently does approve projects with negative net value.

The following simple example will illustrate the point. Assume five voters, A, B, C, D, and E are to vote on a proposal which would cost $500. The costs are to be shared equally, so each would have to pay $100 in extra taxes to finance the project if it is approved. Assume the benefits to the individuals, as they themselves assess them are $105 each for A, B, and C, and $50 each for D and E. A, B, and C have a mild interest in seeing the project undertaken—$5 net value to each, and will vote in favor of it. D and E are strongly against the project, since each stands to lose $50, and will vote against it. The project passes 3 to 2. The political system has voted in a project with total benefits of $415, but total costs of $500, for a negative net value of $85. Or, put more bluntly, the political system has voted to waste $85 worth of resources.

It is not a possibility if the same decision is taken in the marketplace. The dollar votes of consumers A through E would total $415, cost of production would be $500, and no profit-seeking firm would willingly produce the good."[92]

In other cases, a minority that stands to receive great benefits may succeed in gaining approval of a project or program, even though the total costs exceed total

[91] "Capital Shortage, Public vs Private Allocation of Capital, and Alternative Ownership Systems for Alaska's Oil Wealth", Richard B. Coffman, p. 26, in The Trustee Papers, Alaska Permanent Fund Corporation, March 1982.

[92] Coffman, p. 24.

benefits. This can occur when:

- the costs to each individual are small or uncertain enough that it is not worth their time or effort to become informed and engage in political activity; or,
- enough of the benefits can be passed on to critical lawmakers in the form of campaign contributions to enable passage.

"This is the problem of resource misallocation due to special interests in a political system. It is especially acute in a fiscal situation like Alaska's

TABLE V.1

ALASKA
PERSONAL INCOME AND STATE APPROPRIATIONS

Real Per Capita (State FY 95 $)			
Fiscal Year	Personal Income	General Fund Appropriations	Ratio of Appropriations to Personal Income (%)
1975	23,355	2,978	12. 7
1976	24,428	3,296	13.5
1977	23,106	3,633	15.7
1978	22,312	4,179	18.7
1979	21,253	4,823	22.7
1980	21,337	4,610	21.6
1981	22,085	9,112	41.3
1982	23,392	10,569	45.2
1983	24,148	7,947	32.9
1984	23,410	7,898	33.7
1985	23,879	8,799	36.8
1986	23,040	6,511	28.3
1987	22,632	5,603	24.8
1988	23,462	5,305	22.6
1989	24,890	5,496	22.1
1990	24,528	5,298	21.6
1991	23,783	5,074	21.3
1992	23,621	5,140	21.8
1993	23,548	4,769	20.2
1994	23,725	5,458	23.0
1995	23,636	4,106	17.4
1996	23,345	3,894	16.7
1997	23,529	3,790	16.1

where the cost to the citizen is not an out-of-the-pocket cost, but instead the opportunity cost of using already collected oil revenues."[93]

A number of programs were created that transferred State wealth to private sector individuals or businesses. But, the Permanent Fund dividend was the only program that did not benefit a particular group. By 1995, most of the others—such as the longevity bonus program, rural electricity subsidies, loan subsidies, and tax exemptions and renters' payments—were gone, scaled back, or about to be phased out.

In rough terms, the level of State spending in 1995 was approaching the level of spending that existed prior to the oil boom. Real per capita general fund appropriations stood at $4,106 in 1995, about 38 percent over their $2,978 level in 1975. They had peaked at $10,569 in 1982, over 3.5 times their 1975 level. In 1998, they were $3,550, about 19 percent above 1975.

19. Misallocation of Resources

The most straightforward interpretation of the rise and fall of government spending from 1975 to 1995 may be the best—that taxpayers were not willing to fund more than the government spent in 1975, nor were they willing to fund more than the government spent in 1995, and that they would not have coughed up more during all the intervening years, on a real per capita basis, if it had to come from their pockets.

Of course, if taxpayers had gotten their hands on all those billions in extra real per capita spending during those years, economic theory suggests they would have sprung for some increase in per capita spending, in excess of the beginning and ending amounts. Decreasing marginal utility of private consumption would have led to some increase in consumption of public goods. If we are richer, we are likely to maximize our social welfare if some of our incremental spending is on public, as well as private, goods. The rich spend more on education than do the poor.

Unfortunately, the years 1975–95 do not offer an opportunity to determine the normal relationship between personal income and State spending. During this period, real personal income per capita bore almost no relationship to real State general fund appropriations per capita.

As seen in Table V.1, personal income ranged from $21,253 to $24,890. It varied no more than 10 percent up or down, from its beginning value of $23,355 in 1975. But, general fund spending ranged from $2,978 in 1975, to $10,569 in 1982. This peak was over 3.5 times the spending at the beginning of the period, in real per capita terms. As Table V.I shows, peak spending in 1982 would have consumed over 45 percent of Alaskans' personal income if it had come out of their pockets.

Regression tests of real per capita personal income explained almost none of the variation in real per capita spending. We regressed real per capita personal income against real per capita general fund appropriations in terms of absolute values, change in values, and percentage change in values with no lags and lags of one and two years in spending. Change in income, with no lag, offered the most explanation. But, it accounted for less than 6 percent of the change in spending.

Numerous sound bites from the time affirm the idea that voters' pocketbooks had little to do with spending during the oil boom. At a House Finance Committee meeting in the 1970's, Rep. Ed Barber rhetorically asked regarding the major additions being made by Committee members to the House budget, "Is there anything here we don't want?" "Spending rises to meet revenues" was frequently offered as a truism to explain spending. "Get it and get" was the adjournment strategy proclaimed by one member of a Free Conference Committee on the budget during the big oil days.

Elected officials were not blind to what they were doing. There was concern about spending "nonrenewable" resource income and the need for a

[93] Coffman, p. 25.

"soft landing". They atoned for the $900 million Prudhoe Bay bonus money that was "wasted" with a $900 million first special appropriation to the Permanent Fund, and avoided spending what was clearly "one-time money" with a Constitutional amendment to place "windfalls" from tax and royalty settlements in a budget reserve.

With the Permanent Fund, they have come close to replacing the sand under their public castles with a foundation—a financial foundation, an endowment. But, did anybody really want these castles? Would they want them if they had to pay for them? And without the discipline of a willingness to pay test, how can the body politic know that its public castles are more valuable than the private castles Alaskans might otherwise build?

It is inconceivable that general fund appropriations would have risen from their already petrodollar-stoked 1980 level of $1,160 million to $3,445 million two years later if lawmakers had asked voters to cough up the money in taxes. The extra $2,285 million would have been 30 percent of the $7,779 million in Alaska personal income for 1982.

How much would the State have spent if the State's petroleum revenues had gone to Alaskans directly, leaving the State to spend only what it could raise in non-petroleum taxes? The answer is unknowable. But, the potential dimensions of the misallocation of resources can be estimated as follows.

Assume a constant marginal propensity to consume public goods. This is a simple, and certainly incorrect, assumption. But, it suffices for purposes of illustration. It would mean, that Alaskans would always spend the same percentage of their income on public goods.

Real State general fund petroleum revenues throughout 1975–95 were $47,814 million in excess of their 1975 level of $229 million. If this excess had gone into Alaskans' pockets, it would have increased real personal income during the period, $247,724 million, by 19 percent. In FY 1975, real unrestricted general fund revenues, exclusive of petroleum revenues, were $616 million. If Alaskans had chosen to keep the proportion of income that they spent on public goods constant, they would have increased the $616 million of the budget funded from their pockets by 19 percent, or $117 million. Over the 21 years, the additional annual expenditures of $117 million in FY 95 dollars would have meant cumulative additional spending of $2,458 million. This would mean that 95 percent of the general fund petroleum revenue during this period would not have been spent on State programs if it had first gone into voters' pockets.

Of course, the marginal propensity to consume public goods is not constant. As incomes increase, relatively less may be spent on public goods. Government is often thought of as performing certain essential functions of society. Absent wars, disasters, etc., these functions should consume a smaller proportion of society's resources as a state or nation grows richer. Marx believed that eventually the state would wither away. The current legislative and executive leadership would just like to see some departments of State government wither away.

But, other changes besides the level of income can increase the proportion of income spent on public goods. Increased urbanization; increased pollution, congestion, and other external costs of an economy growing in size and complexity; increased education and training for a more specialized, complex, technological society; and assumption of greater responsibilities by government for social welfare and medical expenses of the aged, disabled, and others have swollen the size of state and local government relative to the economy as a whole.

> "**. . .** the federal government buys virtually the same fraction of goods and services from the economy as it did in 1940. It is the states and localities that have vastly enlarged their purchasing, with much larger health and education and transportation programs.[94]

Alaska has experienced these changes as well as the rest of the U.S. But, the magnitude of the shifts over

[94] Economics Explained, page 109, Robert Heilbroner and Lester Thurow, Simon and Schuster, 1994.

the 1975-95 period has not fundamentally changed the character of Alaska. This, along with the almost complete reversion of real per capita spending to 1975 levels, means that there has been a massive misallocation of resources to State and local government.

Scott Goldsmith with the University of Alaska's Institute of Social and Economic Research estimated that during 1979-88 state government spent $17 billion more in 1988 dollars than needed to maintain state spending on par with the rest of the economy.[95] In fiscal year 1995 dollars, this would be $21.4 billion. The main differences between Goldsmith's $21.4 billion and this study's $47.8 billion estimate of state spending added by oil revenue are that:

- Goldsmith's estimate covers only 10 of the 20 years included in the $47.8 billion estimate; and,
- the $47.8 billion of additional spending is in comparison to 1975 non-petroleum revenue general fund spending versus Goldsmith's comparison with 1979 total general fund spending.

Differences are also due to the fact that Goldsmith used a more detailed, econometric analysis to arrive at his estimate. Goldsmith also estimates that

> "In the early 1980s population was 90 thousand higher than would have been the case if government spending had grown at a maintenance rate."[96]

Alaska's population ranged from 434,300 in fiscal year 1981 to 550,700 in fiscal year 1986.

Misallocation of revenues does not mean that there are no benefits from spending them on government. It means that the benefits could have been higher if put to some other use. The real question is "What is the loss in net benefits to society?" Gauging the loss is beyond the scope of this report.

20. Fixing Misallocation

If the benefits of petroleum revenues to society are seriously impaired by allocating them, without question, to government, what is the remedy? The following possibilities present themselves:

- write checks directly to Alaskans—the U.S. Government signs the checks;
- pass through oil revenues to Alaskans—the State signs the checks;
- deposit oil bucks in the Permanent Fund, with real earnings used for only dividends; or,
- deposit oil money in a public resource trust or corporation, with all real earnings paid out to Alaskans.

The first two possibilities, which place money in Alaskans' pockets as it comes in, would upset the economy just as much as pouring it into the State treasury's general fund.

Only the latter two approaches would provide both more stability and a more optimal allocation of resources. They would avoid booms and busts. They would bequeath greater equity to future generations. They would maintain the best balance between public and private spending.

But, absent a Constitutional amendment, the key element of the third approach—spending Permanent Fund earnings only on dividends—is subject to the discretion of the legislature and governor. Only the fourth approach—in essence, a permanent fund outside government—would assure that petroleum revenues flow in a stable fashion into the private sector.

Funneling the State's share of OCS lease revenues into a public resource trust or other entity would require a change in OCS statutes.

[95] "The Economic Cost of a Rent Induced Business Cycle: The Alaska Petrodollar Boom", page 26, Oliver Scott Goldsmith, ISER Fiscal Policy Working Paper #3, Institute of Social and Economic Research, University of Alaska Anchorage, presented at the Annual Meeting of the Western Regional Science Association, February 26, 1991.

[96] "The Economic Cost of a rent Induced Business Cycle: The Alaska Petrodollar Boom", page 22.

The legal entity that would best play the role of permanent fund is a question for accountants and tax lawyers. It might be a trust, a corporation, or something else. A contribution to a trust or distribution of stock in a corporation generally does not create tax liabilities for beneficiaries or shareholders. Receipt of income distributions or dividends does.

A trust is a pass-through device under income tax laws. Income is taxed once, either at the trust level or beneficiary level. Generally, beneficiaries pay tax on the distributions of trust income that they receive. The trust gets a deduction for its distributions. If the trust distributes all of its income each year, it would owe no tax.

The modern approach for endowments is to pay out a percentage of a fund's average market value over the last several years. This has the advantages of: being less volatile than a distribution based on income, however it is defined; and, separating investment management decisions from beneficiary distribution decisions.

Most endowments are tax-exempt educational, religious, or charitable institutions. If a public resource trust did not gain tax-exempt status, by legislation or otherwise, there may be tax issues associated with the endowment pay-out methods that need to be looked at.

In contrast to trust beneficiaries, shareholders in corporations suffer double taxation. Income is taxed at the corporate level, and again as individual income when it is distributed as dividends.

An important point would be that the trustees or directors be held to fiduciary duties of care and loyalty to beneficiaries or shareholders. The duty of care should include a standard of prudence in managing investments equal to that of a professional institutional investor. The duty of loyalty should be to act only in the interests of the beneficiaries or shareholders.

21. The Tax Anchor

All four approaches would require the State to levy taxes from the general populace to fund government spending. A tax anchor is a key mechanism for assuring the proper scope of government spending. "No representation without taxation" has been suggested as a battle cry.

Channeling all oil dollars through taxpayers pockets will of course raise their federal taxes. From the State's standpoint this is a loss that need not be incurred if the money is going to be used for State programs anyway.

But, note three things:

- The argument begs the question of whether the money would be used for State programs anyway. There are many who would cut State and local government further.
- To get the money back from taxpayers with a State income tax, there will be a federal tax savings. The State tax gives some taxpayers a federal deduction, as well as a State tax bill. In essence, the U.S. Government pays part of the State tax bill.
- It turns out that, for Alaska as a whole, the value of the deductions outweighs the federal tax bill on PFD's. Only if a state income tax were structured in a highly regressive manner—an unlikely proposition—might federal tax deductions be less than federal tax liabilities on PFD's, for the state as a whole.
- There are effects on the distribution of income from cycling oil money through taxpayers' hands. Thus, the politics of doing this would become impossible if it went beyond revenues surplus to the essential functions of government. What those surplus revenues are is another question. This report suggests that they are all revenues derived from nonrenewable resources. Others might view them as only those derived from the State's ownership interest in such resources, or none at all.
- From a national perspective, changes in federal tax receipts must also be counted in the net benefits equation.
-

Still, it is an active debate in Alaska whether it is better to balance the budget with budget cuts, Permanent Fund earnings and dividends, or taxes. The costs of these four options to Alaska residents can be compared as follows.

Assume some amount of budget that we want to balance by these four options. To make use of the latest federal income tax data (1996), let's say the deficit is equal to the amount of Permanent Fund dividends (PFD) for 1996, plus PFD program administration costs and public assistance recipients' PFD hold harmless costs. These totaled $634.4 million, somewhat less than general fund deficits facing the State for fiscal years 1999 and 2000.

The following is the cost to Alaska residents to balance a $634.4 million deficit with each of the four options. We performed the calculations of State and federal income tax effects in part with an income tax model developed by the Alaska Department of Revenue for analysis of a State income tax proposed by Governor Tony Knowles in 1999.

From a national perspective, costs would include the changes in federal taxes and non-residents' taxes. On this basis, the only option with direct cost savings would be elimination of the dividends. The savings would be the elimination of the PFD program administration costs —$4.9 million in FY year 1997. Increased federal public assistance costs would offset the State savings in hold harmless costs.

TABLE V.2

COST TO ALASKA RESIDENTS TO BALANCE $634.4 MILLION BUDGET DEFICIT ($ MILLIONS)

Option	Lost Program Benefits at Cost	Lost Dividends	Additional State Taxes	Reduced Federal Taxes	Total Cost
Budget Cuts	$ 634.4				$ 634.4
PF Earnings Present Value		634.4		-49.5	584.9

Dividends	607.8		-47.4	560.4
State Income Tax (7.4% of 1996 Federal Taxable Income)				
Residents		597.5	-93.1	$504.4
Non-Residents		40.9	NA	NA
Total Income Tax		638.4		

Sources:

1. Statistics of Income, Internal Revenue Service, Tax Year 1996.
2. "tax model 8deb2", Excel spreadsheet, Alaska Department of Revenue.
3. Fiscal Note, Alaska Credit Individual Income Tax", Income and Excise Audit Division, Alaska Department of Revenue, February 8, 1999.

22. Budget Cuts

We assume the loss to residents from budget cuts is the cost of the programs that are cut. The value of the programs—their net benefit to society—may be more or less than their cost. Non-residents would actually experience the loss in value to some extent as well.

23. Permanent Fund (PF) Earnings

This option takes $634.4 million from Permanent Fund earnings to balance the budget. It assumes that there are earnings in excess of this amount, so that the Permanent Fund dividend program continues.

If the $634.4 million were not taken from the earnings, the amount would remain in the Fund and increase the amount of future dividends. The present value of these lost future dividends is exactly $634.4 million. This assumes the $634.4 million remains permanently in the Fund and that the future dividends are valued at a discount rate equal to the Fund's earnings rate on its investments.

Under the assumptions given, funding the deficit with Permanent Fund earnings pulls money out of the State economy, as does cutting dividends or levying income taxes. It's just that it pulls it out of the future economy. Of course, moving it to the present is certainly a stimulus to the current economy. But, it reduces economic activity in the future.

We assume that the PFD program remains in place, with dividends paid from Fund earnings in excess of the amount taken to balance the budget. Thus, we assume the administrative costs of the dividend program and the State's hold harmless costs for public assistance recipients remain the same.

The loss of future dividends will reduce dividend recipients' future federal taxes. The present value of these reductions in future taxes, discounted at the Permanent Fund earnings rate, is $49.5 million. Thus, the net cost to Alaska residents in present value terms is $584.9 million.

24. Dividends

If the dividend program is eliminated, the amounts spent by the State for the program's administration and the hold harmless—$26.6 million in FY 97—will be available to help meet the deficit.

The amount—$607.8 million—that would have been paid as dividends is the cost to Alaskans. This loss is offset by $47.4 million in reduced federal income taxes. The net loss is $560.4 million.

25. State Income Taxes

To raise $634.4 million in State income taxes, would cost about $638.4 million because of an estimated $4 million in annual costs to administer an income tax[97].

[97] "Fiscal Note, Alaska Credit Individual Income Tax", Income and Excise Audit Division, Alaska Department of Revenue, February 8, 1999.

Alaska residents would pay $597.5 million. Non-residents would pay the $40.9 million difference. This is a conservative estimate of non-resident tax receipts. It includes individual income tax only on non-resident wages and salaries. It includes no taxes on non-resident business income from partnerships, S corporations, limited liability companies, etc. Furthermore, non-resident exemptions and deductions are not reduced pro-rata by the ratio of their Alaska income to their total income.

Resident tax payments would be far less if credits or deductions were allowed for Permanent Fund dividends or the Alaska longevity bonus, as proposed by Governor Tony Knowles. But, there may be questions about the Constitutionality of such a tax structure.

As a result of their State tax payments, taxpayers that itemize deductions would see their federal tax liability reduced by a total of $93.1 million. Thus, the net cost to residents of balancing the budget with a State income tax should be no more than $504.4 million.

26. Equity

Eliminating deficits with Permanent Fund earnings or dividends is regressive. Every Alaska resident "pays" the same amount. Caps, reductions, or elimination of dividends, now or in the future, take a greater percentage of poorer households' income than they do richer households'.

The State income tax costs contained in Table V.2 are based on taking the same percentage of every taxpayers' federal taxable income. The State rate is neither regressive nor progressive. It is a flat rate of 7.4 percent of federal taxable income.

But, federal taxable income is calculated in a progressive manner. Exemptions and standard deductions offset a greater proportion of income in lower tax brackets. Thus, this particular State income tax winds up being somewhat progressive. But, not to the degree of the federal income tax, which builds in additional progressivity with higher tax rates at higher income brackets.

Table V.3 compares the relative burdens of funding budget deficits with Permanent Fund dividends and a State income tax. Eliminating dividends would take away 15 percent, on average, of the incomes of taxpayers with less than $30,000 in annual income. But, it would only reduce the incomes of those earning over $100,000 by about 1 percent. In contrast, this State income tax would cost low-income households 3.5 percent of their incomes, compared to slightly larger 4.9 percent for the wealthiest households.

With an income tax, the rich pay 40 percent more of their income than do the poor. Their relative burden is 1.4 times that of the poor in terms of percent of income paid. With no dividends, the poor pay 1,158 percent more of their income than do the rich. Their relative burden is 12.58 times that of the rich.

TABLE V.3

ALASKA RESIDENTS' BURDENS OF BUDGET BALANCING OPTIONS BY ADJUSTED GROSS INCOME (AGI)

(NET OF FEDERAL TAX SAVINGS)

AGI Range ($ 000)	< $30	$30 < 50	$50 < 75	$75 < 100	>= $100	Total
Alaska Residents'1996 Income (AGI)						
$ Millions	1,891	2,074	2,520	1,722	2,945	11,152
1996 PFD						
$ Millions	285	105	90	45	36	560
% of Income	**15.1%**	**5.0%**	**3.6%**	**2.6%**	**1.2%**	**5.0%**
Alaska Residents' State Income Tax (7.4% of Federal Taxable Income)						
$ Millions	67	97	117	79	144	504
% of Income	**3.5%**	**4.7%**	**4.7%**	**4.6%**	**4.9%**	**4.5%**

Source:
1. Statistics of Income, Internal Revenue Service, Tax Year 1996.
2. Tables I and II, Appendix.

About 47 percent of Alaska residents have incomes below $30,000.[98] This poorest income bracket received 17 percent of total adjusted gross income for the state. Without the PFD, the poorest 47 percent of Alaskans' share of total income would have been about 15 percent in 1996.

Donald F. Gordon, of the Center for the Study of Business and Government, City University of New York, addressed the issues surrounding the State's wealth in 1981. Then, they were somewhat more academic than the difficult choices the State now faces in the throes of its budget crisis. He stated his views on distributing the State's oil wealth directly to Alaska residents, and on the inequity of not doing so:

"I am going to suppose that we truly believe that the wealth belongs to all Alaskans…I have no belief in equality of income or wealth, and am probably to the right of President Reagan or even Mr. Stockman on that. I do not believe in a progressive income tax above some middle-class level, and believe its popularity is a result of middle-class envy of the rich, the productive and the successful. I believe in property rights (i.e., human rights) and a free market. Hence, I do not believe in expropriating the property rights of the poor or the rich, but certainly not those of the poor…I have called this option, "Give It To The People" …But that is really a gross misnomer. A better title would be "Refrain From Expropriating More Of The Peoples' Property," because the question is not that of "giving" it to them. It is

[98] Table I, Appendix.

theirs."[99]

27. Income Inequality

Income inequality has decreased in Alaska. The ratio of the incomes of the highest 20 percent to the lowest 20 percent of Alaska families fell from an average of 9.9 for the period 1978-80 to 8.0 during 1994-1996. Alaska moved in the opposite direction of the national trend. For the same period, the national ratio increased from 7.7 to 10.7.

These figures also reveal that before PFD's, Alaska's income inequality was almost 30 percent greater than nationally (9.9 versus 7.7). By the mid-90's, Alaska's inequality was 25 percent less than nationally (8.0 versus 10.7).

Alaska is one of only five states whose income inequality decreased over this period. Alaska's income ratio decreased by 1.9, more than any other state. The next closest of the five was North Dakota, whose ratio decreased by 0.5.

Alaska, with its ratio of 8.0, was not far above the state with the least inequality—again, North Dakota—which had a ratio of 13.8. Other states with ratios over 13.0 were New York, New Mexico, and Louisiana.[100]

It is interesting that another state—Louisiana— with a high dependence on the oil industry should be at the opposite end of the inequality spectrum from Alaska. All this data on inequality strongly suggests that PFD's have had a major effect on the level and trend of income inequality in the state. Of course, there are other factors that have played a role, including Alaska Native Claims Settlement Act (ANCSA) corporate distributions.

28. What to Do

Budgets should be cut first. In theory, cost-benefit analysis would tell us what programs should be funded at what level, to maximize social welfare. In practice, the messy political budget process will have to parcel out society's income between public and private goods.

This apportioning will be infinitely better if those persons that public goods are designed to benefit bear the costs. Those persons will know how much is enough. It will be when they can get a better deal elsewhere. If the political machinery creates the illusion that the programs are costless, because there is nothing else that can be done with the oil dollars, there will never be enough of the programs. As Jim Rhode, a legislative aide present at the birth of the Permanent Fund said, "There is always a shortage of free goods."

With a level of public expenditures decided upon, funding for them should flow through taxpayers' pockets. This is best done with a public resource trust or possibly a corporation. This would stabilize the flow and avoid any temptation for government to siphon the oil money directly into its coffers.

29. Geographic Inefficiencies

The fact that the benefits of Alaska OCS revenue sharing would flow only to Alaskans would create some economic distortions. Requiring residency as a condition for receipt of resource trust distribution increases the Alaska population. Gregg Erickson has suggested there are three ways this occurs:

- the money is spent largely in Alaska, increasing demand, jobs, and population;
- it attracts some newcomers to the state and keeps some residents from leaving; as distributions per beneficiary become larger, they become much more visible nationally; over time, this would magnify their effect as a magnet pulling in outsiders; and,

[99] "The Problems of Wealth", Donald F. Gordon, pp. 3-4., in The Trustee Papers, Alaska Permanent Fund Corporation, March 1982.
[100] The State of Working America 1998-99, pp. 322-323, Lawrence Mishel, Jared Bernstein, and John Schmitt, Economic Policy Institute, ILR Press (Cornell University Press), 1999.

- per capita distributions act as a birth incentive.[101]

Tying beneficiaries' feet to the tundra produces some economic inefficiencies. It depresses wages in Alaska while raising them elsewhere. Greater savings may reduce bank lending rates in the state. The result is that some people and savings stay in Alaska when they could make more money elsewhere. This reduces national economic benefits.

Scott Goldsmith points out another global economic inefficiency. The higher cost of living in Alaska is an extra cost to the nation for the extra migrants attracted to Alaska.

> "The manufacture of coats for Alaska residents is a real economic cost to society associated with production in the remote location."

Goldsmith estimates the total bill for the excess population attracted to Alaska during the 1980's to be $1.7 billion (in 1988 dollars), based on a cost-of-living differential of 25 percent.

The additional population also strains public services. It dilutes the public resource wealth, whether received by residents as free government programs, reduced taxes, or PFD's. But, this is only a problem when residents are not taxed to pay for the cost of government services. If residents must pay their way for government services, a main objection to increased population disappears. The greater tax burden would also deter some of the net migration to the state.

A distribution of rights, as well as trust income, has been suggested to eliminate the geographic distortions. A one-time or periodic distribution of the rights to receive distributions from an OCS resource trust could be made to residents of Alaska at the time of the distribution(s). Recipients could keep their rights to distributions regardless of where they lived. This would reduce the inefficiencies of conferring resource benefits on a particular geographic region. It would not eliminate them because many recipients would continue to live in Alaska, spending or saving the distributions in-state.

One-time or periodic distributions should not allow for the sale of the rights. If they did, it would defeat efforts to insulate the Alaska economy from the instabilities of resource revenue spending. The price of rights to distributions would represent the present value of all future distributions of the trust. Their total value could be equal to the market value of the remaining oil or gas reserves at the time of distribution.[102]

If everyone sold their rights and spent the money in Alaska, it could cause a far bigger boom than if the government spent the OCS revenues as they come in. It would be like spending in one mad spree all the revenue from a field for its entire producing life.

Distribution of rights would not be taxable as income. But, the proceeds of their sale would be.

One-time or periodic rights distributions would create different classes of beneficiaries and non-beneficiaries in Alaska. The social and political problems, as well as litigation and legal uncertainty, of rights distributions give one pause.

In sum, vesting residents with portable rights to trust income must weigh marginal gains in national economic output against increased social division within Alaska. Of course, a fundamental way to eliminate geographic inefficiency is to distribute the revenue sharing portion of OCS revenues nationally or deposit it in the U.S. Treasury. But, this would belie the reasons revenue sharing was established in the first place.

30. Savings Inefficiencies

Saving 100 percent of resource revenues in a trust will not maximize economic output or be socially optimal. If the revenues were distributed directly to Alaskans,

[101] "Larger Dividend Checks Will Draw More People to Alaska", Gregg Erickson, Alaska Daily News, page B-6, August 4, 1997.

[102] Among other things, the price would depend on whether the rights conferred were to a particular share of the trust earnings in perpetuity or for the life of the beneficiary.

each recipient would decide how much to spend and how much to save. For many, spending some or all of the revenue will be of more value than saving it. For others, there will be investment opportunities superior to those a trust fund would face. Retirement status, or the number of years until retirement, will play a big role in individual savings decisions.

The purpose of savings and the time horizon for use of the savings will affect not only the proportion of income saved, but investment choices for the savings as well. Those with a longer time horizon to retirement would normally invest savings for that purpose more aggressively.

Thus, the idea of a single trust saving 100 percent of resource revenues may not be the best we can do. Shares of trust assets, or even individual trusts, which allowed investment asset allocations best suited to the purpose and time horizons of individual beneficiaries would improve the efficiency of savings. But, this would be impossible to do without granting rights to proportionate shares of trust assets, and the income therefrom. Alaska would again face different classes of trust beneficiaries created by one-time or periodic distribution of rights, this time to assets, rather than income.

Alternatively, the sustainable revenue concept might be used as a way to distribute some of the resource revenue directly to individuals without throwing the economy off balance. This would be an alternative to limiting distributions to investment earnings on the revenue. It would provide some leeway for individuals to determine the proportion to be saved. But, the sustainable revenue concept's sensitivity to oil prices, trust rates of return on investments, and oil production decline rates would leave the economy exposed to some risks of booms and busts.

31. Supply-Side Effects

Income taxes and use of Permanent Fund earnings or dividends to balance budgets would affect labor supply and cost, investment activity, and ultimately the supply of goods and services. Income taxes may discourage people from working and investors from taking risk. Taxes may drive them elsewhere, if there are lower tax regimes in the region or nation. Some of this effect is offset by efforts to regain the income lost to taxes. Relatively small tax rates may have modest supply-side effects. But at some point, high enough rates can wreak havoc.

If government expenditures were linked to taxes, taxpayer feedback would exert some control over the level that expenditures, and thus taxes, might reach.

Eliminating or reducing dividends might be expected to increase the incentive to work and the labor supply, and hold down salaries and wages. But, the picture is confused by the magnet effect of dividends on migration. If enough people decided not to come to Alaska or to leave because of the absence of dividends, labor supply and costs might not change much. Dividends provide a modicum of investment capital. Dropping dividends might depress marginally the ability of individuals or small business to come up with equity capital. It would have an even slighter effect on the availability or cost of lending in Alaska.

32. Conclusion

Channeling Alaska OCS revenue sharing into a public resource trust or corporation can mitigate the inefficiencies created by the timing and government spending of those revenues (the temporal and public sector allocations of the revenues). No clear remedy exists for the geographic, savings, and possible supply-side inefficiencies that a public resource trust for Alaskans would create. These have been small in comparison to the economic costs of unrestrained government spending booms and busts. But, an increasingly large and visible PFD would cause increasing economic distortions in the future.

Measures to mitigate the direct economic impacts of oil development are also important. But, stabilizing and restraining State and local government spending will cut the biggest problems associated with oil development in Alaska down to size.

Appendix A

(Add two tables here)

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally-owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. Administration.