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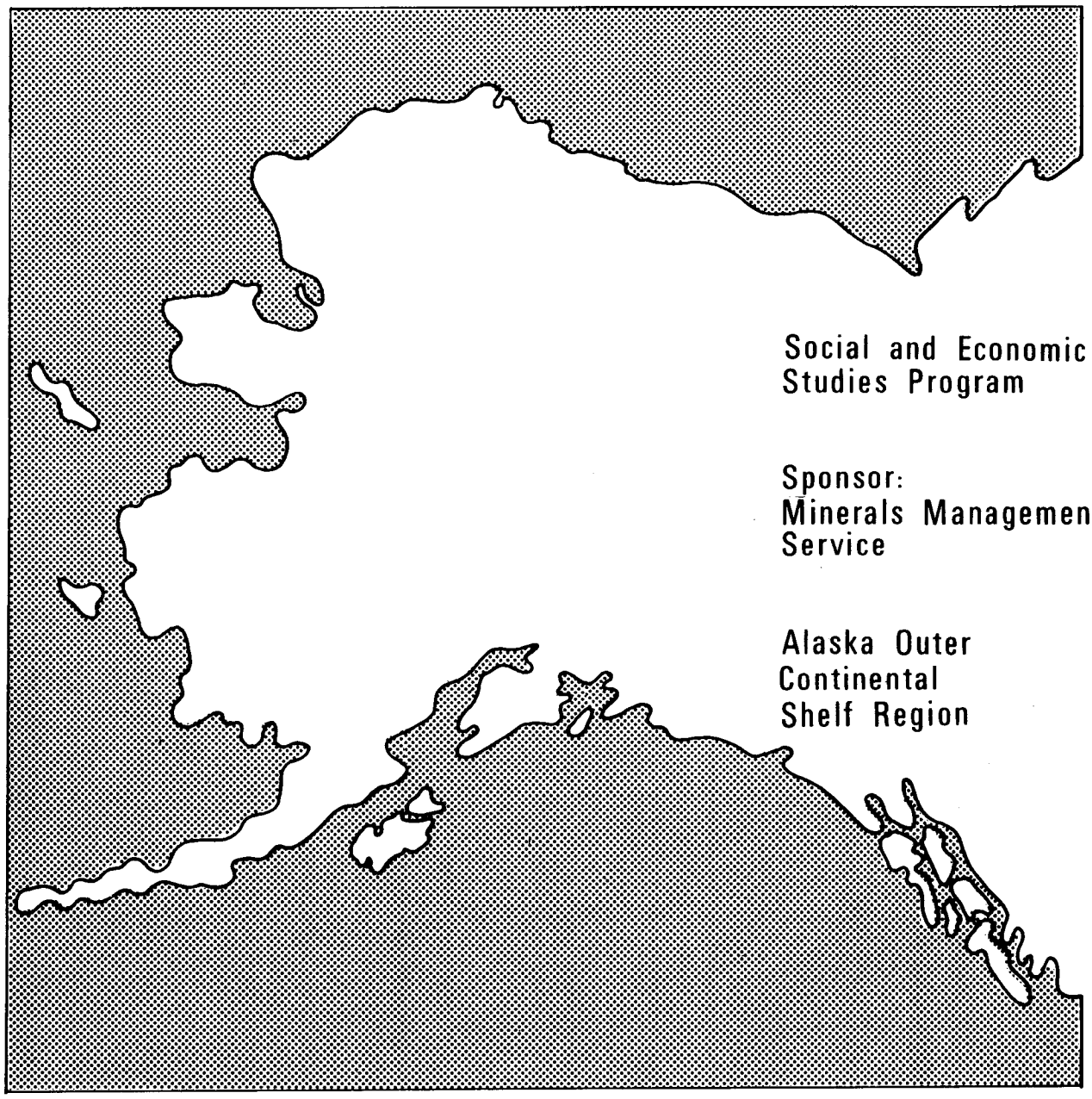

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Community Economic and Demographic Systems Analysis of the Norton Basin Lease Sale 100

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COMMUNITY ECONOMIC AND DEMOGRAPHIC SYSTEMS ANALYSIS OF THE NORTON BASIN LEASE SALE 100

Prepared for

Minerals Management Service
Alaska OCS Office

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N O T I C E

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COMMUNITY ECONOMIC AND DEMOGRAPHIC SYSTEMS
ANALYSIS OF THE NORTON BASIN LEASE SALE 100

PREPARED BY

INSTITUTE OF SOCIAL AND ECONOMIC RESEARCH
UNIVERSITY OF ALASKA
ANCHORAGE, ALASKA

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ABSTRACT

In this report, we develop a description of the economy and population of Nome. In addition, we examine possible impacts of the Norton Basin Lease Offering (OCS Sale 100) upon the population and economy of Nome. We prepared the projections using the Institute of Social and Economic Research's Rural Alaska Model (RAM model).

Our model projections suggest that development of OCS 100 would have a relatively small impact upon Nome, increasing resident employment by a maximum of 8 percent and resident population by a maximum of 5 percent. However, this result depends upon numerous assumptions. Changing some of these assumptions could change the projected impacts of OCS Sale 100.

For example, we assumed that all offshore OCS jobs were held by nonresidents. If local residents obtained some of the offshore jobs, or if some of these workers chose to settle in Nome, the impacts of the sale would be greater. In addition, our model does not consider possible indirect effects of the lease sale such as additional local government revenues due to the taxation of onshore oil facilities.

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I. INTRODUCTION

In this study, we examine possible impacts of the Norton Basin lease offering, scheduled for June of 1984, upon the population and economy of Nome.

Model Projections

In order to examine the impacts of offshore oil development in the lease area, we use a model to project a number of economic and demographic variables for Nome. The model is the Rural Alaska Model, or "RAM" model, which was developed at ISER with the support of the Minerals Management Service Social and Economic Studies Program for use in projecting impacts of OCS development. A detailed description and documentation of the RAM model is provided in several previous technical reports of the Alaska OCS Socio-economic Studies Program, most recently in Technical Report Number 87, "St. George Basin and North Aleutian Basin Economic and Demographic Systems Impacts Analysis" (June 1984).

We prepared model projections for development in the absence of the lease sales (the base case) and development with the lease sale (the impact case). The differences between these cases are the projected impacts of the lease sale.

The RAM model has several hundred equations and is calculated by computer, but it actually uses a relatively simple procedure in projecting various economic and demographic variables. Essentially, we first develop assumptions about basic employment for each year of the projection period. We also make assumptions about how many local-oriented or "support" jobs are generated by each basic job. Based on these assumptions, the model calculates total employment in the community.

We also make assumptions about population growth rates, labor force participation rates, and the extent to which people move into the community in response to new employment opportunities or leave the community in response to lack of employment opportunities. Based on these assumptions, the model calculates population variables for each year of the projection period.

Finally, in order to project impacts of OCS development, we make assumptions about total OCS-related employment broken down by skill level, duration of employment, and whether or not jobs are located onshore or offshore. These assumptions are provided by the MMS Alaska OCS Region. We make additional assumptions about the extent to which local residents could fill OCS jobs and the extent to which new OCS workers would become residents of the community. Based upon all of these assumptions, the model projects total employment and population that would occur with OCS development.

The primary advantage of the RAM model over simple hand calculations is that the model can systematically and rapidly perform a great number of calculations. However, as with any projection of the future, the RAM model's projections are only as good as the underlying assumptions. There are considerable difficulties in developing these assumptions for small communities such as Nome.

For example, we have attempted to base our assumptions upon data which describe current conditions in Nome. However, in many cases data are several years out of date, are available only at highly aggregated levels, or are simply not available at all. Even where data do exist, they may not accurately reflect year-round population and employment conditions, which can vary significantly from season to season.

An even more difficult problem than the lack of data arises from the difficulty of making assumptions about conditions in future years. Even where reliable data are available on current conditions, these conditions are not necessarily a reliable guide to the future. Other difficulties arise with respect to our assumptions about the nature and location of OCS-related employment and the availability of these jobs to local workers. Our projected impacts are for the particular OCS employment levels assumed by the OCS MMS Alaska OCS Region, which are based on specific oil development scenarios. Obviously, with different oil development scenarios, the impacts might differ. Similarly, mitigating factors such as local hire conditions or enclave-basing conditions which might be imposed on

oil development projects could significantly affect the nature of impacts.

To sum up, we feel that our RAM model projections can provide a useful indication of the kinds of impacts which OCS development might have upon Nome, but neither the base case nor the impact case projections should be viewed as highly accurate predictions of the future. It is simply not possible to be highly accurate in predicting the future for small Alaska communities, given the many uncertainties that surround their development.

Organization of This Report

In Chapter II, we describe the population and economy of Nome and present our projections for Nome. Our description of Nome's history, current population, and employment are based upon published sources rather than extensive original research.

After our description of Nome, we review the major assumptions used for our RAM model projections. We then summarize the results of our base case and impact case projections. We summarize the results of the study in Chapter III.

Appendix D provides data on population, employment, and income in Nome as well as a discussion of how we used this information in developing our RAM model projections. Appendix E documents our RAM model assumptions in detail, and Appendixes F and G present our RAM model projections in full.

CHAPTER II: NOME

In this chapter, we briefly describe the history, population, and economy of Nome. We then discuss the assumptions which we used for our RAM model projections for the community. Next, we present base case projections of the population and economy of Nome in the absence of development from OCS Sale 100. Finally, we present projections of population and employment if development occurs in these lease areas, and we discuss the projected impacts of the sales.

Our description of Nome in this chapter is intended to provide a brief introduction to the community as well as a starting point for our projections. We refer readers desiring a more detailed description of Nome to "Bering-Norton Petroleum Development Scenarios Local Socioeconomic Systems Analysis" (SESP Technical Report Number 53), prepared by Policy Analysis, Ltd., in June 1980, and "The Regional Socioeconomics of Norton Sound" prepared by John Muir Institute, Inc., in August 1983. These studies include a detailed discussion on many aspects of the community of Nome including its history, infrastructure, population, and economy. We have based our description of the community primarily upon these studies.

History

Nome's origin stems back to the turn of the century with the discovery of rich gold deposits on the Seward Peninsula. Nome, originally named Anvil City, was the scene of a substantial gold discovery in July 1898. Word soon spread about this discovery through the rest of Alaska and the outside world. Anxious prospectors began coming to Nome during the summer of 1899. Ships arrived in great numbers, and cargo and supplies were piled as high as two-story houses along Nome's waterfront. In 1899, the population of Nome had grown to 3,000. Residents were sheltered in a few frame and galvanized iron buildings and hundreds of tents.

The tremendous growth in the area's population which accompanied the discovery of gold introduced increasing pressures on the natural resources and social structure of the area. Lack of timber created an immediate housing crisis, and supplies shipped by ocean steamer were extremely expensive. The U.S. Census for 1900 placed the population of Nome at 12,488. With the great population influx, community life became chaotic. A consent form of government was established, and incorporation was passed in April 1901. By the end of 1906, Nome had become an established town.

By 1906, all major placer deposits had been discovered. From 1898 to 1906, the placer mines of the Seward Peninsula had produced $37,247,000 in gold. From 1907 to 1914, the region saw a decline in gold production. Mining came to almost a standstill with the onset

of World War I, lasting until 1923. From 1929 to 1934, through the midst of the depression, mining in the region held its own. By 1932, gold rose in price from $20.67 to $35.00 an ounce, which further stimulated operations. World War II halted mining operations and, following the war, rapidly rising costs forced many operations to remain closed.

Following the initial gold rush in Nome, the population dwindled to 852 in 1920. The town's land use patterns were basically established. Since that time, Nome has shown steady but modest growth with a present population of 2,842. From the initial bonanza town in the early 1900s, Nome has displayed a somewhat stagnant economy through present day. Although mining and commercial fishing activities have increased in recent years, the thrust of the economic activity is government service delivery and tourism.

Population

In this section, we briefly describe the population of Nome. Appendix D provides sources for the figures cited in the text as well as a more detailed description of population.

During the gold rush era of the early 1900s, Nome's population skyrocketed to over 12,000 people. In the ten years following this great influx, Nome saw its population dwindle to just over 2,000 people. By 1920, the population of Nome was only 852. Since that time, Nome has shown a consistent but moderate growth pattern.

Over the next fifty years, Nome experienced steady growth, which brought its population to 2,488 by 1970. Table II-1 provides selected population data for Nome during this period.

Between 1970 and 1980, Nome's population fluctuated. According to a regional census, the population declined slightly to 2,380 in 1975. According to the U.S. Census, the population dropped further by the end of the decade with the 1980 census showing Nome to have a total population of 2,301. This change in population from 1970 to 1980 would represent a 7.5 percent decline in total population.

The 1980 Census figure of 2,301 has been disputed by the city of Nome. The city of Nome cited a figure of 2,921 as an October 1981 population estimate. Two estimates presented in SESP Technical Report 53 show estimates of 2,842 in 1979. Throughout Alaska, 1980 Census figures have been disputed and adjustments made. Given the nature of development and population growth in Alaska, a significant decrease in the population of Nome during the period of 1970-1980 seems unlikely. For the purposes of this study, we assumed a 1980 population of 3,000. However, in any case, our population assumptions do not substantially affect our analysis of projected impacts of OCS development.

Despite the uncertainty associated with 1980 census figures, they still provide useful information about the distribution of Nome's population by age, sex, and race (Table II-2). Age distribution in

TABLE II-1.
SELECTED POPULATION DATA FOR NOME, 1939-1970

Population of Nome City, Selected Years

Year	Population
1939	1,559
1950	1,876
1960	2,316
1970	2,488

Population of Nome Election District by Sex and Race, 1960

	Total	Male	Female
Native	4,634	2,330	2,224
Non-Native	1,457	1,110	427
Total	6,091	3,440	2,651

Population of Nome by Age, Sex, and Race, 1970

	AGE						
	0-4	5-14	15-19	20-34	35-64	65+	Total
Total	297	681	257	491	644	100	2,488
Male	163	334	126	254	351	62	1,290
Female	134	347	131	237	311	38	1,198
Native							1,554
Male							786
Female							768
Non-Native							934
Male							504
Female							430

SOURCE: Review of Business and Economic Conditions, University of Alaska, Institute of Social, Economic, and Government Research, September 1973, Vol. X, No. 2.

TABLE II-2
1980 CENSUS FIGURES FOR NOME POULATION,
BY AGE, SEX, AND RACE

	AGE						
	0-4	5-14	15-19	20-34	35-64	65+	Total
Total	206	450	217	682	612	134	2,301[a]
Male	109	235	114	359	324	76	1,217
Female	97	215	103	323	288	58	1,084
Native	138	322	148	343	302	104	1,357
Male	74	170	70	185	140	55	694
Female	64	152	78	158	162	49	663
Non-Native	68	128	69	339	310	30	944
Male	35	65	44	174	184	21	523
Female	33	63	25	165	126	9	421

[a]Non-Native numbers were calculated by using the difference after subtracting Native numbers from total male/female population.

SOURCE: 1980 Census, Tape STF2B, on file at the Institute of Social and Economic Research.

Nome approaches the expected patterns of normal distribution. This normal distribution is represented by a fairly even reduction in the percentage of population in each succeedingly older age group; however, a significant change has occurred during the ten years between 1970 and 1980. The percentage of individuals under the age of 20 years declined over 10 percent, dropping from 49.6 percent to 37.9 percent. This change is also evident from the increase in the median age during this time. In 1970, the median age in Nome was 21.5 percent for males and 19.5 percent for females. By 1980, both male and female median ages had increased to 26.3 and 25.6 percent, respectively. However, this phenomenon is best explained by a high birth rate during the late fifties and early sixties, which formed a population group that is now between 20 and 30 years of age.

The racial composition of Nome has remained relatively constant in recent years. In 1980, the Alaska Native population accounted for 58.9 percent of the total population, a slight decrease from the 1970 figure of 62.4 percent.

Employment

The primary sources of data on employment in Nome are the 1980 U.S. Census, the Alaska Department of Labor, and reports prepared for the OCS office by Ender et al. and by the John Muir Institute. Appendix D provides a detailed discussion of each of these data sources.

Economic activity in Nome consists primarily of government and support activities rather than basic industries such as mining or fishing. Nome is a center for much of the economic activity occurring throughout the surrounding region, including transportation, communications, services, trade, and governmental functions. Employment is cyclical, peaking in the summer months and bottoming out during the winter months.

Tables II-3--II-5 provide selected 1980 employment data for Nome from the 1980 Census. Government employment accounted for over 44 percent of employment counted by the census (Table II-3). Retail trade, professional educational services, and public administration are the three industries that contribute the most to employment in Nome (Table II-4). Professional services, administrative support, and other services are the three occupations which contribute the most to employment in Nome (Table II-5).

Based upon these different data, we developed the employment assumptions for Nome shown in Table II-6. We used these employment assumptions as a basis for our RAM model projections. (See Appendix D for definitions of the employment categories.) As with our population assumptions, while the general pattern of employment assumed is important, the exact numbers assumed do not substantially affect our OCS impact projections.

TABLE II-3
NOME EMPLOYMENT BY CLASS OF WORKER, 1980

Class	Number of Workers
Federal Government	108
State Government	167
Local Government	134
Private Worker	464
Self-employed Worker	48
Unpaid Worker	4
Total	925

SOURCE: 1980 Census, Census Tape STF3A, Table 67, on file at the Institute of Social and Economic Research.

TABLE II-4.
NOME EMPLOYMENT BY INDUSTRY, 1980

Industry	Number Employed
Agriculture, Forestry, Fishing, and Mining	42
Construction	48
Manufacturing: Nondurables	2
Manufacturing: Durables	18
Transportation	75
Communication and Public Utilities	34
Wholesale Trade	7
Retail Trade	139
Finance, Insurance, and Real Estate	6
Business and Repair Services	43
Personal, Entertainment, and Recreational Services	54
Professional Health Services	85
Professional Education Services	168
Other Professional Services	38
Public Administration	166
TOTAL	925

SOURCE: Special Tabulations for 1980 Census, from U.S. Bureau of the Census Tape STF3A, Tabulation 65, on file at ISER.

TABLE II-5.
NOME EMPLOYMENT BY OCCUPATION, 1980

Occupation	Number Employed
Executive Administrator, Manager	79
Professional	190
Technical Related Support	35
Sales	72
Administrative Support	208
Private Household Service	3
Protection Service	7
Other Service	128
Farming, Forestry, Fishing	9
Precision Product and Craft Repair	97
Operators, Fabricators, and Laborers	97
TOTAL	925

SOURCE: Special Tabulations for 1980 Census from U.S. Bureau of the Census, Table 66.

TABLE II-6.
RAM MODEL EMPLOYMENT ASSUMPTIONS

Total Basic Employment	66
Resident fishing employment	9
Resident fish processing	0
Nonfishing related basic employment	57
Total Support Employment	639
Exogenous support employment	297
Endogenous support employment	315
Government sponsored support employment	27
Enclave sponsored support employment	0
Total Government Employment	485
Exogenous government employment	365
Endogenous government employment	120
Total Resident Employment	1190
Nonproject enclave employment	0
Military enclave employment	0

SOURCE: See text.

We assumed total resident employment of 1,190, 70.4 percent of the estimated adult population between 20 and 64 years of age. We assumed total "basic" employment of 66, primarily nonfishing-related basic employment consisting of mining and manufacturing. We assumed total support employment of 639, approximately half of which is endogenous (serving the local community). Finally, we assumed government employment to be 485.

Assumptions for RAM Model Base Case Projections

Table II-7 summarizes our assumptions for our Nome base case projections. Table II-8 summarizes the OCS employment which we assumed for the base case, as directed by the Minerals Management Service. We document our Nome RAM model assumptions fully in Appendixes D and E.

Base Case Projections

The tables in Appendix F show our base case projections in detail. Here we briefly describe and explain these projections.

Table II-9 summarizes our base case resident population projections. Resident population rises over the projection period from 3,000 in 1980 to over 4,600 in 2010 (enclave population remains less than 150 throughout the period). Most of the population increase during the period is due to increases in the Native population. Native population rises by over 1,400 while non-Native population rises by a maximum of about 300 and begins to decline after 2003.

TABLE II-7
SUMMARY OF RAM MODEL ASSUMPTIONS FOR NOME PROJECTIONS

Population Assumptions	
1980 Resident Population	3,000 (1979 city estimate 3,064; 1980 Census estimate 2,334. 1981 city estimate 3,249).
Age, Sex, Race Breakdown of Population	Based on 1980 Census distribution.
Non-OCS Employment Assumptions	
1980 Resident Employment	1,190
Basic Employment	66
Support Employment	639
Government Employment	485
Exogenous Basic Employment	
Resident Fishing Employment	Remains at 9 from 1980 to 2010.
Resident Fish Processing Employment	Remains at 0 throughout projection period.
Nonfishing Related Basic Employment	Remains constant at 57 throughout projection period.
Nonproject Enclave Employment	Remains at 0 throughout projected period.
Exogenous Support Employment	Constant at 297.
Exogenous Government Employment	Remains constant at 365 throughout projection period.
Endogenous Employment	
Endogenous Support Employment	Increases by 1 for every $85 thousand increase in resident income.
Endogenous Government Employment	Increases in response to population growth; response varies depending upon level of per capita state operating expenditures. In 1984, projected government employment is 1 for every 18 residents. In 2000, government employment is 1 for every 22 residents.

Table II-7 (Continued)
Summary of RAM Model Assumptions for Nome Projections

Government-sponsored Support Employment	Increases in response to population growth; response varies depending upon level of per capita state capital expenditures. In 1984, projected government-sponsored support employment is 1 for every 58 residents. In 2000, government sponsored support employment is 1 for every 83 residents.
Enclave-generated Support Employment	Increases by 1 for every increase of 100 in OCS enclave population.
Migration	Twenty percent of the non-Native population over 65 leaves every year. If unemployment rises by more than 5 percent, 30 percent of unemployed Native workers and 60 percent of unemployed non-Native workers leave, taking dependents with them. If unemployment falls by more than 5 percent, new workers arrive to take available jobs, bringing dependents.

OCS Employment Assumptions

All offshore workers assumed to be commuters who only pass through Nome.

All offshore jobs, all onshore short-term skilled jobs, and 80 percent of all onshore short-term unskilled jobs held by nonresidents of Nome.

Each year, ten percent of those onshore long-term skilled workers not hired locally become local residents. Twenty percent of those onshore long-term unskilled workers not hired locally become local residents. Otherwise, workers not hired locally do not become local residents.

Initially, no Nome residents qualify for "skilled" OCS work. However, up to 5 percent of nonskilled workers may be trained each year. No more than 5 percent of skilled OCS positions not filled by skilled local residents are filled by training nonskilled local workers in any given year.

Table II-8

OCS Employment Assumptions for Nome
Sale 100 Base Case

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010
TOTAL ONSHORE JOBS IN THIS COMMUNITY	17	23	17	43	30	90	62	91	87	57	192	138	245	245	245	245	245	209	173
SHORT-TERM JOBS																			
Skilled	12	15	12	25	17	48	33	17	21	5	4	1	0	0	0	0	0	0	0
Unskilled	5	8	5	18	13	42	29	74	66	52	52	1	0	0	0	0	0	0	0
LONG-TERM JOBS																			
Skilled	0	0	0	0	0	0	0	0	0	0	92	92	176	176	176	176	176	148	120
Unskilled	0	0	0	0	0	0	0	0	0	0	45	45	69	69	69	69	69	61	53
TOTAL JOBS OFFSHORE FROM THIS COMMUNITY (Workers either live in this community, or pass through)	101	133	101	396	320	885	723	393	394	114	678	638	1630	1652	1694	1694	1750	1414	1078
SHORT-TERM JOBS																			
Skilled	101	133	101	396	320	885	723	393	394	114	56	16	0	0	0	0	0	0	0
Unskilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LONG-TERM JOBS																			
Skilled	0	0	0	0	0	0	0	0	0	0	568	568	1490	1512	1555	1555	1610	1303	936
Unskilled	0	0	0	0	0	0	0	0	0	0	53	53	140	140	140	140	140	111	82

Source: Minerals Management Service, Alaska OCS Region. Title and notes for original table: "Table 5: Petroleum Activities Affecting the Community of Nome Resulting from OCS Sale 57—Base Case for Proposed OCS Sale 100." Construction employment related to expansion of the Sale 57 terminal and shore base at Cape Nome accounts for most Sale 100 onshore jobs in 1992 and 1993. Prepared by Fred King on October 3, 1984.

TABLE II-9
RURAL ALASKA MODEL POPULATION PROJECTIONS
NOME
MEDIUM BASE CASE

Population

	Resident	Native	Non-Native	Native Male	Native Female	Non-Native Male	Non-Native Female
1981	3059	1814	1245	925	890	686	559
1982	3134	1860	1274	945	916	698	575
1983	3221	1907	1315	965	942	718	597
1984	3279	1953	1326	985	968	721	605
1985	3336	2000	1336	1006	995	723	613
1986	3439	2048	1391	1026	1021	751	640
1987	3514	2096	1418	1047	1049	763	655
1988	3571	2144	1427	1068	1076	765	662
1989	3640	2193	1446	1090	1103	773	673
1990	3697	2243	1454	1111	1131	775	680
1991	3772	2293	1479	1133	1160	786	693
1992	3831	2344	1486	1156	1189	787	699
1993	3889	2396	1493	1178	1218	789	705
1994	3949	2449	1500	1202	1247	790	710
1995	4009	2503	1506	1225	1278	791	715
1996	4070	2557	1512	1249	1308	792	720
1997	4132	2613	1518	1274	1339	793	725
1998	4194	2670	1524	1299	1371	795	730
1999	4258	2728	1530	1324	1404	796	735
2000	4323	2787	1536	1350	1437	797	739
2001	4390	2848	1542	1377	1470	798	744
2002	4457	2909	1548	1404	1505	799	749
2003	4526	2972	1554	1432	1540	801	753
2004	4580	3029	1552	1457	1572	798	754
2005	4599	3068	1531	1474	1594	786	746
2006	4616	3106	1509	1490	1617	773	737
2007	4631	3144	1487	1506	1638	760	727
2008	4646	3182	1464	1521	1660	747	717
2009	4661	3219	1442	1537	1682	734	708
2010	4656	3246	1410	1548	1698	716	693

Source: Variables PO, PONA, PONN, PONAMA, PONAFE, PONNMA, and PONNFE
DSET NM.100BC--created 10/4/84

Most of the projected population growth is due to natural increase. In fact, there is net outmigration every year (Table F-4). Under the RAM model assumptions, the rate of natural increase is greater for Natives. In addition, fewer Natives leave in response to lack of employment opportunities, and Natives over 65 do not leave, while 20 percent of non-Natives over 65 are assumed to leave each year. The preschool population increases by about 270, the school-age population increases by about 500, the working-age population increases by about 600, and the senior (65+) population increases by about 240 (Table F-3).

Table II-10 summarizes the base case employment projections. Total resident employment increases from 1,244 in 1981 to 1,500 in 1996, and then declines to 1,415 by the end of the projection period. Resident basic employment reemains constant over the period. Government employment increases by about 100 between 1981 and 1991 and then gradually declines to close to its original level by the end of the period. Support employment increases by about 100 jobs between 1981 and 1991 and then fluctuates for a number of years before declining somewhat towards the end of the period. The changes in government employment are due to the assumed initial increase in per capita state government expenditures, followed by a long-term decline in these expenditures. The projected changes in support employment result partly from increases in population which cause nonwage income to rise, and partly from changes in wage income

TABLE II-10
RURAL ALASKA MODEL EMPLOYMENT PROJECTIONS
NOME
MEDIUM BASE CASE

	Total Resident Employment	Resident Basic Employment	Resident Support Employment	Resident Government Employment	Resident Project Employment
1981	1244	66	680	498	0
1982	1284	66	703	515	-0
1983	1313	66	717	530	-0
1984	1316	66	702	547	1
1985	1335	66	709	559	2
1986	1372	66	729	576	1
1987	1393	66	743	580	4
1988	1395	66	746	580	3
1989	1419	66	760	584	8
1990	1425	66	766	588	6
1991	1450	66	776	593	15
1992	1435	66	764	592	13
1993	1414	66	749	589	10
1994	1489	66	768	586	69
1995	1463	66	759	578	60
1996	1501	66	770	568	96
1997	1492	66	767	562	97
1998	1488	66	767	558	97
1999	1489	66	768	558	97
2000	1488	66	768	557	97
2001	1486	66	768	555	97
2002	1481	66	766	552	97
2003	1482	66	769	551	97
2004	1480	66	768	548	97
2005	1457	66	761	545	85
2006	1452	66	759	542	84
2007	1447	66	757	539	84
2008	1442	66	756	536	84
2009	1438	66	754	533	84
2010	1415	66	746	530	72

Source: Variables EMRETO, EMBA, EMSU, EMGO, and EMREPJ
DSET NM.100BC--created 10/4/84

as government employment rises and then falls. We assumed that all exogenous employment was constant throughout the projection period.

Assumptions for RAM Model Impact Case Projections

In preparing our impact case projections, we used exactly the same RAM model assumptions as for the base case projections except that we assumed additional OCS employment, as directed by the Minerals Management Service. This additional OCS employment is shown in Table II-11. This employment is the direct cause of all the impacts projected by the RAM model.

Thus, our model projections do not consider other potential effects of OCS development upon the economy or population of Nome. Examples of potential impacts which we do not consider include the effects of additional revenues which might be received by the City of Nome as a result of taxation of OCS facilities, changes in the structure of the local economy due to the construction of new facilities such as harbors or roads, or changes in non-economic migration into or out of Nome.

Our assumptions about employment of OCS workers in the Nome area are based entirely upon employment assumptions provided to us by the Minerals Management Service Alaska OCS Region. These employment assumptions were developed in-house by MMS using a model known as the "Alaska OCS Petroleum Activities Manpower Requirements Model."

Table II-11

OCS Employment Assumptions for Nome
Sale 100 Impact Case

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010
TOTAL ONSHORE JOBS IN THIS COMMUNITY	0	0	6	12	12	25	23	113	59	124	226	124	147	183	183	183	183	165	147
SHORT-TERM JOBS																			
Skilled	0	0	4	8	8	16	15	41	6	41	35	8	0	0	0	0	0	0	0
Unskilled	0	0	2	4	4	10	8	72	53	83	79	4	0	0	0	0	0	0	0
LONG-TERM JOBS																			
Skilled	0	0	0	0	0	0	0	0	0	0	72	72	100	128	128	128	128	114	100
Unskilled	0	0	0	0	0	0	0	0	0	0	39	39	47	55	55	55	55	51	47
TOTAL JOBS OFFSHORE FROM THIS COMMUNITY (Workers either live in this community, or pass through)	0	0	37	69	69	173	189	728	180	932	1077	557	736	1088	1114	1149	1149	981	813
SHORT-TERM JOBS																			
Skilled	0	0	37	69	69	173	189	728	180	857	691	156	0	0	0	0	0	0	0
Unskilled	0	0	0	0	0	0	0	0	0	75	0	0	0	0	0	0	0	0	0
LONG-TERM JOBS																			
Skilled	0	0	0	0	0	0	0	0	0	0	353	353	660	983	1010	1044	1044	831	737
Unskilled	0	0	0	0	0	0	0	0	0	0	33	47	76	105	105	105	105	90	76

Source: Minerals Management Service, Alaska OCS Region. Title and notes for original table: "Table 5: Petroleum Activities Employment Affecting the Communities of Nome, Resulting from Proposed OCS Sale 100—Mean Case."

This model is essentially a formalized set of assumptions about the numbers and timing of different kinds of OCS tasks which would be involved in OCS development as well as the manpower requirements associated with each task. Further information about this model is available from MMS.

The MMS OCS employment assumptions for both the base case and the impact case are based upon the assumption that petroleum resources from both base case and impact case offshore developments would be transported from production platforms via pipelines to a processing and storage facility at Cape Nome. Air and marine support would be from Nome. The Sale 100 (impact case) development would use the same transportation and support facilities as earlier development, although some expansion of these facilities would take place.

As shown in Table II-11, total onshore jobs associated with Sale 100 peak at 226 in 1994. Prior to 1994, all onshore jobs are short-term jobs associated with the exploration and development phase. Long-term onshore jobs associated with the production phase begin in 1994. Skilled long-term onshore jobs peak at 128 in 1997 while unskilled jobs peak at 55 in the same year.

A far higher number of jobs are located offshore. The number of offshore jobs peaks at 1,149 in 1999. However, most of these jobs are skilled jobs. For our model projections, we assume that all of these jobs are held by commuters who only pass through Nome. This

assumption was based upon our assessment that offshore jobs require primarily highly skilled workers who are likely to be hired by oil companies from other regions, and who are not likely to choose to settle in Nome.

Given the large number of offshore jobs, this is a key assumption of the model. Assuming that Nome residents obtained some of these jobs, or that some of the offshore workers chose to settle in Nome or live in enclaves near Nome, might have resulted in considerably larger estimated impacts of the lease sale.

Projected Impacts of OCS Sale 100

The tables in Appendix G show our impact case projections in detail. Tables II-12 and II-13 summarize these impacts.

As shown in Table II-12, the lease offering causes total employment to rise by a maximum of 276, or 17 percent, in 1994. During the first half of the projection period (the exploration and construction phases), most of the additional employment is enclave employment. These are jobs held by non-local workers living in camps. During the second half of the projection period (the production phase), slightly over half of the additional employment is resident employment. Some of these jobs are held by local residents who obtain OCS onshore jobs. Others are held by non-residents who come to Nome to work at OCS jobs, and then settle in the community.

The projected increase in enclave employment due to OCS Sale 100 is over 230 percent in the peak year. In contrast, the projected maximum increase in resident employment is only 9 percent.

As shown in Table II-12, OCS Sale 100 causes the projected resident population of Nome to increase by slightly over 200 in the late 1990's--an increase of about 5 percent. This increase is due to additional employment of local residents.

TABLE II.12.
EMPLOYMENT AT NOME, 1981-2010, WITH AND WITHOUT
THE PROPOSED NORTON SOUND LEASE OFFERING (OCS SALE 100)

	Projected Employment Without the Lease Offering			Estimated Employment Effects of the Proposed Lease Offering		
Year	Resident Employment	Enclave Employment	Total Employment	Resident Employment	Enclave Employment	Total Employment
1981	1244	0	1244	0	0	0
1982	1284	0	1284	0	0	0
1983	1313	0	1313	0	0	0
1984	1316	17	1333	0	0	0
1985	1335	21	1356	0	0	0
1986	1372	17	1388	1	6	6
1987	1393	39	1432	2	11	13
1988	1395	27	1422	2	11	13
1989	1419	82	1501	4	24	28
1990	1425	56	1482	3	21	25
1991	1450	76	1526	27	99	126
1992	1435	74	1509	22	48	70
1993	1414	47	1461	31	107	138
1994	1489	124	1613	112	164	276
1995	1463	79	1542	97	72	168
1996	1501	149	1650	112	85	197
1997	1492	148	1640	129	108	238
1998	1488	148	1636	130	108	237
1999	1489	148	1637	129	108	237
2000	1488	148	1636	129	108	237
2001	1486	148	1634	129	108	237
2002	1481	148	1629	129	108	236
2003	1482	148	1630	128	108	236
2004	1480	148	1628	129	108	237
2005	1457	124	1581	119	96	215
2006	1452	125	1576	119	96	215
2007	1447	125	1571	118	96	214
2008	1442	125	1567	118	96	214
2009	1438	125	1562	118	96	214
2010	1415	101	1515	108	84	192

TABLE II.12 (continued)

Year	Projected Employment if the Lease Offering Occurs			Percentage Increases Due to the Lease Offering		
	Resident Employment	Enclave Employment	Total Employment	Resident Employment	Enclave Employment	Total Employment
1981	1244	0	1244	0	0	0
1982	1284	0	1284	0	0	0
1983	1313	0	1313	0	0	0
1984	1316	17	1333	0	0	0
1985	1335	21	1356	0	0	0
1986	1372	22	1395	0	33	0
1987	1394	51	1445	0	28	1
1988	1396	39	1435	0	41	1
1989	1423	106	1529	0	29	2
1990	1429	78	1507	0	38	2
1991	1477	175	1652	2	130	8
1992	1457	122	1579	2	66	5
1993	1445	154	1599	2	230	9
1994	1601	289	1889	8	132	17
1995	1560	151	1711	7	91	11
1996	1613	234	1846	7	57	12
1997	1621	256	1878	9	73	14
1998	1618	256	1873	9	73	15
1999	1619	256	1874	9	73	14
2000	1617	256	1873	9	73	14
2001	1615	256	1871	9	73	14
2002	1610	256	1865	9	73	15
2003	1611	256	1866	9	73	14
2004	1609	256	1864	9	73	15
2005	1577	220	1796	8	77	14
2006	1570	220	1791	8	77	14
2007	1565	220	1785	8	77	14
2008	1560	220	1781	8	77	14
2009	1556	220	1776	8	77	14
2010	1523	185	1707	8	83	13

SOURCE: Variables EMRETO EMENNOPJ EMTO EMENPJ
Dsets NM.100BC NM.100IC — created 10/4/84

TABLE II-13.
POPULATION AT NOME, 1981-2010, WITH AND WITHOUT
THE PROPOSED NORTON SOUND LEASE OFFERING (OCS SALE 100)

	Projected Employment Without the Lease Offering			Estimated Employment Effects of the Proposed Lease Offering		
Year	Resident Employment	Enclave Employment	Total Employment	Resident Employment	Enclave Employment	Total Employment
1981	3059	0	3059	0	0	0
1982	3134	0	3134	0	0	0
1983	3221	0	3221	0	0	0
1984	3279	17	3296	0	0	0
1985	3336	21	3358	0	0	0
1986	3439	17	3456	1	6	7
1987	3514	39	3553	3	11	14
1988	3571	27	3598	3	11	14
1989	3640	82	3721	7	24	31
1990	3697	56	3753	7	21	28
1991	3772	76	3849	46	99	145
1992	3831	74	3904	47	48	95
1993	3889	47	3936	47	107	155
1994	3949	124	4075	201	164	365
1995	4009	79	4088	203	72	274
1996	4070	149	4219	205	85	289
1997	4132	148	4280	206	108	314
1998	4194	148	4342	208	108	316
1999	4258	148	4406	209	108	317
2000	4323	148	4472	211	108	319
2001	4390	148	4538	212	108	320
2002	4457	148	4606	213	108	321
2003	4526	148	4675	214	108	322
2004	4580	148	4728	223	108	331
2005	4599	124	4724	220	96	315
2006	4616	125	4740	218	96	313
2007	4631	125	4755	217	96	313
2008	4646	125	4770	217	96	313
2009	4661	125	4785	218	96	314
2010	4656	101	4757	210	84	294

TABLE II.13 (continued)

Year	Projected Employment if the Lease Offering Occurs			Percentage Increases Due to the Lease Offering		
	Resident Employment	Enclave Employment	Total Employment	Resident Employment	Enclave Employment	Total Employment
1981	3059	0	3059	0	0	0
1982	3134	0	3134	0	0	0
1983	3221	0	3221	0	0	0
1984	3279	17	3296	0	0	0
1985	3336	21	3358	0	0	0
1986	3441	22	3463	0	33	0
1987	3516	51	3567	0	28	0
1988	3574	39	3612	0	41	0
1989	3646	106	3752	0	29	1
1990	3704	78	3782	0	38	1
1991	3819	175	3994	1	130	4
1992	3877	122	4000	1	66	2
1993	3937	154	4091	1	230	4
1994	4149	289	4438	5	132	9
1995	4211	151	4363	5	91	7
1996	4274	234	4508	5	57	7
1997	4338	256	4594	5	73	7
1998	4402	256	4658	5	73	7
1999	4468	256	4724	5	73	7
2000	4534	256	4790	5	73	7
2001	4602	256	4858	5	73	7
2002	4671	256	4927	5	73	7
2003	4741	256	4997	5	73	7
2004	4804	256	5060	5	73	7
2005	4819	220	5039	5	77	7
2006	4833	220	5054	5	77	7
2007	4848	220	5068	5	77	7
2008	4863	220	5083	5	77	7
2009	4879	220	5099	5	77	7
2010	4866	185	5050	5	83	6

SOURCE: Variables PO EMENNOPJ POTO EMENPJ
Dsets NM.100BC NM.100IC — Created 10/4/84

Relationship of Projections in This Report to Previous Projections for Nome

ISER has prepared base case and OCS impact projections for Nome in several previous reports prepared for the Minerals Management Service's Social and Economic Studies Program. These include Technical Report No. 50, Bering-Norton Petroleum Development Scenarios Economic and Demographic Analysis (June 1980), and Technical Report No. 76, Forecasting Enclave Development Alternatives and Their Related Impacts on Alaskan Coastal Communities as a Result of OCS Development (December 1982).

As shown in Table II-14, the projections in this report differ from those in the two previous reports. In general, in this report, we project a lower base case population for Nome as well as lower impacts of OCS development. There are numerous reasons for these differences. First, the projection area differs between the reports. The projection area for Technical Report 50 is the entire Nome region, while for the other two reports it is the city of Nome.

Second, the size, character, timing, and manpower requirements of the assumed impacting OCS development differed substantially between all three reports. Thus, the impact projections in this report are really not at all comparable to those in the previous report. The impact projections in this report are for the second Norton Basin sale, whereas the impact projections in the previous report are for the first Norton Basin sale.

TABLE II-14.
SUMMARY COMPARISON OF PROJECTIONS AND ASSUMPTIONS
IN THIS REPORT WITH PROJECTIONS AND
ASSUMPTIONS IN PREVIOUS REPORTS

Selected Projections	Technical Report Number 50 (Medium Case)	Technical Report Number 76 (Cape Nome Case)	Technical Report Number 111
Projected Base Case Total Population, 1990	13,108	4,456	3,753
Projected Total Base Case Total Population, 2000	15,140	5,966	4,472
Projected Impact of OCS Development on Total Population, 1990	4,473	1,410	29
Projected Impact of OCS Development on Total Population, 2000	3,688	435	318
Selected Assumptions			
Projection Area	Entire Nome Region	City of Nome	City of Nome
1981 Population	11,776	3,240	3,059
Underlying Assumption About State-funded Employment	Rising	Constant	Falling
Previous OCS Development Assumed	None	None	Previous Development of Cape Nome base from prior Norton sale
Projection Model	MAP	SCIMP	RAM

SOURCE: Edward Porter, Bering-Norton Petroleum Development Scenarios, Economic and Demographic Analysis, Social and Economic Studies Program, Technical Report No. 50 (Anchorage, U.S. Department of the Interior, Alaska OCS Office, June 1980); Louis Berger and Associates, Forecasting Enclave Development Alternatives and Their Related Impacts on Alaskan Coastal Communities as a Result of OCS Development (Anchorage, Minerals Management Service, Alaska OCS Office, December 1982).

Third, our assumptions about the factors affecting the growth of Nome changed during the period over which the three reports were written. For example, in preparing this report, we assumed a smaller role for state government in the future Nome economy due to declining projections for state revenues.

Fourth, over time we acquired better and more extensive data about Nome. This led to a downward estimate on our part in the size of the base year population for the projections prepared for this report.

Fifth, we used different models in preparing each set of projections. However, the effect of using different models is relatively slight: had the underlying assumptions been the same, the projections would have been similar.

The differences between the projections in the three reports emphasize the importance of the point we made in the introduction: all projections of the future depend upon assumptions. For valid reasons, assumptions change over time as the purposes of reports change and as our perception of the most likely course of future events changes. Thus, differences between projections are to be expected. In addition, users of projections should carefully study the underlying assumptions to ensure that they correspond to their own needs.

III. CONCLUSIONS

In this report, we have developed a description of the economy and population of Nome. In addition, we have examined possible impacts of the Norton Basin Lease Offering (OCS Sale 100) upon the population and economy of Nome. We prepared the projections using the Rural Alaska Model (RAM).

Our model projections suggest that development of OCS 100 would have a relatively small impact upon Nome, increasing resident employment by a maximum of 8 percent and resident population by a maximum of 5 percent. However, as we pointed out in the introduction to the report, our projections depend upon numerous assumptions. Changing some of these assumptions could change the projected impacts of OCS Sale 100.

For example, we assumed that all offshore OCS jobs were held by nonresidents. If local residents obtained some of the offshore jobs, or if some of these workers chose to settle in Nome, the impacts of the sale would be greater. In addition, our model does not consider possible indirect effects of the lease sale such as additional local government revenues due to the taxation of onshore oil facilities.

APPENDIX D
NOME TECHNICAL APPENDIX

In this appendix, we present data on population, employment, income, and labor force participation in Nome. We also discuss the derivation of certain key assumptions for our RAM model projections.

Population

A review of the 1970 and 1980 census figures show a decline in Nome's population of 56 people, from 2,357 to 2,301. This apparent decline appears questionable considering that the population of the Nome census division (the larger area including Nome and surrounding Norton Sound region villages) increased from 5,749 to 6,537 during the same period, as shown in Table D-1.

One possible explanation for this discrepancy is that growth in Nome may have occurred outside of traditional boundaries of the city.

Most population estimates for Nome taken prior to 1982 are for the area within the 1905 city boundary. The boundary for the city of Nome was formally increased during the March 6, 1982 annexation, as shown in Figure D-1. The expanded boundary includes outlying areas of Nome and the small community of Perkinsville not previously considered in prior censuses. Since our purpose in this report is to study the impacts of OCS development on the Nome community, we use this expanded boundary for our study area. Although a few people

TABLE D-1.
NOME REGIONAL CENSUS DIVISION POPULATION

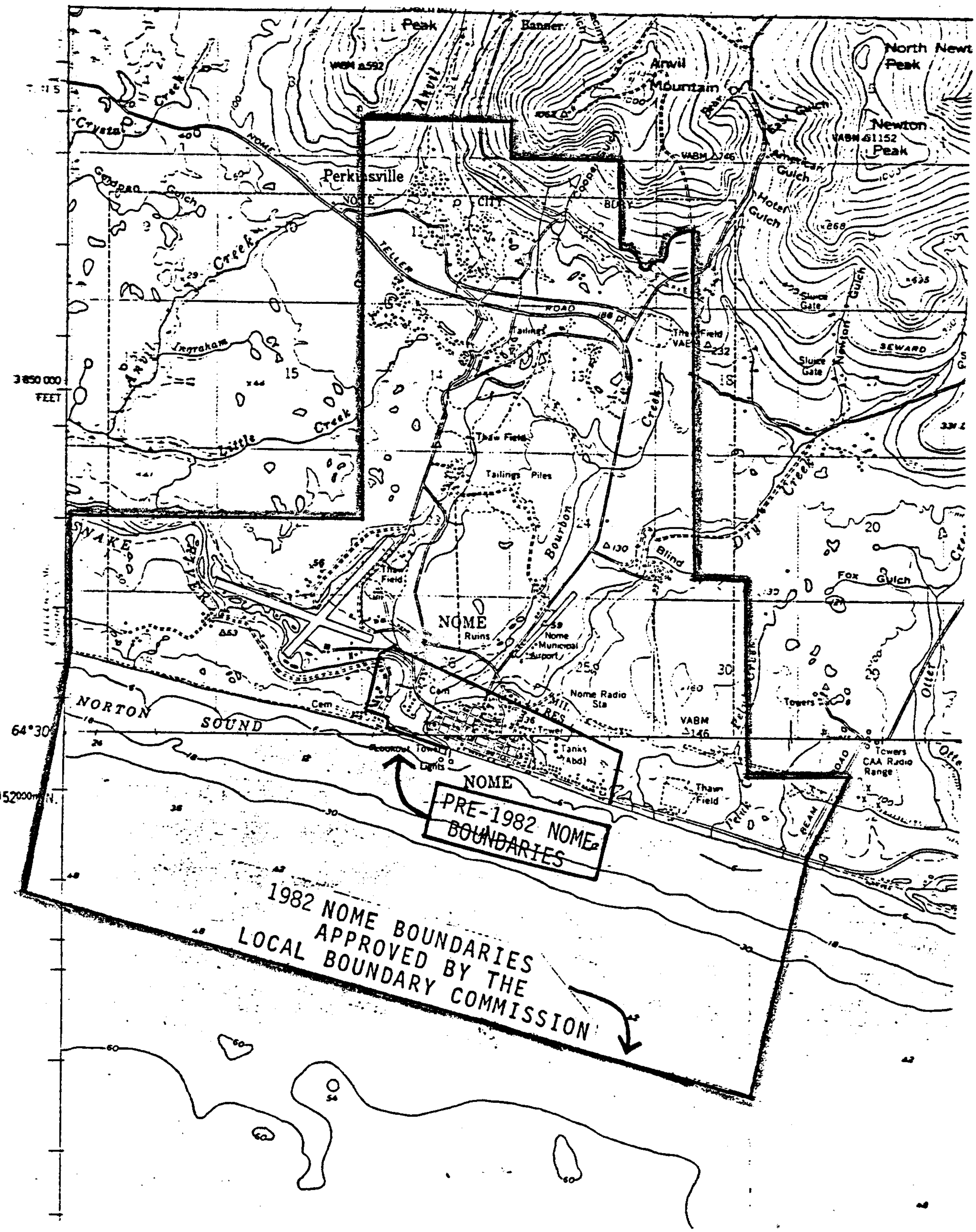
Year	Population
1960[a]	6,091
1970[a]	5,749
1980[a]	6,537
1981[b]	7,565
1982[b]	7,449

[a]U.S. Census Bureau.

[b]Alaska Department of Labor.

SOURCE: "The Regional Socioeconomics of Norton Sound," John Muir Institute.

FIGURE D-1.


Peak
Banner
Anvil
Mountain
North Newt
Peak
Newton
Peak
American
Gulch
Hotel
Gulch
Crystal
Creek
Perkinsville
NOME
CITY
TELLER
ROAD
Ingraham
Anvil
Creek
Little
Thaw Field
Tailings Piles
Bourbon
Blind
Dry Creek
Fox Gulch
SNAKE
RIVER
NOME
Ruins
Nome Municipal Airport
Nome Radio Sta
NORTON
SOUND
Towers
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7152000m N.
SEWARD
NOME
PRE-1982 NOME BOUNDARIES
1982 NOME BOUNDARIES
APPROVED BY THE
LOCAL BOUNDARY COMMISSION

live outside of this study area, we feel that the study area includes most of the population of the Nome community.

Many of the data currently available for Nome refer to the pre-1982 boundaries. We have had to adjust these data to reflect the expanded boundaries of our study area. Table D-2 shows how estimates of population for the years 1940-1982 differ with respect to what area is included in "Nome."

Our base year for this study is 1980. Unfortunately, we do not have 1980 population corresponding to the boundaries of our study area, which were drawn in 1982. The only 1980 estimate was that of the U.S. Census, which gave a total population of 2,334 for Nome and Perkinsville combined. However, this figure appears low compared with the 1979 and 1981 estimates prepared by the city of Nome, both of which reported populations for the Nome area of over 3,000. For this study, we assumed the 1980 population to have been 3,000.

Despite the uncertainty in the 1980 census, it still provides useful information about the distribution of Nome's population in regards to age, sex, and race characteristics. We have assumed that the 1980 census portrays an accurate picture of these distributions. The 1980 census figures are shown in Table D-3. Table D-4 shows adjusted 1980 census figures to reflect our assumed population estimate for the study area of 3,000.

TABLE D-2.
NOME POPULATION GROWTH 1940 - 1982

Year	Area	Population
1940[a]	City of Nome	1,559
1950	City of Nome	1,876
1960	City of Nome	2,316
1970	City of Nome	2,357
1975[b]	City of Nome (March)	2,380
1976[c]	City of Nome (February)	2,605
1978[d]	City of Nome (July)	2,892
	Contiguous Areas	272
	TOTAL NOME AREA	3,164
1979[e]	Winter - City	2,842
	Contiguous Areas	222
	TOTAL NOME AREA	3,064
	Summer - City	2,932
	Contiguous Areas	222
	TOTAL NOME AREA	3,204
1980[f]	City of Nome	2,301
	Perkinsville	33
	TOTAL	2,334
1981[d]	1905 Boundary (November)	2,921
	1901 Boundary	3,039
	1982 Boundary	3,249
1982[d]	1982 Boundary (July)	3,429

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[a] 1940-1970 U.S. Census.

[b] Linda J. Ellanna and Maureen C. Roche, Bering Strait Regional Census, 1975, Kawerak, Inc., October 1976.

[c] CH2M Hill.

[d] City of Nome.

[e] OCS Estimate (Ender et al., 1980).

[f] 1980 U.S. Census.

NOTE: Information in this table was collected from Rick Ender et al., Bering-Norton Petroleum Development Scenarios: Local Socioeconomic Systems Analysis, OCS Technical Report No. 53 (Anchorage, BLM-OCS office, June 1980), page 12; and John Muir Institute, The Regional Socioeconomics of Norton Sound, draft report prepared for MMS Alaska OCS Region (Anchorage, August 1983), page D-4.

TABLE D-3.
1980 CENSUS FIGURES FOR NOME POPULATION
BY AGE, SEX, AND RACE

1980	AGE						
	0-4	5-14	15-19	20-34	35-64	65+	Total
Total	206	450	217	682	612	134	2,301[a]
Male	109	235	114	359	324	76	1,217
Female	97	215	103	323	288	58	1,084
Native	138	322	148	343	302	104	1,357
Male	74	170	70	185	140	55	694
Female	64	152	78	158	162	49	663
Non-Native	68	128	69	339	310	30	944
Male	35	65	44	174	184	21	523
Female	33	63	25	165	126	9	421

[a]Non-Native numbers were calculated by using the difference after subtracting Native numbers from total Male/Female Population.

SOURCE: 1980 Census, Tape STF2B, on file at the Institute of Social and Economic Research.

TABLE D-4.
1980 CENSUS ADJUSTED FIGURES* FOR NOME POPULATION
BY AGE, SEX, AND RACE

1980	AGE						
	0-4	5-14	15-19	20-34	35-64	65+	Total
Total	269	587	282	889	798	175	3,000
Male	142	307	149	468	422	99	1587
Female	127	280	133	421	376	76	1413
Native	180	420	192	447	394	136	1769
Male	97	222	90	241	183	72	905
Female	83	198	102	206	211	64	864
Non-Native[a]	89	167	90	442	404	39	1231
Male	46	85	57	227	240	27	682
Female	43	82	33	215	164	12	549

[a]Non-Native numbers were calculated by using the difference after subtracting Native numbers from total male/female population.

* Adjustment factor 1.30.

SOURCE: 1980 Census, Tape STF2B, on file at the Institute of Social and Economic Research.

Employment Data

There is no single source of data which provides a reliable breakdown of employment in Nome into the categories which are required for developing our RAM model assumptions. The primary sources of data on employment in Nome are the 1980 U.S. Census, the Alaska Department of Labor, data provided by the city of Nome, and reports prepared for the OCS office by Ender et al. and by the John Muir Institute. Tables D-5 through D-18 provide selected employment data from these different sources which we used in developing our RAM model assumptions. The differences between these tables illustrate the problems in describing employment in Nome.

The research and analysis section of the Alaska State Department of Labor publishes, on a quarterly basis, monthly nonagricultural employment data by industry for the state as a whole and for each of the 29 regions. Tables D-5 and D-6 depict the 1980 average nonagricultural employment for the Nome census division. Although these data are for the entire Nome region, Nome accounts for a large share of the employment in the region. The combination of state, local, and federal governments provide for 39 percent of the employment in the region. This compares with the state average of government employment of 32.7 percent.

Tables D-7 through D-14 present information on employment in Nome and Perkinsville collected by the 1980 Census.

TABLE D-5.
AVERAGE NONAGRICULTURAL EMPLOYMENT INDUSTRY
SERIES, NOME CENSUS DIVISION, 1980

Industrial Classification	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Yearly Average
Mining	*	*	*	87	*
Construction	*	23	44	44	37[a]
Manufacturing	*	8	*	*	*
Trans, Comm, & Utl.	101	145	169	156	142.75
Wholesale Trade	0	0	0	0	0
Retail Trade	245	274	315	264	274.50
Finance, Ins, & Real Estate	79	119	226	56	120
Services	557	638	743	481	604.75
Federal Govt.	171	167	149	155	160.50
State & Local Govt.	692	643	663	756	688.5
Miscellaneous	*	*	*	*	*
Total Nonagricultural Industry	1,900	2,124	2,591	2,018	2,158.25
Insured State Law	1,660	1,890	2,374	1,793	1,929.25

[a]Nine-month average

* Source not available--withheld

SOURCE: Alaska Department of Labor, Statistical Quarterly 1st, 2nd, 3rd, 4th quarters 1980.

TABLE D-6.
1980 AVERAGE EMPLOYMENT, AVERAGE MONTHLY WAGE,
AND TOTAL PAYROLL: NOME CENSUS DIVISION

Industrial Classification	1st Qtr Avg No. Emp.	1st Qtr Avg Mo. Wage	1st Qtr Total Payrl	2nd Qtr Avg No. Emp.	2nd Qtr Avg Mo. Wage	2nd Qtr Total Payrl	3rd Qtr Avg No. Emp.	3rd Qtr Avg Mo. Wage	3rd Qtr Total Payrl	4th Qtr Avg No. Emp.	4th Qtr Avg Mo. Wage	4th Qtr Total Payrl
Mining	*	*	*	*	*	*	*	*	*	87	2,266	596,065
Construction	*	*	*	23	2,643	185,063	44	2,546	338,694	44	2,727	365,479
Manufacturing	*	*	*	8	3,766	90,399	*	*	*	*	*	*
Transportation, Communication, & Utilities	101	1,786	543,082	145	1,828	793,405	169	1,873	948,018	156	2,187	1,023,950
Wholesale Trade	0	0	0	0	0	0	0	0	0	0	0	0
Retail Trade	245	935	688,840	274	924	760,342	315	939	886,494	264	1,256	996,078
Finance, Insurance, & Real Estate	79	983	234,001	119	772	275,141	226	834	566,626	56	1,005	168,969
Services	557	1,316	2,199,176	638	1,183	2,266,296	743	1,050	2,341,232	481	1,312	1,896,835
Federal Government	171	1,596	820,801	167	1,624	812,477	149	1,720	770,659	155	1,773	828,318
State & Local Government	692	1,636	3,396,070	643	1,803	3,475,387	663	1,724	3,428,478	756	1,778	4,035,367
Miscellaneous	*	*	*	*	*	*	*	*	*	*	*	*
Total Nonagricultural Ind.	1,900	1,449	8,256,494	2,124	1,430	9,112,287	2,591	1,385	10,763,910	2,018	1,644	9,955,802
Insure by State Law	1,660	1,457	7,260,832	1,890	1,442	8,175,666	2,374	1,382	9,848,579	1,793	1,670	8,987,783

SOURCE: Alaska Department of Labor, Statistical Quarterly 1st, 2nd, 3rd, 4th Quarters 1980.

TABLE D-7.
NUMBER OF EMPLOYED WORKERS BY OCCUPATION 1980
16 YEARS AND OLDER, NOME

Type of Worker	Number Employed
Executive Administrator, Manager	79
Professional	190
Technical Related Support	35
Sales	72
Administrative Support	208
Private Household Service	3
Protection Service	7
Other Service	128
Farming, Forestry, Fishing	9
Precision Product and Craft Repair	97
Operators, Fabricators, and Laborers	97
TOTAL	925

SOURCE: Special Tabulations for 1980 Census from U.S. Bureau of the Census Table 66.

TABLE D-8.
NOME EMPLOYMENT BY INDUSTRY, DATA
1980

Industry	Number Employed
Agriculture, Forestry, Fishing, and Mining	42
Construction	48
Manufacturing: Nondurables	2
Manufacturing: Durables	18
Transportation	75
Communication and Public Utilities	34
Wholesale Trade	7
Retail Trade	139
Finance, Insurance, and Real Estate	6
Business and Repair Services	43
Personal, Entertainment, and Recreational Services	54
Professional Health Services	85
Professional Education Services	168
Other Professional Services	38
Public Administration	166
TOTAL	925

SOURCE: Special Tabulations for 1980 Census, from U.S. Bureau of the Census Tape STF3A, Tabulation 65, on file at ISER.

TABLE D-9.
NUMBER OF WORKERS, BY CLASS OF WORKER
NOME, 1980

Class	Number of Workers
Federal Government	108
State Government	167
Local Government	134
Private Worker	464
Self-employed Worker	48
Unpaid Worker	4
Total	925

SOURCE: 1980 Census, Census Tape STF3A, Table 67, on file at the Institute of Social and Economic Research.

TABLE D-10.
EMPLOYMENT STATUS OF PERSONS
AGED 16 AND OVER: NOME
FROM 1980 CENSUS

	Total		Non-Native[a]		Native	
	Male	Female	Male	Female	Male	Female
Civilian Employed	483	442	320	229	163	213
Armed Forces	6	0	4	0	2	0
Unemployed	85	35	33	6	52	29
Not in Labor Force	274	277	52	88	222	189
Total	848	754	409	323	429	431

[a]Non-Native numbers were calculated by using the difference after subtracting Native numbers from total Male/Female population.

SOURCE: Bureau of the Census, 1980. Census Special Tabulation STF3A Table 55.

TABLE D-11.
NUMBER OF EMPLOYED WORKERS BY OCCUPATION 1980
PERKINSVILLE

Type of Worker	Number Employed
Executive Administrator, Manager	5
Professional	1
Technical Related Support	0
Sales	0
Administrative Support	9
Private Household Service	0
Protection Service	0
Other Service	3
Farming, Forestry, Fishing	0
Precision Product and Craft Repair	3
Operators, Fabricators, and Laborers	2
TOTAL	23

SOURCE: Special Tabulations for 1980 Census from U.S. Bureau of the Census Table 66.

TABLE D-12.
SELECTED EMPLOYMENT-RELATED DATA
FROM 1980 CENSUS, PERKINSVILLE

Type of Worker	Number Employed
Agriculture, Forestry, Fishing, and Mining	2
Construction	0
Manufacturing: Nondurables	0
Manufacturing: Durables	0
Transportation	1
Communication and Public Utilities	0
Wholesale Trade	0
Retail Trade	5
Finance, Insurance, and Real Estate	0
Business and Repair Services	0
Personal, Entertainment, and Recreational Services	0
Professional Health Services	3
Professional Education Services	10
Other Professional Services	0
Public Administration	2
TOTAL	23

SOURCE: Special Tabulations for 1980 Census, from U.S. Bureau of the Census Tape STF3A, Tabulation 65, on file at ISER.

TABLE D-13.
NUMBER OF CIVILIAN EMPLOYED WORKERS,
BY KIND OF EMPLOYER, FROM 1980 CENSUS
PERKINSVILLE

	1980	
Government	12	
Federal		0
State		10
Local		2
Private Other Than Self	11	
Self-employed		0
Unpaid		0
Total		23

SOURCE: Special Tabulations for 1980 Census from U.S. Bureau of the Census, Table 67.

TABLE D-14.
EMPLOYMENT STATUS OF PERSONS
AGED 16 AND OVER: PERKINSVILLE
FROM 1980 CENSUS

	Total		Non-Native[a]		Native	
	Male	Female	Male	Female	Male	Female
Civilian Employed	12	11	12	11	0	0
Armed Forces	0	0	0	0	0	0
Unemployed	0	0	0	0	0	0
Not in Labor Force	0	0	0	0	0	0
Total	12	11	12	11	0	0

[a]Non-Native numbers were calculated by using the difference after subtracting Native numbers from total Male/Female population.

SOURCE: Bureau of the Census, 1980. Census Special Tabulation STF3A Table 55.

TABLE D-15.

1977 MONTHLY EMPLOYMENT, NOME[a]

Employment (Workers Covered by State UI Law)

Industry	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average Mo.	% of Total
Mining	(50)[e]	(45)	(40)	(50)	(90)	(175)	(200)	(180)	(120)	(90)	(75)	(25)	(95)	10.8
Construction	58	63	56	56	71	111	128	147	135	80	64	52	85	9.7
Manufacturing	(4)	(4)	(4)	(4)	(4)	(7)	(10)	(10)	(4)	(4)	(4)	(4)	(5)	.6
TUC[b]	66	80	80	95	103	109	166	166	165	113	113	108	114	13.0
Trade	188	179	171	173	177	198	178	182	176	190	183	176	181	20.6
FIRE[c]	(72)	(52)	(52)	(64)	(49)	(66)	(96)	(67)	(55)	(55)	(39)	(41)	(59)	6.7
Services	225	215	201	135	156	187	199	220	220	287	329	313	224	25.5
Federal Govt.	86	84	86	80	88	96	101	105	106	114	108	108	97	11.1
State Govt.[d]	11	16	16	17	18	15	14	13	11	23	26	23	17	1.9
Local Govt.[d]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Covered by State UI Law	760	738	706	674	756	964	1092	1090	992	956	941	850	(877)	100.0
Percent Covered by UI Law (Region)	72	72	71	72	75	81	83	81	76	74	73	72	76	
Est. Total Nome Non-Agricultural	(1056)	(1025)	(994)	(936)	(1008)	(1190)	(1316)	(1346)	(1225)	(1258)	(1272)	(1164)	(1118)	

[a] Alaska Department of Labor
[b] Transportation, utilities, communication
[c] Finance, insurance, real estate
[d] State and local government coverage began in 1978.
[e] Undisclosed data in parenthesis is estimated.

TABLE D-16.

1978 MONTHLY EMPLOYMENT, NOME[a]

Employment (Workers Covered by State UI Law)

Industry	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average Mo.	Average % of Total
Mining	(30)[e]	(30)	(50)	(60)	(125)	(175)	(180)	(170)	(130)	(80)	(60)	(25)	(93)	(5.9)
Construction	40	40	39	33	30	33	39	39	51	39	33	30	38	2.4
Manufacturing	(4)	(4)	(4)	(4)	(4)	(7)	(10)	(10)	(4)	(4)	(4)	(4)	(5)	(.3)
TUC[b]	81	80	88	109	111	134	143	143	134	123	118	113	115	7.3
Trade	173	173	182	186	191	212	191	200	196	198	169	175	187	11.8
FIRE[c]	(45)	(31)	(22)	(21)	(16)	(44)	(26)	(28)	(34)	(50)	(58)	(31)	(38)	(2.4)
Services	447	437	433	393	518	580	553	594	593	557	531	523	513	32.4
Federal Govt.	106	115	108	108	106	116	115	115	115	115	115	117	113	7.1
State Govt.[d]	136	135	138	145	141	172	188	180	182	181	178	166	162	10.2
Local Govt.[d]	316	317	308	344	397	376	200	215	336	342	348	337	320	20.2
Total Covered by State UI Law	1378	1362	1372	1403	1639	1849	1645	1694	1775	1689	1614	1521	1584	100.0
(Percent Covered by UI Law)	91	91	91	93	94	95	95	95	94	(93)	(92)	(91)	(93)	
Est. Total Non-Agricultural	(1531)	(1497)	(1508)	(1519)	(1744)	(1946)	(1732)	(1783)	(1888)	(1816)	(1754)	(1671)	(1703)	

[a]Alaska Department of Labor
[b]Transportation, utilities, communication
[c]Finance, insurance, real estate
[d]State and local government coverage began in 1978.
[e]Undisclosed data in parenthesis is estimated.

TABLE D-17.

NOME EMPLOYMENT DISTRIBUTION - NOVEMBER 1979[a]

Category	Units	F/T Employ-ment	P/T Employ-ment	Total FTE Employ-ment	Summer Seasonal Adjustment		
					Local Hire	Non-Local	Total
Mining	1	25	0	25	+50	+110	+160
Construction	3	10	0	10	Depends on Contracts[b]		
Manufacturing	2	2	3	3.5	---	---	---
TUC[c]	17	129	13	135.5	+ 3	+27	+30
Air Transport	(6)	(64)	(5)	(66.5)	---	---	---
Trade	32	148	24	160	+ 8	---	+ 8
FIRE[d]	6	24	1	24.5	No Reliable Information		
Services[e]	37	261	17	269.5	No Reliable Information		
Churches	(10)	(15)	(0)	(15)	Summer Camps		
Federal Government	9	66	0	66	0	+ 4	+ 4
BIA	(1)	(24)	(0)	(24)	---	---	---
FAA	(1)	(21)	(0)	(21)	---	---	---
Post Office	(1)	(8)	(0)	(8)	---	---	---
Natl. Weather Service	(1)	(6)	(0)	(6)	---	---	---
State Government	16	185	54	185	- 3	---	- 3
Transportation	(1)	(88)	(0)	(88)	(+10)	---	(+10)
Natl. Guard	(1)	(15)	(46)[f]	(15)	---	---	---
Correctional Ctr.	(1)	(13)	(0)	(13)	---	---	---
NWC College	(1)	(13)	(8)[g]	(13)	(-13)	---	(-13)
Local Government	3	191	2	192	-114[h]	---	-114
City	(1)	(24)	(2)	(25)	---	---	---
B.S.School Dist.	(1)	(35)	(0)	(35)	(-15)	---	(-15)
Nome Public Sch	(1)	(132)	(0)	(132)	(-99)	---	(-99)
TOTAL	126	1041	114	1071	-56	+141	+85

[a]Data collected by an employment survey of all Nome businesses and agencies by George Sherrod and Susan Gorski, November 1979.
[b]Construction employment is very unpredictable with large scale employment tied to summer opportunities.
[c]Transportation, Utilities, Communications
[d]Finance, Insurance, Real Estate (Including profit native corporations)
[e]Services
[f]Uniformed weekend personnel not counted in civilian employment.
[g]Adjunct faculty primarily counted elsewhere as full-time employees, or not counted here.
[h]All counts here are school teachers who are considered full-time employees. They are noted here because a portion seek summer employment or pursue subsistance activities even though full-time equivalent.

TABLE D-18.

NOME EMPLOYMENT BY INDUSTRY[a]

NOVEMBER 1979

	Employees	Percent
Mining	25	2.3%
Construction	10	.9
Manufacturing	3.5	.3
TUC[b]	135.5	12.7
Trade	160	14.9
FIRE[c]	24.5	2.3
Services	269.5	25.2
Federal Govt.	66	6.2
State Govt.	185	17.3
Local Govt.	192	17.9
	1,071	100.0%

[a]1979 Survey of businesses and agencies by contractor. Ender, Community Contract, 1979.

[b]Transportation, Utilities, Communication

[c]Finance, Insurance, and Real Estate

Tables D-7 through D-10 show employment data for Nome. Tables D-11 through D-14 provide similar classifications for Perkinsville. Tables D-7 and D-11 show the number of employed workers by occupation, while Tables D-8 and D-12 show employment by industry. Tables D-9 and D-13 show numbers of federal, state, and local government workers and private workers, and Tables D-10 and D-14 give data on employment status of persons aged 16 and over. Tables D-15 through D-18, which are reproduced from the study by Ender et al., provide employment data for the years 1977-1979.

RAM Model Employment Assumptions

Table D-19 shows our RAM model employment assumptions. In this section, we discuss how we arrived at these assumptions.

Basic Employment

Resident basic employment consists of fishing employment, fish processing employment, and nonfishing-related basic employment. According to the 1980 Census, as shown in Table D-7, nine people reported occupations in farming, fishing, or forestry. We used this figure as our assumption for resident fishing employment. We assumed zero employment in fish processing.

Nonfishing related basic employment consists of mining and manufacturing. Mining is seasonal in nature. Table D-17 shows mining employment for Nome in 1979. There were 25 full-time and 160 part-time employees. Assuming part-time employment in mining

TABLE D-19.
1980 EMPLOYMENT ASSUMPTIONS FOR
RAM MODEL PROJECTIONS, NOME

Total Basic Employment	66
Resident fishing employment	9
Resident fish processing	0
Nonfishing related basic employment	57
Total Support Employment	639
Exogenous support employment	36
Endogenous support employment	557
Government sponsored support employment	46
Enclave sponsored support employment	0
Total Government Employment	485
Exogenous government employment	187
Endogenous government employment	298
Total Resident Employment	1190
Nonproject enclave employment	0
Military enclave employment	0

SOURCE: See text.

averaged two months in duration, full-time equivalent employment of these 160 employees would be 26.7. Therefore we assume 52 people were employed in mining activity.

There is not much other data on mining employment. The fourth quarter figure for the Nome census division in 1980 was 87 (Table D-5). The 1980 Census reported employment in agriculture, forestry, fishing, and mining of 42 (Table D-8), but this figure would not reflect seasonal mining employment. These data appear to be consistent with our assumption of FTE employment of 52.

We assume FTE employment of five in manufacturing. This includes primarily manufacturing of handicrafts.

Government Employment

Table D-20 summarizes the data on government employment presented in earlier tables. We used the information in this table to develop estimates of federal, state, and local government employment in 1980, which are shown in Table D-21. We assumed total federal employment of 108 based on the 1980 Census. We assumed figures for state and local government employment based on 1979 Alaska Department of Labor estimates. These figures were slightly higher than the Census estimates, but we feel they are more reliable as estimates of employment for the census area. (In contrast, the Department of Labor 1979 figure for federal government employment appears unreasonably low compared with the census figure.)

TABLE D-20.
SUMMARY OF GOVERNMENT EMPLOYMENT ESTIMATES
FOR NOME

Federal Government	
Alaska Department of Labor (Nome Census Division) 1980[a]	161
1980 Census[b]	108
Alaska Department of Labor, 1978[c]	113
Alaska Department of Labor, 1979[d]	66
Assumed 1980 Level Used as Basis for RAM Model Assumptions	108
State and Local Government	
Alaska Department of Labor (Nome Census Division) 1980[a]	689
State Government	
1980 Census[b]	177
Alaska Department of Labor, 1978[c]	162
Alaska Department of Labor, 1979[d]	185
Assumed 1980 Level Used as Basis for RAM Model Assumptions	185
Local Government	
1980 Census[b]	136
Alaska Department of Labor, 1978[c]	320
Alaska Department of Labor, 1979[d]	192
Assumed 1980 Level Used as Basis for RAM Model Assumptions	192
Total Government Employment Used for RAM Model Assumptions	485

SOURCES: [a]Table D-5.
[b]Tables D-9 and D-13.
[c]Table D-16.
[d]Table D-17.

TABLE D-21.
CALCULATION OF RAM MODEL
1980 GOVERNMENT EMPLOYMENT ASSUMPTIONS

	Exogenous	Endogenous	Total
Federal Government Employment	103	5	108
State Government Employment	148	37	185
Local Government Employment	114	78	192
Total Government Employment	365	120	485

SOURCE: Estimates of total employment based on Table D-20. See text for discussion of exogenous and endogenous breakdown.

We categorized government employment as either endogenous or exogenous, as shown in Table D-21. We assumed only 5 percent of federal government employment to be endogenous. (This includes some post office employees.) We assumed 20 percent of state government employees to be endogenous. We assumed that one-half of local government employees, except those who were not employees of the Bering Straits School District (Table D-17), were endogenous.

Support Employment

Table D-22 shows our procedure for developing our RAM model 1980 support employment assumptions. We used the 1979 Ender et al. employment survey figures for most of our employment assumptions. However, we assumed a higher level of construction employment than the permanent construction employment figure of ten reported by Ender.

Wage Rates

No data are available on current sectoral wage rates in Nome. We estimated sectoral wage rates for the Nome census area from Department of Labor data, as shown in Table D-23. We estimated total annual wages for each sector and divided these figures by average annual employment.

TABLE D-22.
CALCULATION OF RAM MODEL
SUPPORT EMPLOYMENT ASSUMPTIONS

Support Industry	Employment Reported in 1980 Census[a]	Employment Reported in 1979 Ender Survey[c]	Assumed Employment Level	Assumed Exogenous Employment	Assumed Endogenous Employment	Assumed Government Sponsored Employment
Construction	48	10	48	20	9	19
Transportation	76	76	76	30	38	8
Communications and Public Utilities	34	60	60	20	40	-
Trade	151	160	160	80	80	-
Finance, Insurance, and Real Estate	6	25	25	12	13	-
Services	135[b]	270	270	135	135	-
TOTAL	450	601	639	297	315	27

- zero.

[a]Source: Tables D-8 and D-12.

[b]Does not include "professional health services" or "professional education services."

[c]Source: Table D-17.

TABLE D-23.
CALCULATION OF ANNUAL WAGE RATES BY SECTOR,
NOME CENSUS DIVISION

Industry	Number of Reported Quarters	Total Wage Income for Reported Quarters	Adjusted Annual Total Wage Income	Number of Employees	Average Annual Wage
Mining	1	596,065	2,384,260	87	27,405
Manufacturing	1	90,399	361,596	8	45,199
Basic Sector	-	-	2,745,856	95	28,904
Construction	3	889,236	1,185,648	37	32,045
Transportation, Communication, & Utilities	4	3,308,455	3,308,455	142.75	23,177
Retail Trade	4	3,331,754	3,331,754	274.5	12,138
Finance, Insurance, and Real Estate	4	1,244,737	1,244,737	120	10,372
Services	4	8,703,539	8,703,539	604.75	14,392
Support Sector	-	-	17,774,133	1,179	15,076
Federal Government	4	3,232,255	3,232,255	160.5	20,139
State and Local Government	4	14,335,302	14,335,302	688.5	20,821
Government Sector	-	-	17,567,557	849	20,692

- Not applicable.

SOURCE: Alaska Department of Labor, Statistical Quarterly, as reported in Table D-6.

Income

Data on income for Nome are not available. We developed our RAM model income assumptions using several indirect sources.

Table D-24 shows how we calculated our assumptions for wage income in Nome during 1980, based on our assumptions about employment and wages by sector. We estimated total 1980 wage income of $21,576,848. Dividing this total by our assumed population figure of 3,000 results in a per capita wage income estimate of $7,192.

Our only source of information on nonwage income is the income estimates from the Regional Economics Information System of the Bureau of Economic Analysis. Table D-25 shows BEA estimates of personal and per capita income for the Nome Census Division.

Table D-26 summarizes our assumptions about wage and nonwage income for Nome.

TABLE D-24.
TOTAL ESTIMATED WAGE INCOME, NOME, 1980

Sector	Annual Wage, Nome Census Div.	Assumed Nome Employment	Total Wage Income
Basic	28,904	66	1,907,664
Support	15,076	639	9,633,564
Government	20,692	485	10,035,620
Total	-	1,190	21,576,848

- Not applicable.

SOURCE: Tables D-19 and D-23.

TABLE D-25.
BEA INCOME ESTIMATES FOR NOME CENSUS DIVISION, 1980[a]

Derivation of Personal Income by Place of Residence

Total Labor and Proprietors Income by Place of Work	44,051,000
Less Personal Contributions for Social Insurance	2,555,000
Net Labor and Proprietors Income by Place of Work	41,496,000
Plus Residence and Adjustment	420,000
Net Labor and Proprietors Income by Residence	41,916,000
Plus Dividends, Interest, and Rent	1,510,000
Plus Transfer Payments	10,395,000
Personal Income by Place of Residence	53,821,000
Per Capita Personal Income[b]	8,214
Per Capita Nonwage Income[c]	1,804

[a]Estimates based on 1972 SIC.

[b]Based on BEA assumption of population of 6,600.

[c]Nonwage income assumed to include transfer payments, dividends, interest, and rent.

TABLE D-26.
ESTIMATE OF PERSONAL INCOME FOR NOME, 1980

	Per Capita	Total
Wage Income[a]	7,192	21,576,848
Nonwage Income[b]	1,804	5,412,000
TOTAL	8,996	26,988,848

[a]Total wage income based on RAM Model employment and wage assumptions (see Table D-24).

[b]Nonwage income assumptions based on per capita estimate from BEA data (see Table D-25).

Employment Participation Rates

Employment participation rates of Nome and the region can be expected to vary considerably by season and place of residence. Employment opportunities and pursuit of subsistence activities outside the cash economy also vary. In any case, the adult employment rate is estimated at 60.4 percent for Nome. This compares to the 1979 Nome estimate of 60.4 percent and an Anchorage figure of 72.5 percent. Table D-19 shows estimated employment rates for Nome and the region.

TABLE D-19. ESTIMATED EMPLOYMENT RATES: NOME AND REGION

	Nome	Balance of Region	Total Region
1975			
Est. Population	2,380	3,598	5,978
Est. Adults*	1,379	1,935	3,314
Est. Employment*	757	551	1,308
Employment*	54.8%	28.4%	39.5%
1979			
Est. Population	3,064	3,363	6,700
Est. Adults	1,774	1,956	3,730
Est. Employment	1,071	700	1,771
Employment	60.4%	35.8%	47.5%
1980			
Est. Population	2,921	3,616	6,537
Est. Adults	1,924	2,069	3,993
Est. Employment	1,162	773	1,929
Employment	60.4%	37.4%	48.3%

*18-70 years

SOURCE: U.S. Census Technical Report No. 53, 1980.

APPENDIX E: RAM MODEL BASE CASE ASSUMPTIONS

The following worksheets provide a complete list of the assumptions which we used in our Nome RAM Model projections. There is no single source of data which provides the information required for developing our RAM model assumptions. Therefore, we use a combination of sources. We describe our sources and our methodology for developing these assumptions in Appendix D and in Chapter II.

We prepared two "cases," or sets of model projections, for Nome. These are a base case and an impact case. The same assumptions are used for both cases except for OCS project employment.

Community Nome
Year 1980

WORKSHEET 1. POPULATION ASSUMPTIONS FOR BASE YEAR

Total Population (PO) 3,000

Age Group	Non-Native		Native	
	Male	Female	Male	Female
0-4	46	43	97	83
5-14	85	82	222	198
15-19	57	33	90	102
20-34	227	215	241	206
35-64	240	164	183	211
65+	27	12	72	64

Note: Variable names for each column are PONNM1, . . ., PONNM6; PONNF1, . . .,PONNF6; PONAM1, . . .,PONAM6; PONAF1, . . ., PONAF6.

SOURCE: U.S. Bureau of the Census, 1980 Census. Special census tape printouts on file at Institute of Social and Economic Research.

Community Nome

WORKSHEET 2. SURVIVAL RATES AND FERTILITY RATES ASSUMPTIONS

Survival Rates (Share of population which does not die each year)

	Non-Native		Native	
Age Group	Male	Female	Male	Female
0-4	.99654	.99757	.99171	.99413
5-14	.99964	1.0000	.99894	.99952
15-19	.99848	1.0000	.99260	.99634
20-34	.99742	.99926	.99164	.99674
35-64	.99310	.99671	.98817	.99403
65+	.94008	.96612	.93506	.97311

Note: Variable names for each column are SVRANNM1, . . ., SVRANNM6; SVRANNF1, . . ., SVRANNF6; SVRANAM1, . . .,SVRANAM6; SVRANAF1, . . .,SVRANAF6.

SOURCE: Calculated from 1980 census figures for total population and mortality for non-Anchorage Alaska residents.

Fertility Rates (Share of women giving birth each year)

	Non-Native		Native	
	Variable		Variable	
Age Group	Name	Value	Name	Value
15-19	FRNN03	.04033	FRNA03	.13668
20-34	FRNN04	.11641	FRNA04	.18235
35-64	FRNN05	.02084	FRNA05	.03727

SOURCE: These rates are based on data for non-Anchorage Alaska. The number of births are from the Alaska Department of Health and Social Services, Office of Information Systems and the Alaska Native Medical Center, Anchorage. Non-Anchorage figures were derived by subtracting Anchorage from statewide data.

Community Nome

WORKSHEET 3: OTHER POPULATION MODEL ASSUMPTIONS

Shift Factors (Share of population which does not advance to the next age group each year)

Age Group	Variable Name	Shift Factor
0-4	SFPA01	.80
5-14	SFPA02	.90
15-19	SFPA03	.80
20-34	SFPA04	.9333
35-64	SFPA05	.9667
65+	SFPA06	1.0000

NOTE: Calculated using the formula $1 - \frac{1}{\text{(number of age-years in group)}}$

Infant Survival and Sex Distribution Assumptions

Variable	Variable Name	Value
Infant survival rates		
Native		
Males	IFSVNAMA	1.0
Females	IFSVNAFE	1.0
Non-Native		
Males	IFSVNNMA	1.0
Females	IFSVNNFE	1.0
Sex distribution of infants		
Native	SXDVNA	.5
Non-Native	SXDVNN	.5

Community Nome
Base Year 1980

WORKSHEET 4. POPULATION, EMPLOYMENT, WAGES, INCOME AND STATE PER CAPITA SPENDING IN BASE YEAR

Variable	Variable Name	Value
Total Population	PO	3,000
Total Basic Employment	EMBA	66
Resident fishing employment	EMFI	9
Resident fish processing employment	EMFP	0
Nonfishing related basic employment	EMBANF	57
Total Support Employment	EMSU	639
Exogenous support employment	EMSUEX	297
Endogenous support employment	EMSUEG	315
Government-sponsored support employment	EMSUGO	27
Enclave-sponsored support employment	EMSUEN	0
Total Government Employment	EMGO	485
Exogenous government employment	EMGOEX	365
Endogenous government employment	EMGOEG	120
Total Resident Employment		1,190
Nonproject enclave employment	EMENNOPJ	0
Military enclave employment	EMML	0
Basic sector annual wage rate	WABA	28.9
Support sector annual wage rate	WASU	15.1
Government sector annual wage rate	WAGO	20.7
Income		
Total wage income	INWA	21,577
Nonwage income per capita	INNOWAPC	1.804
Total income	IN	26,989
State Per Capita Spending (Thousands of Dollars)		
Per capita operating expenditures	STPCOE	3.334
Per capita capital expenditures	STPCCE	1.009

SOURCES: Population: Worksheet 1.
Employment and income: Appendix D
State per capita spending: Worksheet 6.

Community Nome

WORKSHEET 5: MULTIPLIER CALCULATIONS

Multiplier	Name	Formula	Value
Endogenous support employment multiplier	EMSUEGC1	EMSUEG / IN	.0117
Endogenous government employment multiplier	EMGOEGC1	EMGOEG / PO * STPCOE	.0120
Government-sponsored support employment multiplier	EMSUGOC1	EMSUGO / PO * STPCCE	.0089
Nonproject enclave-generated support employment multiplier	EMSUENC1	EMSUEN / EMENNOPJ	.01
Project enclave-generated support employment multiplier	EMSUENC2	EMSUEN / EMEN	.05

Base Year for Real Dollars 1982

WORKSHEET 6. STATE GOVERNMENT PER CAPITA OPERATING AND CAPITAL EXPENDITURES

(Thousands of Real Dollars)

	State Government per capita operating Expenditures (STPCOE)	State Government per capita capital Expenditures (STPCCE)
1980	3.334	1.009
1981	3.627	2.043
1982	3.990	2.471
1983	4.271	2.613
1984	4.617	1.945
1985	4.837	1.939
1986	5.102	2.229
1987	5.102	2.429
1988	5.007	2.463
1989	5.017	2.615
1990	5.021	2.683
1991	5.035	2.692
1992	4.945	2.343
1993	4.803	1.969
1994	4.667	1.770
1995	4.432	1.669
1996	4.166	1.555
1997	3.964	1.468
1998	3.842	1.414
1999	3.779	1.386
2000	3.696	1.348
2001	3.599	1.304
2002	3.503	1.206
2003	3.417	1.223
2004	3.337	1.187
2005	3.263	1.154
2006	3.194	1.123
2007	3.129	1.094
2008	3.067	1.066
2009	3.008	1.040
2010	2.951	1.014

SOURCE: These figures are based on three-year moving averages of recent ISER MAP model projections for the statewide economy (DSET SIOCS.39).

Community Nome
Base Year for Real Dollars 1980

WORKSHEET 7. WAGE AND NONWAGE INCOME ASSUMPTIONS FOR PROJECTION PERIOD
(Thousands of Real Dollars)

	Per Capita Nonwage Income (INNOWAPC)	Basic Sector Wage Rate (WABA)	Support Sector Wage Rate (WASU)	Government Sector Wage Rate (WAGO)	Project Sector Wage Rate (WAPJ)
1980	1.804	28.9	15.1	20.7	30.0
1981	1.804	28.9	15.1	20.7	30.0
1982	1.804	28.9	15.1	20.7	30.0
1983	1.804	28.9	15.1	20.7	30.0
1984	1.804	28.9	15.1	20.7	30.0
1985	1.804	28.9	15.1	20.7	30.0
1986	1.804	28.9	15.1	20.7	30.0
1987	1.804	28.9	15.1	20.7	30.0
1988	1.804	28.9	15.1	20.7	30.0
1989	1.804	28.9	15.1	20.7	30.0
1990	1.804	28.9	15.1	20.7	30.0
1991	1.804	28.9	15.1	20.7	30.0
1992	1.804	28.9	15.1	20.7	30.0
1993	1.804	28.9	15.1	20.7	30.0
1994	1.804	28.9	15.1	20.7	30.0
1995	1.804	28.9	15.1	20.7	30.0
1996	1.804	28.9	15.1	20.7	30.0
1997	1.804	28.9	15.1	20.7	30.0
1998	1.804	28.9	15.1	20.7	30.0
1999	1.804	28.9	15.1	20.7	30.0
2000	1.804	28.9	15.1	20.7	30.0
2001	1.804	28.9	15.1	20.7	30.0
2002	1.804	28.9	15.1	20.7	30.0
2003	1.804	28.9	15.1	20.7	30.0
2004	1.804	28.9	15.1	20.7	30.0
2005	1.804	28.9	15.1	20.7	30.0
2006	1.804	28.9	15.1	20.7	30.0
2007	1.804	28.9	15.1	20.7	30.0
2008	1.804	28.9	15.1	20.7	30.0
2009	1.804	28.9	15.1	20.7	30.0
2010	1.804	28.9	15.1	20.7	30.0

NOTE: We arbitrarily assume an annual wage of $30,000 for project (OCS-related) employees.

Community Nome

WORKSHEET 8. BASIC SECTOR EXOGENOUS EMPLOYMENT ASSUMPTIONS
(Full-time Equivalent Employment)

Year	Resident Fishing Employment (EMFI)	Resident Fish-processing Employment (EMFP)	Non-Fishing Related Basic Employment (EMBANF)	Nonproject Enclave Employment (EMENNOPJ)
1980	9	0	57	0
1981	9	0	57	0
1982	9	0	57	0
1983	9	0	57	0
1984	9	0	57	0
1985	9	0	57	0
1986	9	0	57	0
1987	9	0	57	0
1988	9	0	57	0
1989	9	0	57	0
1990	9	0	57	0
1991	9	0	57	0
1992	9	0	57	0
1993	9	0	57	0
1994	9	0	57	0
1995	9	0	57	0
1996	9	0	57	0
1997	9	0	57	0
1998	9	0	57	0
1999	9	0	57	0
2000	9	0	57	0
2001	9	0	57	0
2002	9	0	57	0
2003	9	0	57	0
2004	9	0	57	0
2005	9	0	57	0
2006	9	0	57	0
2007	9	0	57	0
2008	9	0	57	0
2009	9	0	57	0
2010	9	0	57	0

NOTE: We assume full-time equivalent nonproject enclave employment of 50 in 1985 and 1986 in connection with the construction of a Nome port facility.

Community Nome

WORKSHEET 9. SUPPORT AND GOVERNMENT SECTOR EXOGENOUS EMPLOYMENT ASSUMPTIONS

Year	Exogenous Support Employment (EMSUEX)	Exogenous Government Employment (EMGOEX)
1980	297	365
1981	297	365
1982	297	365
1983	297	365
1984	297	365
1985	297	365
1986	297	365
1987	297	365
1988	297	365
1989	297	365
1990	297	365
1991	297	365
1992	297	365
1993	297	365
1994	297	365
1995	297	365
1996	297	365
1997	297	365
1998	297	365
1999	297	365
2000	297	365
2001	297	365
2002	297	365
2003	297	365
2004	297	365
2005	297	365
2006	297	365
2007	297	365
2008	297	365
2009	297	365
2010	297	365

Community Nome

WORKSHEET 10. LABOR FORCE PARTICIPATION RATE ASSUMPTIONS

		Non-Native		Native	
	Age Group	Male	Female	Male	Female
Labor Force Participation Rates (Note: Variable names are LFPRNNM3, . . ., 6; LFPRNNF3, . . ., 6; LFPRNAM3, . . ., 6; LFPRNAF3, . . ., 6)	15-19	0	0	0	0
	20-34	.898	.789	.486	.637
	35-64	.898	.789	.486	.637
	65+	0	0	0	0
Population in Base Year (from Worksheet 1)	15-19	57	33	90	102
	20-34	227	215	241	206
	35-64	240	164	183	211
	65+	27	12	72	64
	Total	551	424	583	583
Check: Employment in Base Year	15-19	0	0	0	0
	20-34	203.8	169.6	117.1	131.2
	35-64	215.6	129.4	88.9	134.4
	65+	0	0	0	0
TOTAL		419.4	299.0	206.0	265.6

Total Resident Employment = 1,190
Total Resident Employment (from Worksheet 4) = 1,190

Community Nome

WORKSHEET 11. ENDOGENOUS OUT-MIGRATION PARAMETERS ASSUMPTIONS

Variable	Variable Name	Value
Threshold maximum increase in unemployment before out-migration begins	HIUNRA	.05
Threshold maximum decrease in unemployment before in-migration begins	LWUNRA	-.05
Share of unemployed native workers who leave once unemployment rises above threshold level	OULAPANA	.3
Share of unemployed non-native workers who leave once unemployment rises above threshold level	OULAPANN	.6
Adjustment parameter for ratio of native dependents who out-migrate to native workers who out-migrate (a value of one indicates that this ratio is the same as the ratio of native dependents to native workers in the population)	OUDEPANA	1
Adjustment parameter for ratio of non-native dependents who out-migrate to non-native workers who out-migrate	OUDEPANN	1

Community Nome

WORKSHEET 12. ENDOGENOUS IMMIGRATION PARAMETERS ASSUMPTIONS: NUMBER OF PERSONS WHO IMMIGRATE IN EACH COHORT FOR EACH WORKER WHO IMMIGRATES

	Non-Native		Native	
Age Group	Male	Female	Male	Female
0-4	.064	.060	0	0
5-14	.118	.114	0	0
15-19	.079	.046	0	0
20-34	.316	.299	0	0
35-64	.334	.228	0	0
65+	.038	.017	0	0

Note: Variables are MGPANNM1, . . ., MGPANNM6; MGPANNF1, . . ., MGPANNF6; MGPANAM1, . . ., MGPANAM6; MGPANAFI, . . ., MGPANNF6. These endogenous immigration parameters, shown on Worksheet 10, are based on the following assumptions:

- All immigrants are non-Natives.
- The ratio of immigrants in each age group to immigrant workers is the same as the 1980 ratio of non-Natives in each age group (see Worksheet 1) to the number of non-Native workers (assumed to be 419 + 299 = 718, from Worksheet 8).

Community Nome

WORKSHEET 13. EXOGENOUS MIGRATION PARAMETER ASSUMPTIONS: SHARE OF EACH COHORT WHICH MIGRATES IN OR OUT EACH YEAR IN RESPONSE TO NON-ECONOMIC (EXOGENOUS) FACTORS

	Non-Native		Native	
Age Group	Male	Female	Male	Female
0-4	0	0	0	0
5-14	0	0	0	0
15-19	0	0	0	0
20-34	0	0	0	0
35-64	0	0	0	0
65+	-.2	-.2	0	0

Note: Variables are MXRANNM1, . . ., MXRANNM6; MXRANNF1, . . ., MXRANNF6; MXRANAM1, . . ., MXRANAM6; MXRANAFI, . . ., MXRANAF6.

Community Nome

WORKSHEET 14. MISCELLANEOUS EXOGENOUS ASSUMPTIONS

	Enclave Military Employment (EMML)	Enclave Military Dependents (DEML)
1980	0	0
1981	0	0
1982	0	0
1983	0	0
1984	0	0
1985	0	0
1986	0	0
1987	0	0
1988	0	0
1989	0	0
1990	0	0
1991	0	0
1992	0	0
1993	0	0
1994	0	0
1995	0	0
1996	0	0
1997	0	0
1998	0	0
1999	0	0
2000	0	0
2001	0	0
2002	0	0
2003	0	0
2004	0	0
2005	0	0
2006	0	0
2007	0	0
2008	0	0
2009	0	0
2010	0	0

NOTE: Due to the enclave character of the entire Cold Bay community, we did not treat the military as a separate enclave.

Community Nome

WORKSHEET 15. PROJECT EMPLOYMENT PARAMETERS

Residency and Commuter Parameters

	Share of Project Jobs Reserved for Nonresidents by Industry	Share of Nonresident Workers Brought in to Fill Excess Demand Who Become Residents	Share of Nonresident Workers Who Only Commute Thru Community (ie Do Not Live in Enclaves; Mostly Offshore Workers)
Onshore Short-term Skilled	SNPSONSK 1	SRPSONSK 0	CPPSONSK 0
Onshore Short-term Unskilled	SNPSONNS .8	SRPSONNS 0	CPPSONNS 0
Onshore Long-term Skilled	SNPLONSK 0	SRPLONSK .1	CPPLONSK 0
Onshore Long-term Unskilled	SNPLONNS 0	SRPLONNS .2	CPPLONNS 0
Offshore Short-term Skilled	SNPSOFSK 1	SRPSOFSK 0	CPPSOFSK 1
Offshore Short-term Unskilled	SNPSOFNS 1	SRPSOFNS 0	CPPSOFNS 1
Offshore Long-term Skilled	SNPLOFSK 1	SRPLOFSK 0	CPPLOFSK 1
Offshore Long-term Unskilled	SNPLOFNS 1	SRPLOFNS 0	CPPLOFNS 1

Skill and Training Parameters

Variable	Variable Name	Value
Number of skilled workers in year prior to first projection year	LSSK	0
Maximum share of nonskilled workers who are trained for project jobs in any given year	TNPANS	.05
Maximum share of excess demand for skilled labor which is filled by training local labor in any given year	TNPAED	.05

Community Nome

WORKSHEET 16. PROJECT EMPLOYMENT ASSUMPTIONS, MEDIUM BASE CASE

ONSHORE

Year	Short-term Skilled EMPSONSK	Short-term Unskilled EMPSONNS	Long-term Skilled EMPLONSK	Long-term Unskilled EMPLONNS
1981	0	0	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	12	6	0	0
1985	15	8	0	0
1986	12	6	0	0
1987	25	18	0	0
1988	17	13	0	0
1989	48	42	0	0
1990	33	29	0	0
1991	17	74	0	0
1992	21	66	0	0
1993	5	52	0	0
1994	4	52	92	45
1995	1	1	92	45
1996	0	0	176	69
1997	0	0	176	69
1998	0	0	176	69
1999	0	0	176	69
2000	0	0	176	69
2001	0	0	176	69
2002	0	0	176	69
2003	0	0	176	69
2004	0	0	176	69
2005	0	0	148	61
2006	0	0	148	61
2007	0	0	148	61
2008	0	0	148	61
2009	0	0	148	61
2010	0	0	120	53

Community Nome

WORKSHEET 16. PROJECT EMPLOYMENT ASSUMPTIONS, MEDIUM AND HIGH BASE CASES (Continued)

	OFFSHORE			
	Short-term		Long-term	
Year	Skilled EMPSOFSK	Unskilled EMPSOFNS	Skilled EMPLOFSK	Unskilled EMPLOFNS
1981	0	0	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	101	0	0	0
1985	133	0	0	0
1986	101	0	0	0
1987	396	0	0	0
1988	320	0	0	0
1989	885	0	0	0
1990	723	0	0	0
1991	393	0	0	0
1992	394	0	0	0
1993	114	0	0	0
1994	56	0	568	53
1995	16	0	568	53
1996	0	0	1490	140
1997	0	0	1512	140
1998	0	0	1555	140
1999	0	0	1555	140
2000	0	0	1610	140
2001	0	0	1610	140
2002	0	0	1610	140
2003	0	0	1610	140
2004	0	0	1610	140
2005	0	0	1303	111
2006	0	0	1303	111
2007	0	0	1303	111
2008	0	0	1303	111
2009	0	0	1303	111
2010	0	0	996	82

Community Nome

WORKSHEET 17. PROJECT EMPLOYMENT ASSUMPTIONS, IMPACT CASE

ONSHORE

Year	Short-term Skilled EMPSONSK	Short-term Unskilled EMPSONNS	Long-term Skilled EMPLONSK	Long-term Unskilled EMPLONNS
1981	0	0	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	12	6	0	0
1985	15	8	0	0
1986	16	8	0	0
1987	33	22	0	0
1988	25	17	0	0
1989	64	52	0	0
1990	48	37	0	0
1991	58	146	0	0
1992	27	119	0	0
1993	46	135	0	0
1994	39	131	164	84
1995	9	5	164	84
1996	0	0	276	116
1997	0	0	304	124
1998	0	0	304	124
1999	0	0	304	124
2000	0	0	304	124
2001	0	0	304	124
2002	0	0	304	124
2003	0	0	304	124
2004	0	0	304	124
2005	0	0	262	112
2006	0	0	262	112
2007	0	0	262	112
2008	0	0	262	112
2009	0	0	262	112
2010	0	0	220	100

Community Nome

WORKSHEET 17. PROJECT EMPLOYMENT ASSUMPTIONS, MEDIUM AND HIGH BASE CASES (Continued)

	OFFSHORE			
	Short-term		Long-term	
Year	Skilled EMPSOFSK	Unskilled EMPSOFNS	Skilled EMPLOFSK	Unskilled EMPLOFNS
1981	0	0	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	101	0	0	0
1985	133	0	0	0
1986	138	0	0	0
1987	465	0	0	0
1988	389	0	0	0
1989	1058	0	0	0
1990	912	0	0	0
1991	1121	0	0	0
1992	574	0	0	0
1993	971	75	0	0
1994	747	0	921	86
1995	172	0	921	100
1996	0	0	2150	216
1997	0	0	2495	245
1998	0	0	2565	245
1999	0	0	2599	245
2000	0	0	2654	245
2001	0	0	2654	245
2002	0	0	2654	245
2003	0	0	2654	245
2004	0	0	2654	245
2005	0	0	2194	201
2006	0	0	2194	201
2007	0	0	2194	201
2008	0	0	2194	201
2009	0	0	2194	201
2010	0	0	1733	158

TABLE F-1
RURAL ALASKA MODEL PROJECTIONS
NOME
MEDIUM BASE CASE

	Resident Population	Non-Project Enclave Population	Project Enclave Population	Military Enclave Population	Total Population Including Enclaves & Military
1981	3059	0	0	0	3059
1982	3134	0	0	0	3134
1983	3221	0	0	0	3221
1984	3279	0	17	0	3296
1985	3336	0	21	0	3358
1986	3439	0	17	0	3456
1987	3514	0	39	0	3553
1988	3571	0	27	0	3598
1989	3640	0	82	0	3721
1990	3697	0	56	0	3753
1991	3772	0	76	0	3849
1992	3831	0	74	0	3904
1993	3889	0	47	0	3936
1994	3949	0	124	0	4073
1995	4009	0	79	0	4088
1996	4070	0	149	0	4219
1997	4132	0	148	0	4280
1998	4194	0	148	0	4342
1999	4258	0	148	0	4406
2000	4323	0	148	0	4472
2001	4390	0	148	0	4538
2002	4457	0	148	0	4606
2003	4526	0	148	0	4675
2004	4580	0	148	0	4728
2005	4599	0	124	0	4724
2006	4616	0	125	0	4740
2007	4631	0	125	0	4755
2008	4646	0	125	0	4770
2009	4661	0	125	0	4785
2010	4656	0	101	0	4757

Source: Variables PO, EMENNOPJ, EMENPJ, POML, and POTO
DSET NM.100BC--created 10/4/84

TABLE F-2
RURAL ALASKA MODEL PROJECTIONS
NOME
MEDIUM BASE CASE

Population

	Resident	Native	Non-Native	Native Male	Native Female	Non-Native Male	Non-Native Female
1981	3059	1814	1245	925	890	686	559
1982	3134	1860	1274	945	916	698	575
1983	3221	1907	1315	965	942	718	597
1984	3279	1953	1326	985	968	721	605
1985	3336	2000	1336	1006	995	723	613
1986	3439	2048	1391	1026	1021	751	640
1987	3514	2096	1418	1047	1049	763	655
1988	3571	2144	1427	1068	1076	765	662
1989	3640	2193	1446	1090	1103	773	673
1990	3697	2243	1454	1111	1131	775	680
1991	3772	2293	1479	1133	1160	786	693
1992	3831	2344	1486	1156	1189	787	699
1993	3889	2396	1493	1178	1218	789	705
1994	3949	2449	1500	1202	1247	790	710
1995	4009	2503	1506	1225	1278	791	715
1996	4070	2557	1512	1249	1308	792	720
1997	4132	2613	1518	1274	1339	793	725
1998	4194	2670	1524	1299	1371	795	730
1999	4258	2728	1530	1324	1404	796	735
2000	4323	2787	1536	1350	1437	797	739
2001	4390	2848	1542	1377	1470	798	744
2002	4457	2909	1548	1404	1505	799	749
2003	4526	2972	1554	1432	1540	801	753
2004	4580	3029	1552	1457	1572	798	754
2005	4599	3068	1531	1474	1594	786	746
2006	4616	3106	1509	1490	1617	773	737
2007	4631	3144	1487	1506	1638	760	727
2008	4646	3182	1464	1521	1660	747	717
2009	4661	3219	1442	1537	1682	734	708
2010	4656	3246	1410	1548	1698	716	693

Source: Variables PO, PONA, PONN, PONAMA, PONAFE, PONNMA, and PONNFE
DSET NM.100BC--created 10/4/84

TABLE F-3
RURAL ALASKA MODEL PROJECTIONS
NOME
MEDIUM BASE CASE

	Resident Population	Pre-School Age (0-4)	School Age (5-18)	Adult (19-64)	Senior (65+)
1981	3059	304	808	1764	183
1982	3134	333	814	1796	192
1983	3221	358	827	1836	201
1984	3279	376	839	1854	210
1985	3336	392	854	1872	218
1986	3439	408	881	1922	229
1987	3514	421	904	1951	238
1988	3571	430	925	1969	247
1989	3640	440	949	1995	256
1990	3697	448	971	2013	265
1991	3772	456	997	2045	275
1992	3831	464	1019	2064	284
1993	3889	470	1041	2085	293
1994	3949	477	1064	2106	302
1995	4009	484	1086	2128	311
1996	4070	491	1108	2151	320
1997	4132	499	1129	2175	329
1998	4194	506	1151	2199	338
1999	4258	514	1173	2225	347
2000	4323	522	1194	2251	356
2001	4390	531	1216	2278	365
2002	4457	539	1237	2306	374
2003	4526	548	1259	2335	384
2004	4580	556	1277	2356	392
2005	4599	559	1285	2358	397
2006	4616	563	1292	2359	402
2007	4631	566	1299	2359	407
2008	4646	569	1305	2359	412
2009	4661	573	1312	2360	417
2010	4656	574	1313	2350	420

Source: Variables PO, POKD, POSL, POAT, and POGE
DSET NM.100BC--created 10/4/84

TABLE F-4
RURAL ALASKA MODEL PROJECTIONS
NOME
MEDIUM BASE CASE

	Resident Population	Change in Resident Population	Natural Increase	Net Migration
1981	3059	59	89	-30
1982	3134	75	69	6
1983	3221	87	69	18
1984	3279	58	69	-12
1985	3336	57	69	-12
1986	3439	103	69	34
1987	3514	74	70	4
1988	3571	57	71	-13
1989	3640	69	71	-2
1990	3697	57	71	-14
1991	3772	75	72	3
1992	3831	58	73	-15
1993	3889	59	73	-15
1994	3949	59	74	-15
1995	4009	60	75	-15
1996	4070	61	76	-15
1997	4132	62	77	-15
1998	4194	63	78	-15
1999	4258	64	80	-16
2000	4323	65	81	-16
2001	4390	66	82	-16
2002	4457	68	84	-16
2003	4526	69	85	-16
2004	4580	54	87	-33
2005	4599	19	88	-69
2006	4616	16	88	-72
2007	4631	15	89	-73
2008	4646	15	89	-74
2009	4661	15	90	-75
2010	4656	-5	90	-95

SOURCE: Variables PO, CHPO, NTIC, and IM
DSET NM.100BC--created 10/4/84

TABLE F-5
RURAL ALASKA MODEL PROJECTIONS
NOME
MEDIUM BASE CASE

	Resident Employment	Non-Project Enclave Employment	Project Enclave Employment (Onshore Only)	Military Enclave Employment	Total Employment Including Enclaves & Military
1981	1244	0	0	0	1244
1982	1284	0	0	0	1284
1983	1313	0	0	0	1313
1984	1316	0	17	0	1333
1985	1335	0	21	0	1356
1986	1372	0	17	0	1388
1987	1393	0	39	0	1432
1988	1395	0	27	0	1422
1989	1419	0	82	0	1501
1990	1425	0	56	0	1482
1991	1450	0	76	0	1526
1992	1435	0	74	0	1509
1993	1414	0	47	0	1461
1994	1489	0	124	0	1613
1995	1463	0	79	0	1543
1996	1501	0	149	0	1650
1997	1492	0	148	0	1640
1998	1488	0	148	0	1636
1999	1489	0	148	0	1637
2000	1488	0	148	0	1636
2001	1486	0	148	0	1634
2002	1481	0	148	0	1629
2003	1482	0	148	0	1630
2004	1480	0	148	0	1628
2005	1457	0	124	0	1581
2006	1452	0	125	0	1576
2007	1447	0	125	0	1571
2008	1442	0	125	0	1567
2009	1438	0	125	0	1562
2010	1415	0	101	0	1515

Source: Variables EMRETO, EMENNOPJ, EMENPJ, EMML, and EMTO
DSET NM.100BC--created 10/4/84

TABLE F-6
RURAL ALASKA MODEL PROJECTIONS
NOME
MEDIUM BASE CASE

	Total Resident Employment	Resident Basic Employment	Resident Support Employment	Resident Government Employment	Resident Project Employment
1981	1244	66	680	498	0
1982	1284	66	703	515	-0
1983	1313	66	717	530	-0
1984	1316	66	702	547	1
1985	1335	66	709	559	2
1986	1372	66	729	576	1
1987	1393	66	743	580	4
1988	1395	66	746	580	3
1989	1419	66	760	584	8
1990	1425	66	766	588	6
1991	1450	66	776	593	15
1992	1435	66	764	592	13
1993	1414	66	749	589	10
1994	1489	66	768	586	69
1995	1463	66	759	578	60
1996	1501	66	770	568	96
1997	1492	66	767	562	97
1998	1488	66	767	558	97
1999	1489	66	768	558	97
2000	1488	66	768	557	97
2001	1486	66	768	555	97
2002	1481	66	766	552	97
2003	1482	66	769	551	97
2004	1480	66	768	548	97
2005	1457	66	761	545	85
2006	1452	66	759	542	84
2007	1447	66	757	539	84
2008	1442	66	756	536	84
2009	1438	66	754	533	84
2010	1415	66	746	530	72

Source: Variables EMRETO, EMBA, EMSU, EMGO, and EMREPJ
DSET NM.100BC--created 10/4/84

TABLE F-7
RURAL ALASKA MODEL PROJECTIONS
NOME
MEDIUM BASE CASE

	Total Resident Basic Employment	Resident Fishing Employment	Resident Fish Processing Employment	Other Resident Basic Employment
1981	66	9	0	57
1982	66	9	0	57
1983	66	9	0	57
1984	66	9	0	57
1985	66	9	0	57
1986	66	9	0	57
1987	66	9	0	57
1988	66	9	0	57
1989	66	9	0	57
1990	66	9	0	57
1991	66	9	0	57
1992	66	9	0	57
1993	66	9	0	57
1994	66	9	0	57
1995	66	9	0	57
1996	66	9	0	57
1997	66	9	0	57
1998	66	9	0	57
1999	66	9	0	57
2000	66	9	0	57
2001	66	9	0	57
2002	66	9	0	57
2003	66	9	0	57
2004	66	9	0	57
2005	66	9	0	57
2006	66	9	0	57
2007	66	9	0	57
2008	66	9	0	57
2009	66	9	0	57
2010	66	9	0	57

Source: Variables EMBA, EMFI, EMFP, and EMBANF
DSET NM.100BC--created 10/4/84

TABLE F-8
RURAL ALASKA MODEL PROJECTIONS
NOME
MEDIUM BASE CASE

	Total Resident Support Employment	Endogenous Resident Support Employment	Government Sponsored Resident Support Employment	Exogenous Resident Support Employment	Enclave Sponsored Resident Support Employment
1981	680	328	56	297	0
1982	703	337	69	297	0
1983	717	345	75	297	0
1984	702	348	57	297	0
1985	709	354	58	297	0
1986	729	363	68	297	0
1987	743	369	76	297	0
1988	746	371	78	297	0
1989	760	378	85	297	1
1990	766	380	88	297	1
1991	776	388	90	297	1
1992	764	386	80	297	1
1993	749	383	68	297	0
1994	768	407	62	297	1
1995	759	402	60	297	1
1996	770	416	56	297	1
1997	767	415	54	297	1
1998	767	415	53	297	1
1999	768	417	53	297	1
2000	768	418	52	297	1
2001	768	419	51	297	1
2002	766	419	48	297	1
2003	769	421	49	297	1
2004	768	422	48	297	1
2005	761	416	47	297	1
2006	759	415	46	297	1
2007	757	414	45	297	1
2008	756	413	44	297	1
2009	754	413	43	297	1
2010	746	406	42	297	1

Source: Variables EMSU, EMSUEG, EMSUGO, EMSUEX, and EMSUEN
DSET NM.100BC--created 10/4/84

TABLE F-9
RURAL ALASKA MODEL PROJECTIONS
NOME
MEDIUM BASE CASE

	Total Civilian Government Employment	Endogenous Civilian Government Employment	Exogenous Civilian Government Employment
1981	498	133	365
1982	515	150	365
1983	530	165	365
1984	547	182	365
1985	559	194	365
1986	576	211	365
1987	580	215	365
1988	580	215	365
1989	584	219	365
1990	588	223	365
1991	593	228	365
1992	592	227	365
1993	589	224	365
1994	586	221	365
1995	578	213	365
1996	568	203	365
1997	562	197	365
1998	558	193	365
1999	558	193	365
2000	557	192	365
2001	555	190	365
2002	552	187	365
2003	551	186	365
2004	548	183	365
2005	545	180	365
2006	542	177	365
2007	539	174	365
2008	536	171	365
2009	533	168	365
2010	530	165	365

Source: Variables EMGO, EMGOEG, and EMGOEX
DSET NM.100BC--created 10/4/84

TABLE F-10
RURAL ALASKA MODEL PROJECTIONS
NOME
MEDIUM BASE CASE

	Onshore Short-term Skilled Project Employment	Onshore Short-term Nonskilled Project Employment	Onshore Long-term Skilled Project Employment	Onshore Long-term Nonskilled Project Employment	Total Onshore Project Employment
1981	0	0	0	0	0
1982	0	0	0	0	0
1983	0	0	0	0	0
1984	12	6	0	0	18
1985	15	8	0	0	23
1986	12	6	0	0	18
1987	25	18	0	0	43
1988	17	13	0	0	30
1989	48	42	0	0	90
1990	33	29	0	0	62
1991	17	74	0	0	91
1992	21	66	0	0	87
1993	5	52	0	0	57
1994	4	52	92	45	193
1995	1	1	92	45	139
1996	0	0	176	69	245
1997	0	0	176	69	245
1998	0	0	176	69	245
1999	0	0	176	69	245
2000	0	0	176	69	245
2001	0	0	176	69	245
2002	0	0	176	69	245
2003	0	0	176	69	245
2004	0	0	176	69	245
2005	0	0	148	61	209
2006	0	0	148	61	209
2007	0	0	148	61	209
2008	0	0	148	61	209
2009	0	0	148	61	209
2010	0	0	120	53	173

Source: Variables EMPSONSK, EMPSONNS, EMPLONSK, EMPLONNS, and EMPJON
DSET NM.100BC--created 10/4/84

TABLE F-11
RURAL ALASKA MODEL PROJECTIONS
NOME
MEDIUM BASE CASE

	Offshore Short-term Skilled Project Employment	Offshore Short-term Nonskilled Project Employment	Offshore Long-term Skilled Project Employment	Offshore Long-term Nonskilled Project Employment	Total Offshore Project Employment
1981	0	0	0	0	0
1982	0	0	0	0	0
1983	0	0	0	0	0
1984	101	0	0	0	101
1985	133	0	0	0	133
1986	101	0	0	0	101
1987	396	0	0	0	396
1988	320	0	0	0	320
1989	885	0	0	0	885
1990	723	0	0	0	723
1991	393	0	0	0	393
1992	394	0	0	0	394
1993	114	0	0	0	114
1994	56	0	568	53	677
1995	16	0	568	53	637
1996	0	0	1490	140	1630
1997	0	0	1512	140	1652
1998	0	0	1555	140	1695
1999	0	0	1555	140	1695
2000	0	0	1610	140	1750
2001	0	0	1610	140	1750
2002	0	0	1610	140	1750
2003	0	0	1610	140	1750
2004	0	0	1610	140	1750
2005	0	0	1303	111	1414
2006	0	0	1303	111	1414
2007	0	0	1303	111	1414
2008	0	0	1303	111	1414
2009	0	0	1303	111	1414
2010	0	0	996	82	1078

Source: Variables EMPSOFSK, EMPSOFNS, EMPLOFSK, EMPLOFNS, and EMPJOF
DSET NM.100BC--created 10/4/84

TABLE F-12
RURAL ALASKA MODEL PROJECTIONS
NOME
MEDIUM BASE CASE

	Resident Project Employment	Enclave Project Employment	Commuter Project Employment	Total Project Employment
1981	0	0	0	0
1982	-0	0	0	0
1983	-0	0	0	0
1984	1	17	101	119
1985	2	21	133	156
1986	1	17	101	119
1987	4	39	396	439
1988	3	27	320	350
1989	8	82	885	975
1990	6	56	723	785
1991	15	76	393	484
1992	13	74	394	481
1993	10	47	114	171
1994	69	124	677	870
1995	60	79	637	776
1996	96	149	1630	1875
1997	97	148	1652	1897
1998	97	148	1695	1940
1999	97	148	1695	1940
2000	97	148	1750	1995
2001	97	148	1750	1995
2002	97	148	1750	1995
2003	97	148	1750	1995
2004	97	148	1750	1995
2005	85	124	1414	1623
2006	84	125	1414	1623
2007	84	125	1414	1623
2008	84	125	1414	1623
2009	84	125	1414	1623
2010	72	101	1078	1251

Source: Variables EMREPJ, EMENPJ, EMCOPJ, and EMPJ
DSET NM.100BC--created 10/4/84

TABLE F-13
RURAL ALASKA MODEL PROJECTIONS
NOME
MEDIUM BASE CASE

	Total Project Employment	Resident Project Employment	Skilled Project Employment	Nonskilled Project Employment	Resident Skilled Project Employment	Resident Nonskilled Project Employment
1981	0	0	0	0	0	0
1982	0	-0	0	0	0	-0
1983	0	-0	0	0	0	-0
1984	119	1	113	6	0	1
1985	156	2	148	8	0	2
1986	119	1	113	6	0	1
1987	439	4	421	18	0	4
1988	350	3	337	13	0	3
1989	975	8	933	42	0	8
1990	785	6	756	29	0	6
1991	484	15	410	74	0	15
1992	481	13	415	66	0	13
1993	171	10	119	52	0	10
1994	870	69	720	150	13	55
1995	776	60	677	99	14	45
1996	1875	96	1666	209	27	69
1997	1897	97	1688	209	28	69
1998	1940	97	1731	209	28	69
1999	1940	97	1731	209	28	69
2000	1995	97	1786	209	28	69
2001	1995	97	1786	209	28	69
2002	1995	97	1786	209	28	69
2003	1995	97	1786	209	28	69
2004	1995	97	1786	209	28	69
2005	1623	85	1451	172	24	61
2006	1623	84	1451	172	23	61
2007	1623	84	1451	172	23	61
2008	1623	84	1451	172	23	61
2009	1623	84	1451	172	23	61
2010	1251	72	1116	135	19	53

Source: Variables EMPJ, EMREPJ, EMPJSK, EMPJNS, EMREPJSK, and EMREPJNS
DSET NM.100BC--created 10/4/84

TABLE G.1. RURAL ALASKA MODEL PROJECTIONS
NOME
SALE 100 IMPACT CASE

	Resident Population	Nonproject Enclave Population	Project Enclave Population	Military Enclave Population	Total Population Including Enclaves & Military
1981	3059	0	0	0	3059
1982	3134	0	0	0	3134
1983	3221	0	0	0	3221
1984	3279	0	17	0	3296
1985	3336	0	21	0	3358
1986	3441	0	22	0	3463
1987	3516	0	51	0	3567
1988	3574	0	39	0	3612
1989	3646	0	106	0	3752
1990	3704	0	78	0	3782
1991	3819	0	175	0	3994
1992	3877	0	122	0	4000
1993	3937	0	154	0	4091
1994	4149	0	289	0	4438
1995	4211	0	151	0	4363
1996	4274	0	234	0	4508
1997	4338	0	256	0	4594
1998	4402	0	256	0	4658
1999	4468	0	256	0	4724
2000	4534	0	256	0	4790
2001	4602	0	256	0	4858
2002	4671	0	256	0	4927
2003	4741	0	256	0	4997
2004	4804	0	256	0	5060
2005	4819	0	220	0	5039
2006	4833	0	220	0	5054
2007	4848	0	220	0	5068
2008	4863	0	220	0	5083
2009	4879	0	220	0	5099
2010	4866	0	185	0	5050

SOURCE: VARIABLES PO, EMENNOPJ, EMENPJ, POML, AND POTO
DSET NM.100IC--CREATED 010/4/84

TABLE G.2. RURAL ALASKA MODEL PROJECTIONS
NOME
SALE 100 IMPACT CASE

	Population						
	Resident	Native	Non-Native	Native Male	Native Female	Non-Native Male	Non-Native Female
1981	3059	1814	1245	925	890	686	559
1982	3134	1860	1274	945	916	698	575
1983	3221	1907	1315	965	942	718	597
1984	3279	1953	1326	985	968	721	605
1985	3336	2000	1336	1006	995	723	613
1986	3441	2048	1393	1026	1021	752	641
1987	3516	2096	1421	1047	1049	764	656
1988	3574	2144	1429	1068	1076	766	663
1989	3646	2193	1453	1090	1103	777	676
1990	3704	2243	1461	1111	1131	778	683
1991	3819	2293	1525	1133	1160	811	714
1992	3877	2344	1533	1156	1189	813	720
1993	3937	2396	1540	1178	1218	814	726
1994	4149	2449	1700	1202	1247	901	800
1995	4211	2503	1709	1225	1278	902	806
1996	4274	2557	1717	1249	1308	904	813
1997	4338	2613	1725	1274	1339	906	819
1998	4402	2670	1732	1299	1371	907	825
1999	4468	2728	1740	1324	1404	909	831
2000	4534	2787	1747	1350	1437	910	837
2001	4602	2848	1754	1377	1470	912	843
2002	4671	2909	1761	1404	1505	913	848
2003	4741	2972	1768	1432	1540	915	854
2004	4804	3033	1771	1459	1574	914	857
2005	4819	3072	1747	1475	1596	900	847
2006	4833	3110	1723	1492	1619	885	837
2007	4848	3149	1698	1508	1641	871	827
2008	4863	3189	1674	1525	1664	857	817
2009	4879	3228	1651	1542	1687	843	807
2010	4866	3254	1612	1552	1702	822	790

SOURCE: VARIABLES PO, PONA, PONN, PONAMA, PONAFE, PONNMA, AND PONNFE
DSET NM.100IC--CREATED 010/4/84

TABLE G.3. RURAL ALASKA MODEL PROJECTIONS
NOME
SALE 100 IMPACT CASE

	Resident Population	Preschool Age (0-4)	School Age (5-18)	Adult (19-64)	Senior (65+)
1981	3059	304	808	1764	183
1982	3134	333	814	1796	192
1983	3221	358	827	1836	201
1984	3279	376	839	1854	210
1985	3336	392	854	1872	218
1986	3441	408	881	1922	229
1987	3516	421	905	1953	238
1988	3574	431	925	1971	247
1989	3646	440	950	2000	256
1990	3704	448	972	2018	265
1991	3819	460	1006	2077	276
1992	3877	467	1028	2097	285
1993	3937	475	1051	2117	294
1994	4149	493	1103	2246	308
1995	4211	501	1125	2268	318
1996	4274	509	1147	2291	327
1997	4338	518	1170	2314	336
1998	4402	526	1192	2339	345
1999	4468	534	1215	2364	355
2000	4534	542	1237	2391	364
2001	4602	551	1260	2418	373
2002	4671	560	1283	2446	382
2003	4741	569	1306	2475	392
2004	4804	577	1326	2500	401
2005	4819	580	1334	2499	406
2006	4833	583	1341	2497	411
2007	4848	586	1349	2497	416
2008	4863	590	1356	2496	421
2009	4879	593	1363	2496	426
2010	4866	593	1362	2481	429

SOURCE: VARIABLES PO, POKD, POSL, POAT, AND POGE
DSET NM.100IC--CREATED 010/4/84

TABLE G.4. RURAL ALASKA MODEL PROJECTIONS
NOME
SALE 100 IMPACT CASE

	Resident Population	Change in Resident Population	Natural Increase	Net Migration
1981	3059	59	89	-30
1982	3134	75	69	6
1983	3221	87	69	18
1984	3279	58	69	-12
1985	3336	57	69	-12
1986	3441	104	69	35
1987	3516	76	70	5
1988	3574	57	71	-13
1989	3646	73	71	2
1990	3704	58	72	-14
1991	3819	115	72	43
1992	3877	59	74	-15
1993	3937	59	74	-15
1994	4149	213	75	138
1995	4211	62	80	-17
1996	4274	63	80	-17
1997	4338	64	81	-17
1998	4402	64	82	-17
1999	4468	65	83	-17
2000	4534	67	84	-18
2001	4602	68	85	-18
2002	4671	69	87	-18
2003	4741	70	88	-18
2004	4804	63	90	-27
2005	4819	15	91	-76
2006	4833	14	91	-77
2007	4848	15	92	-77
2008	4863	15	92	-77
2009	4879	16	93	-77
2010	4866	-13	94	-107

SOURCE: VARIABLES PO, CHPO, NTIC, AND IM
DSET NM.100IC--CREATED 010/4/84

TABLE G.5. RURAL ALASKA MODEL PROJECTIONS
NOME
SALE 100 IMPACT CASE

	Resident Employment	Non-Project Enclave Employment	Project Enclave Employment (onshore only)	Military Enclave Employment	Total Employment Including Enclaves & Military
1981	1244	0	0	0	1244
1982	1284	0	0	0	1284
1983	1313	0	0	0	1313
1984	1316	0	17	0	1333
1985	1335	0	21	0	1356
1986	1372	0	22	0	1395
1987	1394	0	51	0	1445
1988	1396	0	39	0	1435
1989	1423	0	106	0	1529
1990	1429	0	78	0	1507
1991	1477	0	175	0	1652
1992	1457	0	122	0	1579
1993	1445	0	154	0	1599
1994	1601	0	289	0	1889
1995	1560	0	151	0	1711
1996	1613	0	234	0	1846
1997	1621	0	256	0	1878
1998	1618	0	256	0	1873
1999	1619	0	256	0	1874
2000	1617	0	256	0	1873
2001	1615	0	256	0	1871
2002	1610	0	256	0	1865
2003	1611	0	256	0	1866
2004	1609	0	256	0	1864
2005	1577	0	220	0	1796
2006	1570	0	220	0	1791
2007	1565	0	220	0	1785
2008	1560	0	220	0	1781
2009	1556	0	220	0	1776
2010	1523	0	185	0	1707

SOURCE: VARIABLES EMRETO, EMENNOPJ, EMENPJ, EMML, AND EMTO
DSET NM.100IC--CREATED 010/4/84

TABLE G.6. RURAL ALASKA MODEL PROJECTIONS
NOME
SALE 100 IMPACT CASE

	Total Resident Employment	Resident Basic Employment	Resident Support Employment	Resident Government Employment	Resident Project Employment
1981	1244	66	680	498	0
1982	1284	66	703	515	-0
1983	1313	66	717	530	-0
1984	1316	66	702	547	1
1985	1335	66	709	559	2
1986	1372	66	729	576	2
1987	1394	66	743	580	4
1988	1396	66	747	580	3
1989	1423	66	762	585	10
1990	1429	66	767	588	7
1991	1477	66	786	596	29
1992	1457	66	772	595	24
1993	1445	66	760	592	27
1994	1601	66	808	597	129
1995	1560	66	794	589	111
1996	1613	66	810	579	158
1997	1621	66	812	571	172
1998	1618	66	811	568	172
1999	1619	66	813	568	172
2000	1617	66	813	566	172
2001	1615	66	813	564	172
2002	1610	66	810	561	172
2003	1611	66	813	559	172
2004	1609	66	813	557	172
2005	1577	66	803	554	154
2006	1570	66	800	550	154
2007	1565	66	798	547	154
2008	1560	66	797	544	154
2009	1556	66	795	541	154
2010	1523	66	784	537	135

SOURCE: VARIABLES EMRETO, EMBA, EMSU, EMGO, AND EMREPJ
DSET NM.100IC--CREATED 010/4/84

TABLE G.7. RURAL ALASKA MODEL PROJECTIONS
NOME
SALE 100 IMPACT CASE

	Total Resident Basic Employment	Resident Fishing Employment	Resident Fish Processing Employment	Other Resident Basic Employment
1981	66	9	0	57
1982	66	9	0	57
1983	66	9	0	57
1984	66	9	0	57
1985	66	9	0	57
1986	66	9	0	57
1987	66	9	0	57
1988	66	9	0	57
1989	66	9	0	57
1990	66	9	0	57
1991	66	9	0	57
1992	66	9	0	57
1993	66	9	0	57
1994	66	9	0	57
1995	66	9	0	57
1996	66	9	0	57
1997	66	9	0	57
1998	66	9	0	57
1999	66	9	0	57
2000	66	9	0	57
2001	66	9	0	57
2002	66	9	0	57
2003	66	9	0	57
2004	66	9	0	57
2005	66	9	0	57
2006	66	9	0	57
2007	66	9	0	57
2008	66	9	0	57
2009	66	9	0	57
2010	66	9	0	57

SOURCE: VARIABLES EMBA, EMFI, EMFP, AND EMBANF
DSET NM.100IC--CREATED 010/4/84

TABLE G.8. RURAL ALASKA MODEL PROJECTIONS
NOME
SALE 100 IMPACT CASE

	Total Resident Support Employment	Endogenous Resident Support Employment	Government Sponsored Resident Support Employment	Exogenous Resident Support Employment	Enclave Sponsored Resident Support Employment
1981	680	328	56	297	0
1982	703	337	69	297	0
1983	717	345	75	297	0
1984	702	348	57	297	0
1985	709	354	58	297	0
1986	729	364	68	297	0
1987	743	370	76	297	1
1988	747	371	78	297	0
1989	762	379	85	297	1
1990	767	381	88	297	1
1991	786	396	91	297	2
1992	772	393	81	297	1
1993	760	392	69	297	2
1994	808	443	65	297	3
1995	794	433	63	297	2
1996	810	451	59	297	2
1997	812	456	57	297	3
1998	811	457	55	297	3
1999	813	458	55	297	3
2000	813	459	54	297	3
2001	813	460	53	297	3
2002	810	460	50	297	3
2003	813	462	52	297	3
2004	813	463	51	297	3
2005	803	454	49	297	2
2006	800	453	48	297	2
2007	798	452	47	297	2
2008	797	451	46	297	2
2009	795	451	45	297	2
2010	784	441	44	297	2

SOURCE: VARIABLES EMSU, EMSUEG, EMSUGO, EMSUEX, AND EMSUEN
DSET NM.100IC--CREATED 010/4/84

TABLE G.9. RURAL ALASKA MODEL PROJECTIONS
NOME
SALE 100 IMPACT CASE

	Total Civilian Government Employment	Endogenous Civilian Government Employment	Exogenous Civilian Government Employment
1981	498	133	365
1982	515	150	365
1983	530	165	365
1984	547	182	365
1985	559	194	365
1986	576	211	365
1987	580	215	365
1988	580	215	365
1989	585	220	365
1990	588	223	365
1991	596	231	365
1992	595	230	365
1993	592	227	365
1994	597	232	365
1995	589	224	365
1996	579	214	365
1997	571	206	365
1998	568	203	365
1999	568	203	365
2000	566	201	365
2001	564	199	365
2002	561	196	365
2003	559	194	365
2004	557	192	365
2005	554	189	365
2006	550	185	365
2007	547	182	365
2008	544	179	365
2009	541	176	365
2010	537	172	365

SOURCE: VARIABLES EMGO, EMGOEG, AND EMGOEX
DSET NM.100IC--CREATED 010/4/84

TABLE G.10. RURAL ALASKA MODEL PROJECTIONS
NOME
SALE 100 IMPACT CASE

	Onshore Short-Term Skilled Project Employment	Onshore Short-Term Nonskilled Project Employment	Onshore Long-Term Skilled Project Employment	Onshore Long-Term Nonskilled Project Employment	Total Onshore Project Employment
1981	0	0	0	0	0
1982	0	0	0	0	0
1983	0	0	0	0	0
1984	12	6	0	0	18
1985	15	8	0	0	23
1986	16	8	0	0	24
1987	33	22	0	0	55
1988	25	17	0	0	42
1989	64	52	0	0	116
1990	48	37	0	0	85
1991	58	146	0	0	204
1992	27	119	0	0	146
1993	46	135	0	0	181
1994	39	131	164	84	418
1995	9	5	164	84	262
1996	0	0	276	116	392
1997	0	0	304	124	428
1998	0	0	304	124	428
1999	0	0	304	124	428
2000	0	0	304	124	428
2001	0	0	304	124	428
2002	0	0	304	124	428
2003	0	0	304	124	428
2004	0	0	304	124	428
2005	0	0	262	112	374
2006	0	0	262	112	374
2007	0	0	262	112	374
2008	0	0	262	112	374
2009	0	0	262	112	374
2010	0	0	220	100	320

SOURCE: VARIABLES EMPSONSK, EMPSONNS, EMPLONSK, EMPLONNS, AND EMPJON
DSET NM.100IC--CREATED 010/4/84

TABLE G.11. RURAL ALASKA MODEL PROJECTIONS
NOME
SALE 100 IMPACT CASE

	Offshore Short-Term Skilled Project Employment	Offshore Short-Term Nonskilled Project Employment	Offshore Long-Term Skilled Project Employment	Offshore Long-Term Nonskilled Project Employment	Total Offshore Project Employment
1981	0	0	0	0	0
1982	0	0	0	0	0
1983	0	0	0	0	0
1984	101	0	0	0	101
1985	133	0	0	0	133
1986	138	0	0	0	138
1987	465	0	0	0	465
1988	389	0	0	0	389
1989	1058	0	0	0	1058
1990	912	0	0	0	912
1991	1121	0	0	0	1121
1992	574	0	0	0	574
1993	971	75	0	0	1046
1994	747	0	921	86	1754
1995	172	0	921	100	1193
1996	0	0	2150	216	2366
1997	0	0	2495	245	2740
1998	0	0	2565	245	2810
1999	0	0	2599	245	2844
2000	0	0	2654	245	2899
2001	0	0	2654	245	2899
2002	0	0	2654	245	2899
2003	0	0	2654	245	2899
2004	0	0	2654	245	2899
2005	0	0	2194	201	2395
2006	0	0	2194	201	2395
2007	0	0	2194	201	2395
2008	0	0	2194	201	2395
2009	0	0	2194	201	2395
2010	0	0	1733	158	1891

SOURCE: VARIABLES EMPSOFSK, EMPSOFNS, EMPLOFSK, EMPLOFNS, AND EMPJOF
DSET NM.100IC--CREATED 010/4/84

TABLE G.12. RURAL ALASKA MODEL PROJECTIONS
NOME
SALE 100 IMPACT CASE

	Resident Project Employment	Enclave Project Employment	Commuter Project Employment	Total Project Employment
1981	0	0	0	0
1982	-0	0	0	0
1983	-0	0	0	0
1984	1	17	101	119
1985	2	21	133	156
1986	2	22	138	162
1987	4	51	465	520
1988	3	39	389	431
1989	10	106	1058	1174
1990	7	78	912	997
1991	29	175	1121	1325
1992	24	122	574	720
1993	27	154	1046	1227
1994	129	289	1754	2172
1995	111	151	1193	1455
1996	158	234	2366	2758
1997	172	256	2740	3168
1998	172	256	2810	3238
1999	172	256	2844	3272
2000	172	256	2899	3327
2001	172	256	2899	3327
2002	172	256	2899	3327
2003	172	256	2899	3327
2004	172	256	2899	3327
2005	154	220	2395	2769
2006	154	220	2395	2769
2007	154	220	2395	2769
2008	154	220	2395	2769
2009	154	220	2395	2769
2010	135	185	1891	2211

SOURCE: VARIABLES EMREPJ, EMENPJ, EMCOPJ, AND EMPJ
DSET NM.100IC--CREATED 010/4/84

TABLE G.13. RURAL ALASKA MODEL PROJECTIONS
NOME
SALE 100 IMPACT CASE

	Total Project Employment	Resident Project Employment	Skilled Project Employment	Nonskilled Project Employment	Resident Skilled Project Employment	Resident Nonskilled Project Employment
1981	0	0	0	0	0	0
1982	0	-0	0	0	0	-0
1983	0	-0	0	0	0	-0
1984	119	1	113	6	0	1
1985	156	2	148	8	0	2
1986	162	2	154	8	0	2
1987	520	4	498	22	0	4
1988	431	3	414	17	0	3
1989	1174	10	1122	52	0	10
1990	997	7	960	37	0	7
1991	1325	29	1179	146	0	29
1992	720	24	601	119	0	24
1993	1227	27	1017	210	0	27
1994	2172	129	1871	301	24	106
1995	1455	111	1266	189	26	85
1996	2758	158	2426	332	42	116
1997	3168	172	2799	369	48	124
1998	3238	172	2869	369	48	124
1999	3272	172	2903	369	48	124
2000	3327	172	2958	369	48	124
2001	3327	172	2958	369	48	124
2002	3327	172	2958	369	48	124
2003	3327	172	2958	369	48	124
2004	3327	172	2958	369	48	124
2005	2769	154	2456	313	42	112
2006	2769	154	2456	313	42	112
2007	2769	154	2456	313	42	112
2008	2769	154	2456	313	42	112
2009	2769	154	2456	313	42	112
2010	2211	135	1953	258	35	100

SOURCE: VARIABLES EMPJ, EMREPJ, EMPJSK, EMPJNS, EMREPJSK, AND EMREPJNS
DSET NM.100IC--CREATED 010/4/84