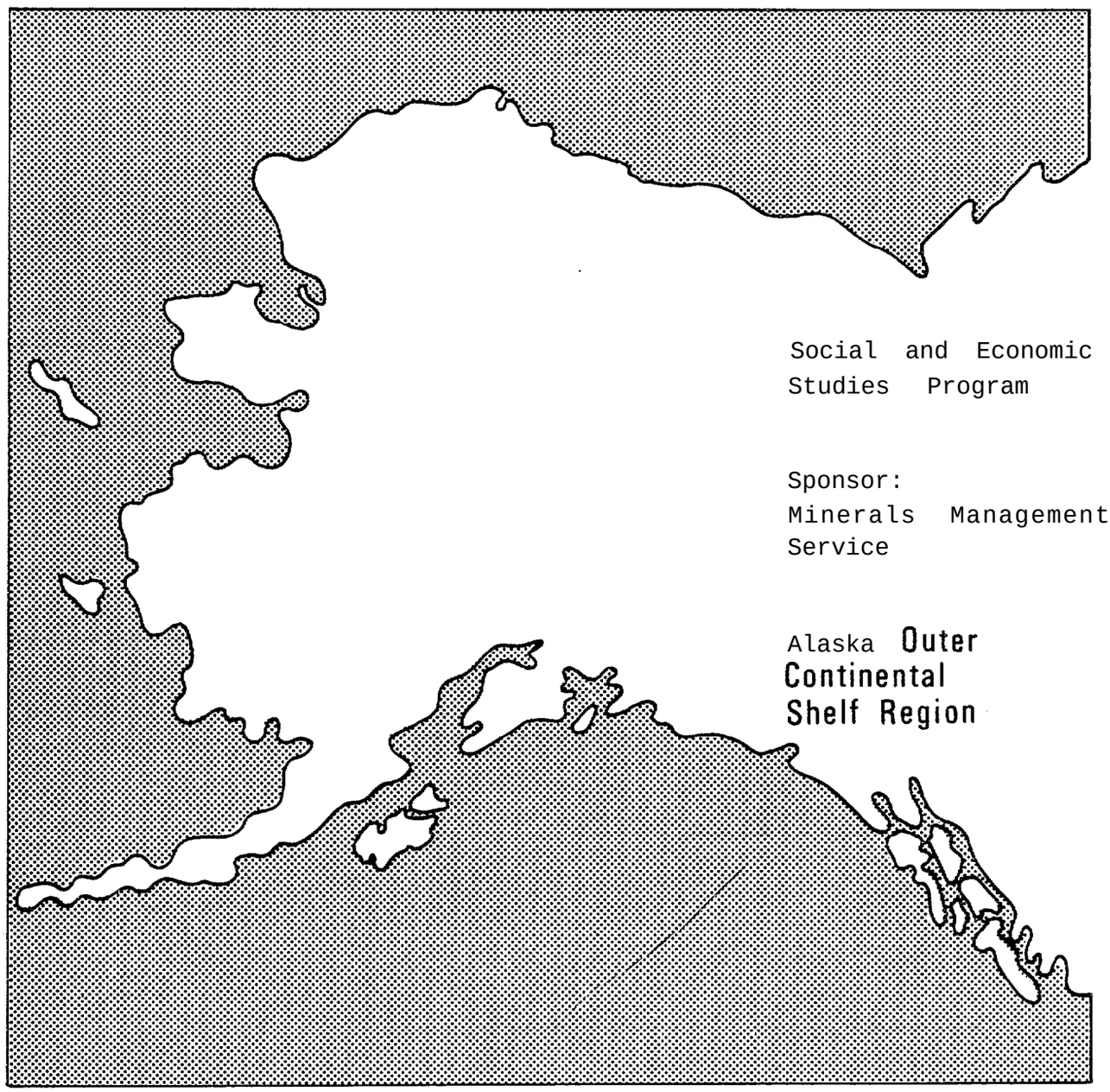
OCS Study
MMS 85-0030

U.S. Department of the interior

Technical Report
Number 115



Social and Economic Studies Program

Sponsor:
Minerals Management Service

Alaska Outer Continental Shelf Region

Alaska Statewide and Regional Economic and Demographic Systems: Effects of OCS Exploration and Development, 1985

ALASKA STATEWIDE ANO REGIONAL ECONOMIC AND DEMOGRAPHIC SYSTEMS: EFFECTS OF OCS EXPLORATION ANO DEVELOPMENT, 1985

Technical Report Number 115
Social and Economic Studies Program

Minerals Management Service
Alaska OCS Region

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June 1985

Prepared under Contract Number 14-12-0001-30139

ABSTRACT

This report projects cumulative demographic and economic effects expected from the federal Outer Continental Shelf (OCS) oil and gas lease sale program in Alaska. Econometric modeling techniques are used to develop projections including and excluding OCS exploration and development for the state of Alaska and the state's Southcentral Region.

The "projected cumulative effects of the OCS program include an increase of approximately 3.5 percent in state population and employment and a modest decline in real per capita state expenditures. The statewide employment and population effects grow as OCS development proceeds but diminish very slowly as construction employment declines in the late 1990s.The effects grow more slowly in the Southcentral Region, continuing to increase until 2000 to reach or exceed the same percentage increases in population and employment as observed for the state as a whole. The delayed response is due to the importance of the support sector in projected Alaska economic growth, especially in the Southcentral Region.

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1. INTRODUCTION

This report contains projections and analyses of economic and demographic effects of the federal Outer Continental Shelf (OCS) oil and gas leasing program in Alaska. It includes projections of the effects on Alaska's Southcentral Region as well as on the state as a whole. For this study, the Southcentral Region includes the Kenai Peninsula Borough and the Matanuska-Susitna Borough as well as Anchorage, but it excludes the Valdez and Copper River areas.[1]

We project economic and demographic effects using the Man-in-the-Arctic Program (MAP) system of econometric models developed at the University of Alaska, Institute of" Social and Economic Research (ISER). Chapter II summarizes the MAP model system and discusses the manner in which we use the models to project the Alaska statewide and regional economy and population.

We analyze the effects of OCS oil and gas development by projecting the economy and population under two alternative scenarios. These two scenarios consist of identical assumptions about future economic and demographic variables, except that one includes and the other excludes future OCS activity.

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[1]The Kenai Peninsula Borough, the Matanuska-Susitna Borough, and the Municipality of Anchorage constitute separate 1980 Census Divisions. The 1980 Kenai Peninsula Census Division is the sum of the 1970 Seward and Kenai-Cook Inlet Census Divisions.

The projections, including OCS development, assume a scenario of plausible petroleum exploration and development activities occurring in areas included in the five-year lease sale schedule as well as on currently leased acreage. For the alternative scenario, excluding OCS development, we assume that there is no development and no further exploration on the federal OCS, even on areas already under lease. Thus, the projections discussed in this report are analogous to base case and impact projections of a hypothetical future project. We do not use these terms to describe the two sets of projections, however, since the scenario excluding all OCS exploration and development, which would be the base case in such a paradigm, is not a realistic course of events.

These two scenarios do not include development of natural gas resources on Alaska's North Slope and on the federal OCS. Appendix G contains an alternative set of projections of the Alaska economy and population including and excluding OCS development, assuming that it becomes feasible to market these gas resources by 1995.

Chapter III reviews the assumptions used for the MAP statewide model and presents the economic and demographic projections for Alaska assuming a scenario of continuing OCS exploration and development. Chapter IV discusses the projections under the assumption of no further OCS development. We use these results to analyze the cumulative effects of the OCS program on the state economy and population.

Chapter V discusses alternative projections of the population and economy of southcentral Alaska, depending upon whether or not OCS development occurs. Chapter VI reviews the results of the statewide and regional projections shown in Chapters III-V. The appendixes contain additional supporting information for these projections, including details of model simulation assumptions and results.

The following projections and analyses are similar in scope and build on the analyses described previously in Berman and Hull, 1984. In this report, however, we analyze an entirely new set of projections which differ in several important respects from previous studies. In the first place, we examine a new scenario for OCS development reflecting a recent revision by the Minerals Management Service of likely oil discoveries in the Beaufort Sea. Secondly, we make use of updated information for assumptions about basic sector activity and state petroleum revenues. Finally, we have revised the MAP model to incorporate findings of ongoing studies of the structure of the Alaska economy as well as to make use of new data which have recently become available. These changes to the MAP model system are summarized for reference in Appendix E.

II. METHODOLOGY

This chapter describes the methodology used to project statewide and regional economic and demographic effects of Alaska OCS development. We focus the analysis principally on changes in total population, total employment, and the composition of employment. This makes the results of the cumulative impacts study readily comparable to those of other studies; i.e., impact analyses of individual sales. It also allows a straightforward assessment of the absolute and relative importance of the OCS program to the overall economic size and performance of the state and regional economies.

Although we describe projections using simple measures of employment, incomes and population, the projections are the product of a complex modeling process. The Man-in-the-Arctic Program (MAP) model system, the principal modeling tool for our economic and demographic projections, has been used extensively in the past for economic and demographic projections. The remainder of this chapter summarizes the MAP model system and provides a brief description of how it works. Readers who are generally familiar with the structure of the MAP model may wish to skip ahead directly to Chapter III.

The model system includes a statewide econometric model and a regional model allocating economic activities, employment, and population within the state. These models were developed at ISER

and have been refined and extended periodically over the years. Goldsmith et al., 1985, contains a description and complete documentation of the model system. We shall, however, briefly review how each of the two models projects the main economic, demographic, and fiscal variables.

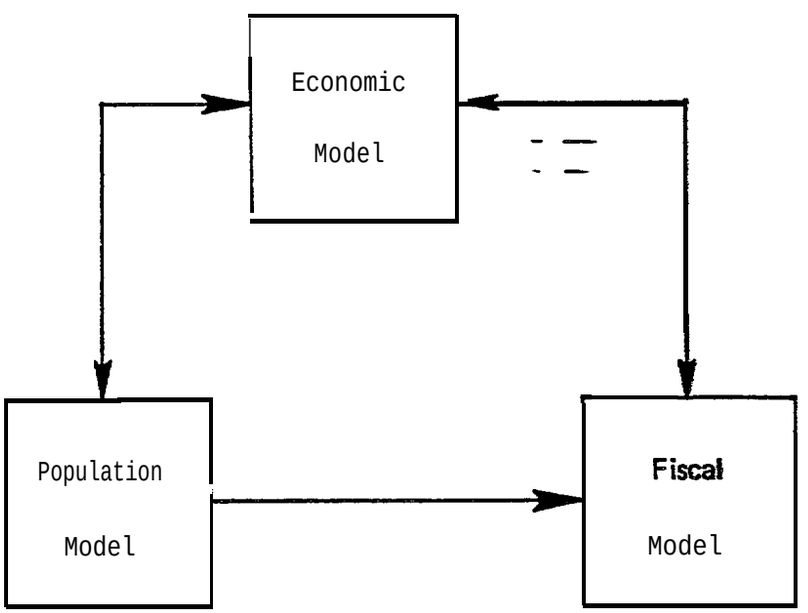
Statewide Projections

The MAP statewide econometric model has three main components—an economic model, a "population model, and a fiscal model. The economic model determines the level of economic activity and employment in each industry as well as prices, wages, and total income. The population model projects values for numerous demographic variables in order to determine tots? population and total households. The fiscal component models the revenue and spending patterns of Alaska state and local governments. The three components of the MAP model are interdependent, with linkages as shown in Figure 1. Understanding the nature of this interdependence is helpful for recognizing the powers and limitations of the model for making economic and demographic projections.

The link between the economic model and population model is the notion of a labor market. The population model produces a potential labor force while the economic model produces a labor-force participation rate and the demand for labor, e.g., jobs. Net migration flows balance the supply and demand for labor, as discussed in Berman, 1982. One link between the fiscal model and

Figure 1

The MAP Model



the economic model reflects the ability of government to stimulate or depress the economy through expenditures and tax policy. On the other hand, the level of government revenues depends on the level of economic activity, especially activity in the petroleum industry.

In addition to these major links among the three components of the MAP model, there are minor interdependencies such as the use of population figures in the economic and fiscal models to compute per capita income and per capita public spending. This last ratio has been significant in the recent past for computing state spending under the expenditure limitation initiative. Under current revenue projections, however, spending is unlikely to reach the limit again even under relatively optimistic scenarios.

The economic model classifies all economic activity as exogenous or endogenous. Exogenous activities produce goods or services for a primarily national or international market while endogenous activities produce to satisfy local or state demand. Forest and fisheries products, petroleum and other mining, and federal government are the major exogenous industries. Most services sector employment is endogenous, although a portion derived from tourism is considered exogenous. Manufacturing, construction, and transportation also contain both endogenous and exogenous components, depending on the assumed location of the market for their products. State and local government spending is endogenous but depends on revenues with major exogenous components (petroleum

revenues and federal transfers). Although local markets absorb most Alaska agricultural production, direct and indirect state subsidies determine the size and growth of the industry. Thus, we consider it more appropriate to classify this industry as exogenous rather than endogenous.

The notion of exogenous and endogenous economic activity in the MAP statewide economic model is, in many ways, similar to the basic and support sectors in an economic base model. In an economic base model, the so-called basic industries are exogenous {set outside the model), and the support industries are endogenous (computed by the model). The MAP model goes beyond the concept of the basic versus support industries by taking into account the fact that data available for various industries in Alaska to estimate and calibrate the model include both exogenous and endogenous components. Thus, some industries usually considered basic in a base model, such as manufacturing, have an endogenous , component while some support services, for example, have an exogenous tourism component.

Given the levels of exogenous economic activity, the MAP statewide model solves simultaneously for all the endogenous activities as well as for total disposable income, total population, arid total employment. Though the process is much more complex than in an economic base model, the MAP model Implicitly derives an 'employment multiplier," defined as the equilibrium change in total employment following a change in exogenous employment, other things equal. One

may readily observe the multiplier process working in MAP model projections. However, it is difficult to predict how large the multiplier will be without simulating the entire model, since the actual value of the multiplier is based mainly on real Income. Many economic variables affect real income, including state fiscal policy, wage rates, the cost of living and the mix of employment among relatively high- and relatively low-wage industries.

Regional Projections

The MAP regional model allocates MAP statewide model projections for population and basic, support, and government employment among 20 regions, given the regional distribution of exogenous industry employment. The MAP model regions correspond exactly to 1970 census divisions, except that the unincorporated portion of the Bristol Bay Region is combined with the borough census division in one region, and all census divisions in Southeast Alaska are combined into one region.

The methodology of the regional model is based upon the use of two large matrixes. One relates basic employment in each region to support sector employment in that and in other regions while the other matrix relates employment in each region to population in that and in other regions. The model also distributes government employment to regions based upon population and past trends. The model begins with proportions determined by 1980 population and employment, but changes in basic employment in a region in general affects support sector employment and population in other regions.

III. ALASKA ECONOMIC GROWTH TO 2010

This chapter discusses a projection for the Alaska economy and population assuming that exploration and development of OCS oil and gas resources continue. First, we discuss the assumptions used for the projection. Then we present the results of a simulation of the MAP statewide model.

Scenario Assumptions

Using the MAP model to project the Alaska economy and population requires an input scenario containing four types of assumptions. These are (1) national economic variable assumptions relevant to Alaska's economy, (2) projections for exogenous employment in various projects and industries, (3) a projection of the number of visitors to Alaska, and (4) assumptions regarding Alaska State revenues and spending policy. Table 1 summarizes the assumptions we used for the MAP median projections, following the outline of the four categories.

The scenario assumptions represent, in the aggregate, a median outcome for future demographic, economic, and fiscal conditions affecting the Alaska economy. This means that we consider it equally likely that the value is higher or lower than the assumed value. Since it is unlikely but possible that a very high level may result for some scenario assumptions, the median value generally is lower than the average level of all possible outcomes (the mean).

TABLE 1. SUMMARY OF MAP MODEL ASSUMPTIONS FROM THE SCENARIO GENERATOR: FEBRUARY 1985 OCS STUDIES (S85.B1)

ASSUMPTIONS	DESCRIPTION(a)
National Variables Assumptions	
U.S. Inflation Rate	Consumer prices rise at an annual rate of 6.2 percent from 1987 to 1991, then at 6.8 percent annually after 1991.
Real Average Weekly Earnings	Growth in real average weekly earnings averages 1 percent annually.
Real Per Capita Income	Growth in real per capita income averages 1.5 percent annually after 1984.
Unemployment Rate	Long-run rate of 7 percent.
Alaska Industry Assumptions	
Trans-Alaska Pipeline	Operating employment remains constant at 990 through 2010 (TAP.F84).
North Slope Petroleum Production	Petroleum employment increases through the early 1990s to a peak of 4.6 thousand and subsequently tapers off gradually. Construction employment is eliminated by the late 1990s. This case presumes no significant change in current oil price trends (NSO.84B).
Upper Cook Inlet Petroleum Production	Employment in exploration and development of oil and gas in the Upper Cook Inlet area declines gradually beginning in 1983 by approximately 2.5 percent per year (UPC.F84).
OCS Development	Exploration and development activity grows through the early 1990s with commercial development of oil (but not gas) occurring in both the Bering and Beaufort Seas. Direct construction employment peaks at around 1900 in 1992, while operating employment declines slowly from a level of approximately 2,500 in 2000 (OCS.C85X).

(a) Codes in parentheses indicate ISER names for MAP Model SCEN_ case files.

Oil Industry Headquarters	Oil company headquarters employment in Anchorage rises by 1,150 between 1983 and 1986 to remain at around 4,600 through 2010 (OHQ. F84).
Beluga Chuitna Coal Production	Development of 4.4 million ton/year mine for export beginning in 1990 provides total employment of 524 (BCL.04T(-4)).
Healy Coal Mining	Export of approximately 1 million tons of coal annually will add 25 new workers to current base of 100 by 1986 (HCL.84X) .
U.S. Borax	The U.S. Borax mine near Ketchikan is brought into production with operating employment of 790 beginning in 1989 and eventually increasing to 1,020 (BXM. F84).
Greens Creek Mine	Production from the Greens Creek Mine on Admiralty Island results in employment of 150 people from 1988 through 2003 (GCM.F84).
Red Dog Mine	The Red Dog Mine in the Western Brooks Range reaches full production with operating employment of 428 by ?993 (RED. F84).
Other Mining Activity "	Mining employment not included in special projects increases from current level at 1 percent annually (OMN. F84).
Agriculture	Moderate state support results in expansion of employment in agriculture by 4 percent per year (AGR.F83).
Logging and Sawmills	Employment expands to over 3,500 by 1990 before beginning to decline gradually to about 3,100 after 2000 (FLL. F84) .
Pulp Mills	Employment declines at a rate of 1 percent per year after 1991 (FPU. F84).
Commercial Fishing-Nonbottomfish	Employment levels in traditional fisheries harvest remain constant at 7,500 through 2010 (TCF. F84).

Commercial Fish Processing - Nonbottomfish	Employment in processing traditional fisheries harvests remains at the level of the average figure for the period 1978-1982, or around 7,300 (TFP.F84).
Commercial Fishing-Bottomfish	The total U.S. bottomfish catch expands at a constant rate to allowable catch in 2000, with Alaska resident harvesting employment rising to 733. Onshore processing capacity expands in the Aleutians and Kodiak census divisions to provide total resident employment of 971 by 2000 (BCF.F83).
Federal Military Employment	Employment declines at 1 percent per year, consistent with the long-term trend since 1960 (GFM.F84).
Light Army Division Deployment	A portion of a new Army division is deployed to Fairbanks and Anchorage beginning in 1986, augmenting active-duty personnel by 2,600 (GFM.JPR)
Federal Civilian Employment	Rises at 0.5 percent annual rate consistent with the long-term trend since 1960 (GFC.F84).
Tourism	Number of tourists visiting Alaska increases by 30,000 per year to over 1.3 million by 2010 (TRS.J85). "
State Hydroelectric Projects	Construction employment from Alaska Power Authority projects peaks at over 700 in 1990 for construction of several projects in Southcentral and Southeast Alaska (SHP.F83).

State Petroleum Revenue Assumptions

Royalties and Severance Taxes	Based on 50 percent probability projections published by the Alaska Department of Revenue in December 1984. After 2001, values assumed to remain constant in nominal dollars at the 2001 level (DOR.D84).
Bonuses, Petroleum Property and Corporate Income Taxes	Based on Alaska Department of Revenue projections, published in Revenue Sources, January 1985 (DOR.D84).

Additional Property Taxes from OCS Development	Two percent of depreciated original cost of oil pipelines and support bases within state jurisdiction, depreciating facilities in proportion to oil production. Facility cost, construction schedule, and oil production assumptions provided by u. s. Department of Interior, MMS (OCS. C85X).
State Fiscal Behavior Assumptions	
State Appropriations	If funds available, ceiling established by Constitutional Spending Limit; otherwise appropriations equal revenues.
Capital/Operations Split	Two-thirds operations if Spending Limit in effect; three-fourths operations otherwise.
General Obligation Bonds	Bonding occurs up to point where debt service is 5 percent of state revenues.
State Loan Programs	New capitalization terminated in FY 1992.
Municipal Capital Grants	Funding terminated in FY. 1987.
Permanent Fund/Other Appropriations in Excess of Spending Limit	None
Permanent Fund Dividend	Dividend terminated after FY 1989 distribution.
Use of Permanent Fund Earnings	Beginning in FY 1991, half of earnings transferred to General Fund; beginning in 2001, all earnings transferred to General Fund.
Permanent Fund Principal	Continuous accumulation.
Personal Income Tax	Personal income tax reinstated in CY 1991.

Goldsmith et al., 1985 (Appendix K, Section K.1) discuss this problem in greater detail.

The national variable assumptions define the benchmarks used by the MAP model for the national economy. These are important for our projections because national economic trends in the long run mainly determine Alaskan prices, earnings, and labor market conditions. In the current study, we assume a long-run Us. inflation rate approaching 6.8 percent, a long-run U.S. unemployment rate of 7 percent, and slowly growing real wage and real per-capita income levels. Changing the rate of inflation has little effect on projections in constant dollars. A different long-run unemployment rate would affect the ratio of population to employment in Alaska without changing the projected employment levels Significantly. If one were to assume a higher rate of growth of U.S. wage-rates and per-capita income, projected Alaska support-sector employment would increase at a faster rate due to the increased spending power that the model would project for Alaska. A slower growth in U.S. earnings would result in projections with reduced growth in Alaska's support industries.

Exogenous employment assumptions for the median scenario are either assumptions about special projects or assumptions about industries. The industry employment assumptions summarized in Table 1 show a general pattern of modest growth. We project baseline employment to increase in forest products, mining, fishing and processing,

transportation, and agriculture, based upon supply and demand for these products. We project total federal employment to remain essentially unchanged at current levels. We anticipate that current civilian federal budget cuts and the deployment of a new light infantry division in 1986 will not change the long-term trends of slowly-growing federal civilian employment and slowly declining military employment in Alaska.

In addition to these baseline industry assumptions, we include a number of special projects. Our method is to include some projects that might occur, while excluding others that might also occur. We seek to project the pattern of total exogenous employment in the industry, using actual proposed projects as examples of the type of economic activity that might take place. As such, we are not passing judgment on the viability of certain specific projects as opposed to others. Rather, we develop a scenario of possible development consistent with our expectations for overall growth in the industry.

We include most construction and manufacturing employment in the "low wage" category. We associate the "high wage" construction and manufacturing employment categories only with specific activities likely to pay wages substantially above the prevailing average scale for the industry. Examples of high wage construction and manufacturing would be pipeline construction and petroleum processing on the North Slope.

Exogenous construction employment declines in the 1990s, reflecting a projected continuation of the historical decline in the Importance of exogenous (relative to endogenous) construction. The figures for low wage exogenous construction include primarily employment resulting from state-sponsored hydroelectric projects noted in Table 1. High-wage exogenous construction assumptions reflect an arbitrary division of North Slope onshore oil and gas operations between construction and mining employment in an attempt to provide consistency with historical Alaska Department of Labor employment figures.

We aggregate industry and special project assumptions into ten categories of exogenous employment. These are employment in agriculture, mining, commercial fishing, exogenous transportation, high-wage and low-wage exogenous construction and manufacturing, active-duty military, and federal civilian government. Table 2 presents the exogenous employment assumptions for the median scenario in the ten categories for the forecast period, 1984 to 2010.

Fluctuations in year-to-year totals in some categories of employment reflect the timing of employment assumed for individual projects. While changes in the timing of particular projects could affect. considerably the employment assumptions for certain years, such fluctuations have a relatively minor impact upon tong-term projections of total employment and total population.

TABLE 2. EXOGENOUS EMPLOYMENT ASSUMPTIONS FOR MAP STATEWIDE MODEL INCLUDING OCS DEVELOPMENT, OIL ONLY CASE*

(thousands of employees)

	Agricultural Employment	Mining Employment	High Wage Exogenous Construction Employment	Low Wage Exogenous Construction Employment	Exogenous Transportation Employment
1980	0.140	6.680	0.360	0.050	1.100
1981	0.320	8.910	1.450	0.160	1.100
1982	0.360	8.840	2.180	0.440	1.100
1983	0.270	8.180	2.990	0.670	1.100
1984	0.385	9.258	2.215	0.242	1.000
1985	0.400	10.465	2.594	0.218	1.116
1986	0.416	11.408	3.443	0.644	1.175
1987	0.435	12.876	1.716	1.630	1.273
1988	0.454	12.189	0.644	1.391	1.273
1989	0.475	12.776	0.489	0.890	1.136
1990	0.496	13.260	0.714	1.025	1.152
1991	0.520	15.027	1.869	1.130	1.409
1992	0.544	17.123	2.323	1.290	1.523
1993	0.573	17.980	0.651	0.571	1.641
1994	0.601	14.920	0.415	0.100	1.598
1995	0.633	14.805	0.415	0.000	1.818
1996	0.668	14.701	0.336	0.000	1.818
1997	0.704	14.657	0.336	0.000	1.818
1998	0.744	14.441	0.336	0.000	1.818
1999	0.788	14.258	0.336	0.000	1.818
2000	0.834	14.256	0.336	0.000	1.818
2001	0.866	14.041	0.336	0.000	1.796
2002	0.899	13.212	0.336	0.000	1.774
2003	0.935	13.139	0.336	0.000	1.752
2004	0.971	12.554	0.336	0.000	1.730
2005	1.008	12.490	0.336	0.000	1.708
2006	1.047	12.383	0.314	0.000	1.675
2007	1.089	11.661	0.291	0.000	1-642
2008	1.132	11.565	0.269	0.000	1.609
2009	1.176	11.459	0.246	0.000	1.576
2010	1.223	11.353	0.224	0.000	1.543

*1980-1983: Historical data (ISER MAP data base); 1984-2010: projected.

SOURCE: MAP MODEL INPUT SCENARIO S85.B1--CREATED FEBRUARY 1985

TABLE 2 (continued)

	High Wage Exogenous Manufacturing Employment	Low Wage Exogenous Manufacturing Employment	Fish Harvesting Employment	Active Military Employment	Duty Civilian Federal Employment
1980	0.000	11.320	7.620	22.710	17.720
1981	0.000	11.2-10	7.900	22.450	17.470
1982	0.000	9.790	8.280	22.100	17.640
1983	0.000	8.930	NA	22.260	17.?30
1984	0.000	10.802	7.581	22.038	17.818
1985	0.000	11.129	7.608	21.818	17.907
1986	0.000	11.330	7.636	24.200	17.996
1981	0.000	11.536	7.664	23.984	18.086
1988	0.000	11.652	7.681	23.770	18.177
1989	0.000	11.724	7.716	23.558	18.268
1990	0.000	11.785	7.729	23.349	18.359
1991	0.000	11.805	7.745	23.141	18.451
1992	0.000	11.817	7.766	22.936	18.543
1993	0.000	11.837	7.792	22.732	18.636
1994	0.000	11.868	7.826	22.531	18.729
1995	00000	11.914	7.868	22.332	18.823
1996	0 .000	11.979	7.921	22.134	18.917
1997	0.000	12.072	7.988	21.939	19.011
1998	0.000	12.203	8.072	21.746	19.106
1999	0.000	12.386	8.178	21.554	19.202
2000	0.000	12.618	8.233	21.365	19.298
2001	0.000	12.564	8.233	21.177	19.394
2002	0.000	12.533	8.233	20.991	19.491
2003	0.000	12.502	8.233	20.807	19.589
2004	0.000	12.471	8.233	20.625	19.687
2005	0.000	12.440	8.233	20.445	19.785
2006	0.000	12.313	8.233	20.266	19.884
2007	0.000	12.126	8.233	20.090	19.984
2008	0.000	12.118	8.233	19.915	20.083
2009	0.000	12.111	8.233	19.742	20.184
2010	0 .000	12.104	8.233	19.570	20.285

SOURCE: MAP MODEL INPUT SCENARIO S85.B1--CREATED FEBRUARY 1985

Not included in the exogenous employment assumptions for the MAP model in Table 2 is employment resulting from tourism. Table 3 presents the projected number of tourists visiting Alaska under the tourism assumption summarized in Table 1. This projection of visitors results in strong growth in employment in tourist-related services, which can be considered almost as another category of exogenous employment in the MAP model.

TABLE 3. EXOGENOUS TOURISM ASSUMPTIONS FOR MAP STATEWIDE MODEL INCLUDING OCS DEVELOPMENT, OIL ONLY CASE*

(thousands of tourists}

	Tourists Visiting Alaska
1980	451.000
1981	477.000
1982	505.000
1983	523.000
1984	560.000
1985	590,000
1986	620.000
1987	6500000
1988	680.000
1989	710.C)00
1990	740.000
1991	770.000
1992	800.000
1993	830.000
1994	8600000
1995	890.000
1996	920.000-
1997	950.000
1998	980.000
1999	1010.000
2000	1040.000
2001	1070.000
2002	1100.000
2003	1130.000
2004	1160.000
2005	1190.000
2006	1220.000
2007	1250.000
200$	1280.000
2009	1310.000
2010	1340.000

*1980-83: Historical data (ISER MAP database); I984-201O: projected.

SOURCE: MAP MODEL INPUT SCENARIO S85.B1--CREATED FEBRUARY 1985

Assumptions about state fiscal policy follow the rules noted In Table 1. We assume the permanent fund principal remains intact, but that the earnings of the fund are diverted to fund state operations within approximately five years. As total unrestricted revenues decline net of inflation, we assume that permanent fund dividends and loan subsidies are eliminated first and that the personal income tax is reinstated two years after curtailment of the dividend program. After the adjustments, expenditures are reduced to match revenues.

The median scenario assumes completion of a number of state-funded hydroelectric projects, but not the Susitna Dam. If the Susitna Dam is constructed, we assume that a corresponding decline in state expenditures would occur elsewhere, most likely in the capital budget. Thus, the increase in exogenous construction from the proposed Susitna Dam would be offset by reductions in other state capital expenditures (included in endogenous construction).

Petroleum revenue assumptions for the model are based upon Alaska Department of Revenue 50 percent probability projections released in December 1984. Our scenario assumptions for the five types of petroleum revenues are shown in Table 4.

Appendix D details the exogenous employment assumptions for each of the special projects and industries summarized in Table 1 except for OCS exploration and development. Direct OCS employment and revenue

TABLE 4. EXOGENOUS REVENUE ASSUMPTIONS FOR MAP STATEWIDE MODEL INCLUDING OCS DEVELOPRENT, OIL ONLY CASE*

(millions of current dollars)

	State Production Tax Revenue	State Royalty Income	State Bonus Payment Revenue	State Property Tax Revenue	State Corporate Petroleum Tax Revenue
1980	506.200	917.600	456.500	168.900	547.500
1981	1169.900	1491.300	10.100	143.000	860.100
1982	1581.100	1543.100	6.700	142.700	668.900
1983	1493.000	1437.900	48.300	152.600	236.000
1984	1392.400	1396.700	20.200	131.000	265.100
1985	1350.000	1390.000	17.600	121.000	250.000
1986	1350.000	1460.000	0.000	148.000	275.000
1987	1350.000	1460.000	o* 000	183.000	300 .000
1988	1100.000	1460.000	0.000	204.000	285.000
1989	1060.000	1500.000	00000	220.000	295.000
1990	1050.000	1480.000	0.000	220.000	305.000
1991	970.000	1440.000	0.000	228.834	300.000
1992	940.000	1460.000	0.000	242.870	290 . 000
1993	950.000	1470.000	0.000	261.589	285.000
1994	870.000	1430.000	0.000-	296.398	275.000
1995	830.000	1400.000	0.000-	301.141	260.000
1996	790.000	1360.000	0.000	310.944	250.0m"-
1997	740..000	1300.000	0.000	312.404	240.000
1998	680.000	1270.000	0.000	310.312	220. 000
1999	600.000	1190.000	00000	307.601	210.000
2000	540.000	1170.000	00000	304.197	195.000
2001	600.000	1260.000	0.000	300.253	195.000
2002	600.000	1260.000	0.000	295.765	195.000
2003	600.000	1260.000	0.000	290.696	195.000
2004	600.000	1260.000	0.000	285.291	195.000
2005	600.000	1260.000	0.000	279.526	195.000
2006	600.000	1260.000	0.000	273.693	195.000
2007	600.000	1260.000	0.000	267.971	195.000
2008	600.000	1260.000	0.000	262.369	195.000
2009	6000000	1260.000	0.000	257.170	195.000
2010	600 e 000	1260.000	0.000	252.484	195.000

*1980-83: Historical data (ISER MAP database); 1984-2010: projected.

SOURCE: MAP MODEL, INPUT SCENARIO S85.B1--CREATED FEBRUARY 1985

assumptions, provided by MMS, are discussed in the next chapter and in Appendix E. Appendix F describes a review of the median scenario assumptions and of certain other assumptions used in the MAP model projections used in this report.

Statewide Projections

Table 5 summarizes a projection of the Alaska economy to 2010, using the MAP model and the median exogenous employment, revenue, fiscal, and tourism assumptions. These projections include the effects on the state economy and population of projected OCS development activities. Appendix A contains additional information about this simulation, including projections of 23 important variables.

The figures in Table 5 show growth in total population from 538,000 in 1984 to 697,000 in 2010, or 30 percent over the period. Total employment grows from 264,000 in 1984 (including military and self-employed) to 341,000 in" 2010, or 29 percent. According to the projection, the Alaska economy is nearing the end of a recent period of rapid growth. We project total employment to peak at 280,000 in 1986 and then decline by 3.2 percent to 271,000 in 1989. Petroleum industry activities, including development of OCS resources, stimulates employment growth of approximately 6 percent over the succeeding four years. After another recession in the period 1993-95, the economy resumes a long-term pattern of growth. By the turn of the century, employment is rising again at approximately 1.6 percent annually.

TABLE 5. MAP MODEL, STATEWIDE MEDIAN PROJECTIONS: SUMMARY*

	Total Population (000)	Total Employment (000)	Per Capita Government Revenues (1984 $)	Per Capita General Fund Expenditures (1984 $)	Per Capita Combined Funds Balance (1984 $)
1980	419.700	212.060	7789.000	401?.000	7952.000
1981	435.200	227.540	10011.000	9531.000	10248.000
1982	460.800	243.510	4799.000	8190.000	13362.000
1983	510.600	257.450	7852.000	8293.000	13643.000
1984	537.998	264.045	6539.836	7139.789	14013.830
1985	556.429	270.371	5988.012	6938.309	13762.220
1986	569.759	280-,102	5801.352	5920.211	13930.570
1987	570.475	279.548	5687.250	5660.383	14491.340
1988	569.397	276.792	5089.355	5949.938	14167.750
1989	565.024	271.234	4872.684	5294.703	14415.300
1990	565.058	271.414	4620.352	4735.711	15318.410
1991	571.118	277.906	5142.391	5003.895	15725.430
1992	578.136	284.662	5019.570	4949.281	15274.480
1993	582.494	289.643	4879.539	4867.648	15525.890
1994	580.476	283.463	4683.090	4693. 203	15879.760
1995	580.490	281.970	4500.000	4501.367	16156.750
1996	581.643	282.181	4335.859	4327.188	16383.250
1997	583.919	283.624	4147.609	4143.234	16538.480
1998	586.686	285.408	3972.396	3967.723	16654.430
1999	590.263	287.752	3773.822	3774.006	16708.110
2000	595.398	291.272	3627.679	3617.381	16711.420
2001	605.853	299.554	4362.555	4195.324	1598'7.210
2002	615.412	305.051	4217.262	4198.742	15176.530
2003	626.238	310.872	4059.412	4050.496	14369.600
2004	635.983	314.938	3916.302	3908.534	13629.990
2005	645.931	319.020	3779.188	3766.393	12930.230
2006	655.634	322.868	3654.670	36441.378	12274.460
2007	664.477	325.980	3541.354	3526.686	11668.970
2008	674.184	330.145	3431.732	3413.444	11084.050
2009	684.835	335.279	3328.975	3308. 578	10519.050
2010	696.591	341.267	3231.174	3217.038	9964.040

*1980-83: Historical data (ISER MAP database); 1984-2010: projected.

SOURCE: MAP MODEL SIMULATION OCS85S85.B1--CREATED FEBRUARY 1985
VARIABLES: POP, EM99, PCREV, DFP.EXGF, AND DFP.BAL9

Projected Alaska population grows to around 570,000 in 1986. After about a one percent decline at the end of the decade, population increases to 580,000, remaining at that level until steady growth resumes in the late 1990s. Since we project natural increase at around 9,000 per year, these periods of essential stable population are associated with substantial net emigration from the state.

Approximately one hundred percent of the net new jobs created in the median projection between 1984 and 2010 are in the services sector. Basic sector employment rises by about ten percent during this period, but a projected decline in the number of jobs in the government sector offsets this increase. The average wage In the services sector is lower and is projected to grow more slowly than wages in the basic and government sectors. Consequently, real per-capita personal income grows more slowly--averaging 1.2 percent annually--than the assumed national average of 1.5 percent per year.

The continued growth projected for the services sector, despite a slowing of basic sector growth, results to a considerable extent from the assumption of modest, steady growth in average national rea 1 wages and per capita incomes. While we believe these assumptions are reasonable, higher or lower values would strongly affect the MAP model projections of Alaska wage scales and incomes, thereby influencing the demand for services. Using an earlier version of the MAP model, Goldsmith et al., 1983, reported (Appendix J) that varying the rate of growth in the U.S. real wage

rate from 0.5 percent a year to 1.5 percent increased the number of households by approximately 4 percent by 2000.

The two recessions projected for the Alaska economy derive from different but related events. The projected 1987-89 recession results from reduced state spending levels anticipated over the next two years due to declining oil prices. The cycle of growth and recession in the first half 'of the 1990s includes both the effects of petroleum-related employment associated with development of North Slope and OCS oil fields, and the renewed downward pressure on state revenues and spending due now to declining state oil production.

Real per capita revenues, expenditures, and the combined permanent, general, and other special funds balance--shown in Table 5--outline the deteriorating fiscal position included in the projection. The projection presents a scenario of rising tax rates, reduced public services, and reduced state and local government employment. Additional supporting information for these observations about the median projection is included in Appendix A.

IV. STATEWIDE ECONOMIC AND DEMOGRAPHIC EFFECTS OF OCS DEVELOPMENT

This chapter discusses differences in the projection of the Alaska economy depending upon whether or not exploration and development of petroleum resources takes place on the federal Outer Continental Shelf. We use the difference between these two projections to analyze the cumulative economic and demographic impacts of the OCS program in Alaska. First, we discuss the direct contribution of OCS activity to the employment and state revenues assumed for the median projection presented in Chapter III. Then using the MAP statewide model we project the Alaska economy and population without this contribution in order to analyze the cumulative direct and Indirect effects of OCS development.

Direct Employment and Revenue Effects

Table 6 summarizes the employment and revenue assumptions for the scenario of OCS exploration and development used in the median projection. These figures are included as part of the state totals presented in Tables 2 and 3. We used employment assumptions provided to us by the Minerals Management Service Alaska OCS office, unadjusted for Alaska residency. Assuming that Alaska is considered the place of work of OCS workers, this is consistent with other employment data used in the MAP model. The model adjusts income for residence depending on the industry mix of total employment.

TABLE 6. OCS EXPLORATION AND DEVELOPMENT ASSUMPTIONS

(thousands of employees)
(millions of current $)

	High-Wage Exogenous Construction Employment	Mining Employment	Exogenous Transportation Employment	State Property Tax Revenue
1984	0.000	0.000	0.000	0.000
1985	0.348	0.412	0.118	0.000
1986	0.563	0.627	0.177	0.000
1987	0.430	0.896	0.275	0.000
1988	0.215	0.902	0.275	0.000
1989	0.000	0.533	0.138	00000
1990	0.225	0.863	0.154	0.000
1991	1.439	2.748	0.411	8.834
1992	1.893	4.686	0.525	18.870
1993	0.572	5.846	0.643	33.589
1994	0.336	2.639	0.547	69.398
1995	0.336	2.432	0.715	72.141
1996	0.336	2.498	0.715	72.944
1997	0.336	2.552	0.715	72.404
1998	0.336	2.552	0.715	70.312
1999	0.336	2.552	0.715	67.601
2000	0.336	2.552	0.715	64.197
2001	0.336	2.478	0.693	60.253
2002	0.336	2.404	0.671	55.765
2003	0.336	2.331	0.649	50.696
2004	0.336	2.257	0.627	45.291
2005	0.336	2.183	0.605	39.526
2006	0.314	2.075	0.572	33.693
2007	0.291	1.967	0.539	27.971
2008	0.269	1.859	0.506	22.369
2009	0.246	1.751	0.473	17.170
2010	0.224	1.643	0.440	12.484

SOURCE: MAP MODEL CASE OCS.C85X
VARIABLES: EMCNX1 EMP9 EMT9X RPPS

Production of oil and gas from the federal Outer Continental Shelf does not provide the state of Alaska with any shared royalties or severance tax revenue. The state and local governments can, however, tax petroleum property. We assumed new exploration, production, and pipeline property for OCS development would be built either in the North Slope Borough or along the coast of western or southwestern Alaska. In the former case, we assumed the borough was already receiving the statutory limit placed on local revenue from taxation of onshore property; while in the latter, facilities would be built outside the boundaries of organized local government. In both cases, then, we assumed the state would collect the-entire tax of 20 mills on the depreciated inflation-adjusted construction cost.

The figures for state property tax revenue in Table 6 assume a depreciation schedule following the depletion schedule assumed for oil reserves associated with that facility. We used assumptions for production schedules, timing and construction cost of facilities and pipelines provided to us by the Alaska OCS office. Appendix F contains supporting documentation associated with these assumptions.

Projection of Statewide Growth with and without OCS Development

Tables 7 and 8 summarize two sets of projections for total state population and employment, respectively. The projection for employment and population including OCS development is the same as in Table 5. The projection without OCS development uses exactly the same set of assumptions as in the projections in Table 5, except

TABLE 7. MAP MODEL STATEWIDE PROJECTIONS:

TOTAL POPULATION

(thousands)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	537.998	537.998	0.000	0.000
1985	555.148	556.429	1.281	0.231
1986	567.253	569.759	2.505	0.442
1987	567.043	570.475	3.432	0.605
1988	565.485	569.397	3.912	0.692
1989	561.747	565.024	3.277	0.583
1990	561.019	565.058	4.040	0.720
1991	561.778	571.118	9.340	1.663
1992	562.607	578.136	15.530	2.760
1993	563.335	582.494	19.159	3.401
1994	562.843	5%0.476	17.633	3.133
1995	562.214	580.490	18.276	3.251
1996	562.371	581.643	-9.272	3.427
1997	563.887	583.919	-0.032	3.553
1998	566.241	586.686	20.444	3.611
1999	569.430	590.263	20.833	3.659
2000	574.229	595.398	21.168	3.686
2001	584.529	605.853	21.324	3.648
2002	594.096	615.412	21.316	3.588
2003	605.014	626.238	21.224	3.508
2004	614.890	635.983	21.093	3.430
2005	625.026	645.931	20.905	3.345
2006	635.009	655.634	20.625	3.248
2007	644.178	664.477	20.298	3.151
2008	654.242	674.184	19.942	3.048
2009	665.264	684.835	19.571	2.942
2010	677.406	696.591	19.185	2.832

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B1-- CREATED FEBRUARY 1985

VARIABLE: POP

TABLE 8. MAP MODEL STATEWIDE PROJECTIONS:

TOTAL EMPLOYMENT

(thousands)

	Without OCS Development	Including Ocs Development	Difference	Percent Difference
1984	264.045	264.045	0.000	0.000
1985	269.119	270.371	1.251	0.465
1986	277.709	280.102	2.393	0.862
1987	276.455	279.548	3.093	1.119
1988	273.556	276.792	3.236	1.183
1989	269.026	271.234	2.208	0.821
1990	268.665	271.414	2.748	1.023
1991	270.019	277.906	7.887	2.921
1992	271.204	284.662	13.458	4.962
1993	271.968	287.643	15.675	5.764
1994	271.203	283.463	12.260	4.520
1995	270.489	281.970	11.481	4.245
1996	270.711	282.181	31.470	4.237
1997	272.208	283.624	11.416	4.194
1998	274.211	285.408	11.197	4.083
1999	276.595	287.752	11.157	4.034
2000	280.082	291.272	11.190	3.995
2001	288.416	299.554	11.138	3.862
2002	294.002	305.051	11.048	3.758
2003	299.915	310.872	10.958	3.654
2004	304.061	314.938	10.877	3.577
2005	308.268	319.020	10.752	3.488
2006	312.322	322.868	10.547	3.377
2007	315.673	325.980	10.307	3.265
2008	320.088	330.145	10.057	3.142
2009	325.468	335.279	9.810	3.014
2010	331.695	341.267	9.572	2.886

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B1— CREATED FEBRUARY 1985

VARIABLE: EM99

that they exclude the contribution assumed for OCS employment and revenues shown in Table 6. Appendix B displays projections of a number of additional important economic and demographic variables, comparing the two sets of projections.

Projected total population without OCS development approaches 680 thousand by 2010, or only 26 percent more than the 1984 population. Without the contribution of OCS development, Alaska population is virtually constant for a decade and a half, between 1986 and 2000. Projected total employment without OCS development shown in Table 8 actually declines in the late 1980s, not-surpassing the projected 1987 peak level until 2000.

The figures in Table 7 show that OCS development will have an impact on population that Increases steadily until about 2000. The difference in population. for the two projections rises rapidly between 1990 and 1993, then levels off at around 20,000, or between 3 and 3.5 percent of projected state population. Since population growth in the higher projection is still largely attributable to natural increase, OCS development reduces projected net emigration over the period. However, fluctuations in net migration in the 1990s are larger in the projection including OCS development than in the projection excluding it.

The effect on employment of OCS development rises to a peak of 16,000 in 1993 (5.8 percent of total employment), then falls slowly

after that to around 10,000 (3 percent of total employment). Over the next decade, when we project slow average growth rates for the Alaska economy, OCS effects contribute nearly two-thirds of the total net new jobs. However, the timing of effects from OCS development assumed for Alaska coincides with the effects of other factors on the state economy, particularly, development impacts of new North Slope oil fields and declining state revenues from Prudhoe Bay production. Thus, the OCS oil and gas leasing program appears to contribute to a cyclical pattern of growth and decline in the Alaska economy in the 1990s led by fluctuations in employment and revenues from petroleum development.

Employment growth in excess of that projected without OCS development begins with expansion of the basic sector as a direct result of OCS activity. However, by the year 2010, the indirect effects of OCS development add twice as many new jobs in the services and government sectors as in the basic sector. In a general sense, the type of labor market growth projected to result from OCS development is similar to that which occurred at a much faster rate over the past decade. Appendix B contains supporting Information about the projected employment and income effects discussed in this chapter.

We project OCS development to bring a modest increase in state revenues. However, population growth (from reducing net emigration after 1990) places demand on public services in excess of new revenues. As a result of this impact, state and local governments

must raise tax rates or reduce services, or both, in a period already characterized by fiscal retrenchment. We project the principal effect to be an additional reduction in per capita government services. Projections of variables tracking the adverse impact on the state's fiscal situation are included in Tables B.9 to B.13 in Appendix B.

V. REGIONAL IMPACTS OF OCS DEVELOPMENT ON ANCHORAGE AND SOUTHCENTRAL ALASKA

In this chapter, we discuss economic and demographic projections for the Southcentral Region of the state of Alaska. We project economic and demographic effects of OCS development on Southcentral Alaska using the MAP regional model outlined in Chapter II. The regional model requires a set of assumptions regarding exogenous basic industry and federal government employment for each of twenty regions of the state. Before presenting our projections of regional growth with and without OCS development, we discuss the exogenous employment assumptions used for the regional model. .

Regional Model Assumptions

Other studies have analyzed impacts of potential oil and gas development on the regions that would receive the main direct impacts of individual OCS lease sales. For example, see Nebesky and Huskey, 1981, and Knapp et al., 1983.'

We consider here cumulative regional impacts of the OCS program on Southcentral Alaska, the region of the state which includes Anchorage, the state's major city and business center. We assume that most direct OCS-related employment occurs in the coastal areas adjacent to the location of projected development in the Bering and Beaufort Seas. While future exploration of federal waters could

occur from bases in Southcentral Alaska, we assume that such ventures have a negligible impact on the region. We do, however, assume some additional oil industry headquarters employment in Anchorage associated with OCS activity.

Table 9 shows the regional distribution of employment in OCS petroleum exploration and development assumed for the regional simulation. The table shows Anchorage headquarters employment as well as on-site employment assumed to be located in the Aleutian Islands (Cold Bay) and the North Slope regions. These assumptions, provided by the Minerals Management service, are associated with the "oil-only" petroleum development scenario summarized in Appendix F.

Although the direct effect of OCS employment is small in the Southcentral Region, the MAP regional model calculates indirect effects to derive from two sources: (1) the model adjusts the residence to Southcentral Alaska of a fraction of workers in remote areas, and (2) the model allocates a large share of increased support-sector employment from the indirect effects of OCS development to the Southcentral Region.

Our regional exogenous employment assumptions follow the implications of the statewide assumptions summarized in Table 1. In general, we assume the regional distribution of federal government and baseline industry employment maintains recent shares of the total. Special projects, of course, change the shares of statewide

TABLE 9. REGIONAL DISTRIBUTION OF EMPLOYMENT IN OCS DEVELOPMENT ACTIVITIES

(thousands)

	Aleutian Islands	Anchorage	Barrow/ North Slope
1984	00000	0.000	0.000
1985	0.332	0.000	0.546
1986	0.498	0.014	0.855
1987	0.798	0.014	0.789
1988	0.725	0.020	0:647
1989	0.358	0.028	0.285
1990	0.212	0.040	0.990
1991	1.681	0.048	2.869
1992	4.680	0.064	2.360
1993	4.463	0.080	2.518
1994	2.179	0.096	1.247
1995	2.057	0.096	1.330
1996	2.090	0.096	1.363
1997	2.127	0.096	1.380
1998	2.127	0.096	1.380
1999	2.127	0.096	1.380
2000	2.127	0.096	1.380
2001	2.079	0.093	1.335
2002	2.033	0.090	1.288
2003	1.986	0.086	1.244
2004	1.940	0.083	1.197
2005	1.892	0.080	1.152
2006	1.788	0.077	1.096
2007	1.685	0.074	1.038
2008	1.583	0.070	0.981
2009	1.481	0.067	0.922
2010	1.377	0.064	0.866

SOURCE: MAP MODEL CASE OCS.C85X
VARIABLES: 501 B02 B04

exogenous employment assumed for each region, as do differing rates of growth projected for different industries, given the uneven distribution of employment by industry among Alaska regions. The complete set of regional base case exogenous employment assumptions (except for OCS activities discussed in Appendix E) appears in Appendix D.

Regional Projections with OCS Development

Table 10 shows a projection of total population, total employment, and three categories of employment, for Southcentral Alaska, using the MAP regional model. This projection corresponds to the projection including OCS development summarized in Table 5. Table 10 shows that we project total employment to increase by 37 percent by 2010. In parallel with the statewide results, all the net growth comes from the support sector, which b—creases by more than 70 percent over the period. Af:er a period of rapid growth, the Southcentral Region population " evels off at just over 320,000 in 1986, then rises slightly to a new level of 330,000 in the early 1990s. Population and employment remain virtually constant until 1997, when growth returns to an average annual rate of 1.7 percent after 1995.

Tables 11 and 12 show projections of the difference in total population and total employment, respectively, projected for Southcentral Alaska, depending upon whether or not we include OCS development in the set of exogenous assumptions. The figures for

TABLE 10. MAP REGIONAL MODEL PROJECTIONS
WITH OCS DEVELOPMENT

SOUTHCENTRAL REGION

(thousands)

	Total Population	Total Employment	Basic Sector Employment	Support Sector Employment	Government Sector Employment
1984	307.881	143.506	32.028	71.897	39.581
1985	319.293	146.695	32.905	74.181	39.610
1986	323.840	149.634	32.913	76.300	40.622
1987	322.819	148.890	31.922	77.032	39.937
1988	321.701	148.209	31.928	76.049	40.233
1989	322.364	146.854	32.672	76.426	37.756
1990	322.310	146.436	32.510	76.197	37.729
1991	324.185	147.848	32.480	76.542	38.826
1992	327.339	150.667	33.441	78.517	38.709
1993	330.121	153.016.	34.109	80.279	38.628
1994	330.139	152.695	33.420	81.133	38.142
1995	330.738	152.147	32.641	81.816	37.690
1996	331.918	152.597	32.327	82.929	37.341
1997	334.135	153.831	32.466	84.453	36.912
1998	336.595	155.326	32.636	86.137	36.553
1999	339.673	157.166	32.845	88.144	36.177
2000	343.642	159.555	33.134	90.443	35.977
2001	349.411	164.237	33.783	93.112	37.342
2002	356.563	168.650	34.697	96.642	37.311
2003	364.601	172.839	35.582	100.051	37.206
2004	371.951	176.246	35.678	103.457	37.111
2005	379.182	179.307	35.732	106.592	36.983
2006	386.772	182.501	36.038	109.786	36.677
2007	393.773	185.625	36.364	112.872	36.389
2008	401.103	188.844	36.773	115.906	36.165
2009	409.168	192.707	37.379	119.332	35.996
2010	418.243	197.221	38.307	123.146	35.768

SOURCE: REGIONAL MODEL SIMULATION C85.B1--CREATED FEBRUARY 1985
VARIABLES: P.AG, M.AG, B.AG, S.AG, AND G.AG

TABLE 11. MAP REGIONAL MODEL PROJECTIONS

SOUTHCENTRAL REGION
TOTAL POPULATION

(thousands)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	307.881	307.881	0.000	0.000
1985	318.583	319.293	0.710	0.223
1986	322.310	323.840	1.531	0.475
1987	320.799	322.819	2.021	0.630
1988	319.394	321.701	2.308	0.722
1989	320.245	322.364	2.118	0.661
1990	319.575	3220310	2.735	0.856
1991	318.568	324.185	5.617	1.763
1992	319.068	327.339	8.271	2.592
1993	319.217	330.121	10.904	3.416
1994	319.246	330.139	10.893	3.412
1995	319.490	330.738	11.248	3.521
1996	320.052	331.918	11.865	3.707
1997	321.794	334.135	12.341	3.835
1998	324.017	336.595	12.578	3.882
1999	326.818	339.673	12.855	3.933
2000	330.528	343.642	13.114	3.968
2001	336.172	349.411	13.239	3.938
2002	343.260	356.563	13.303	3.875
2003	351.290	364.601	13.312	3.789
2004	358.639	371.951	13.313	3.712
2005	365.889	379.182	13.292	3.633
2006	373.551	386.772	13.220	3.539
2007	380.661	393.7-73	13.112	3.444
2008	388.136	401.103	12.967	3.341
2009	396.361	409.168	12.808	3.231
2010	405.602	418.243	12.640	3.116

SOURCE: REGIONAL MODEL SIMULATIONS CIOCS.B1 AND C85.B1-- CREATED FEBRUARY 1985
VARIABLE: P.AG

TABLE 12. MAP REGIONAL MODEL PROJECTIONS

SOUTHCENTRAL REGION
TOTAL EMPLOYMENT

(thousands)

	Without OCS Development	Including Ocs Development	Difference	Percent Difference
1984	143.506	143.505	0.000	0.000
1985	146.425	146.695	0.270	0.184
1986	148.902	149.634	0.732	0.491
1987	147.825	148.890	1.065	0.721
1988	146.950	148.209	1.259	0.856
1989	145.765	146.854	1.089	0.747
1990	145.360	146.436	1.076	0.740
1991	145.507	147.848	2.341	1.609
1992	146.082	150.667	40586	3.139
1993	146.965	153.016	6.051	4.118
1994	146.762	152.695	5.933	4.043
1995	146.675	152.147	5.471	3.730
1996	147.137	152.597	5.460	3.711
1997	148.401	153.831	5.430	3.659
1998	150.018	155.326	5.308	3.538
1999	151.855	157.166	5.311	3.497
2000	154.193	159.555	5.361	3.477
2001	158.844	164.237	5.393	3.395
2002	163.233	168.650	5.416	3.318
2003	167.406	172.839	5.433	3.245
2004	170.785	176.246	5.462	3.198
2005	173.835	179.307	5.471	3.147
2006	177.045	182.501	5.456	3.082
2007	180.209	185.625	5.417	3.006
2008	183.481	188.844	5.363	2.923
2009	187.397	192.707	5.310	2.834
2010	191.959	197.221	5.261	2.741

SOURCE: REGIONAL MODEL SIMULATIONS C1OCS.B1 ANO C85.B1-- CREATED FEBRUARY 1985
VARIABLE: M.AG

these two tables come from two simulations of the regional model, one with the base case assumptions, including OCS development, and the other with the base case assumptions and excluding OCS development.

Since most OCS development will occur outside of the Southcentral Region, most of the differences projected in Tables 11 and 12 result from a different pattern of exogenous employment projected in other regions (specifically, in the regions experiencing direct OCS developent impacts). More detail on the pattern of these indirect effects is contained in Appendix C.

The regional population and employment projections shown in Tables 11 and 12 show that the long-term effect of OCS development on Southcentral Alaska is significant, but not large. Under the scenario including OCS development, total population in the region rises 36 percent by 2010, growing at an average annual rate of 1.2 percent over the 27-year period. Although we project growth in the Southcentral Region to follow the uneven pattern of statewide growth over the period, population grows in every year after 1990.

Total employment, shown in Table 12, remains virtually constant from 1986 through 1992. After increasing by around 3.5 percent over the two-year period 1991-93, employment levels off at. just over 150,000 until 1997. Thereafter, it resumes its upward course, rising approximately 2 percent per year.

The contribution of OCS development to the Southcentral Region population rises rapidly between 1990 and 1993, as shown in Table 11. The difference in regional population depending on whether or not OCS development occurs reaches a peak of 13,000 (around 4 percent of total population) after the turn of the century, declining only a little at the end of the projection period. The employment effect of OCS development peaks sooner than the effect on population, rising to around 6,000 jobs (4.1 percent of total employment) in 1993. The projected contribution of OCS development to regional employment falls very slowly, as with the effect on population, still exceeding 5,000 (2.7 percent of total employment) in 2010.

As expected, most of the jobs added in the Southcentral region from OCS development result from the indirect rather than the direct effects. Out of the total employment effects of 5,400 in the Southcentral Region by 2000, the indirect effects of OCS development account for all but about 100 jobs. Because the Southcentral Region effects stem from expansion of the support sector in response to the basic sector growth occurring primarily elsewhere, they also occur later on the average than the statewide effects.

The Southcentral Region receives around 70 percent of the statewide indirect employment effects. Of the total state population gain of 21,000 by 2000, we project that 13,000, or around 62 percent of the additional residents, will live in the Southcentral Region. These

proportions derive from our assumptions in using the MAP regional model that the location of employment and population effects of OCS development in the Beaufort Sea and Bering Sea would be similar to those of the average basic industry job in the census areas adjacent to those regions in 1980. While such an assumption seems reasonable for Beaufort Sea OCS development, it may not be as accurate for the Bering Sea workers included in the OCS development scenario analyzed here.

Table 13 contains the shares of the net growth in statewide employment and population projected to occur in the Southcentral Region, regardless of whether or not OCS development proceeds. The figures show that if OCS development proceeds, slightly less than one-half of new jobs during the period 1984-1995 will be located in the Southcentral Region. However, over 60 percent of the change in population (measured as the difference between the two projections) occurs in the Southcentral Region during this period.

As OCS development moves more into the operation phase from the construction phase, this pattern changes. We project that around three-fourths of new jobs occurring from 1995 to 2010 will be located in the Southcentral Region, regardless of whether or not OCS development occurs. Note that although the OCS development contributes to a slight decline in employment, nearly all of this decline occurs after 1995 outside the Southcentral Region.

TABLE 13. SOUTHCENTRAL REGION'S SHARE OF PROJECTED STATEWIDE EMPLOYMENT AND POPULATION GROWTH

	Without OCS Development	With OCS Development	Difference*
Change in Total Employment (thousands)			
1984-1995			
Alaska	6.5	18.0	11.5
Southcentral Region	3.2	8.6	5.5
Share Southcentral (%)	49	48	48
1995-2010			
Alaska	61.2	59.3	-1 *9
Southcentral Region	45.3	45.1	-.02
Share Southcentral (%)	74	76	11
1984,2010			
Alaska	67.7	77.0	9.6
Southcentral Region	48.5	53.7	5.3
Share Southcentral (%)	72	70	55
Change in Total Population (thousands)			
1984-1995			
Alaska	24.2	42.5	18.3
Southcentral Region	11.6	22.8	11.2
Share Southcentral (%)	48	54	61
1995-2010			
Alaska	115.2	116.1	0.9
Southcentral Region	86.1	87.5	1.4
Share Southcentral (%)	75	75	156
1984-2010			
Alaska	139.4	158.6	19.2
Southcentral Region	97.7	110.3	12.6
Share Southcentral (%)	70	70	66

*Share of incremental employment or population growth resulting from OCS development (difference between the two projections)

SOURCE: Tables .7, 8, 11, 12

VI. CONCLUSIONS

We project that the Alaska economy will go through a period of cyclical growth and recession before resuming steady growth around the turn of the twenty-first century. The principal cause of the cyclical instability is the pattern of resource-development activities--mainly petroleum development--expected to occur over the next decade, as well as projected decline in state spending due to declining oil revenues. After a recession in the late 1980s, private sector growth led by petroleum development takes over the slack in the economy left by declining state spending. The economy agains suffers a recession in the mid-1990s as petroleum development activities are completed, and as state revenues continue to fall. Steady growth resumes in the late 1990s, as upward trends In national wages and per-capita incomes cause Alaska wage rates to rise, stimulating support-sector growth.

OCS development activities appear to contribute to the cyclical instability projected for the Alaska economy. The surge in employment in development of offshore oil fields is likely to coincide with similar types of development activities occurring onshore. Since the schedule of major OCS construction and development drilling operations also coincides roughly with the schedule of major development work on the North Slope, OCS development both adds to the peak and to the trough of the petroleum development bubble projected for the early 1990s.

OCS development results in significant new revenues to state and local governments. However, the increase in revenues is not sufficient to offset the increased demand on public services created by the influx of new residents, an influx which occurs at a time of severe state fiscal pressure.

The long-term effect of OCS development on Alaska statewide population and employment rises steadily to around a 3 percent difference of the total before "the end of the century. For the Southcentral Region of the state, the long-term effect--largely indirect--of OCS development rises more slowly, but again reaches nearly as large a percentage difference by 2010, the end year for the projection. The effect of OCS activities in contributing to the projected cyclical instability of the Southcentral Region population and employment is not so great as the statewide effect, due to the lags in the multiplier process producing these largely indirect effects.

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APPENDIX A

MAP MODEL STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT

TABLE A1. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: POPULATION AND COMPONENTS OF CHANGE

(thousands)

	Total Population	Change in Population	Net Migration	Natural Increase
1984	537.998		18.850	9.168
1985	556.429	18.431	9.263	9.605
1986	569.759	13.330	-1.412	9.797
1987	570.475	0.717	-8.559	9.702
1988	569.397	-1.078	-10.086	9.435
1989	565.024	-4.373	-13.130	9.156
1990	565.058	0.034	-8.403	8.814
1991	571.118	6.060	-2.169	8.632
1992	578.136	7.018	-1.202	8.633
1993	582.494	4.358	-3.897	8.658
1994	580.476	-2.018	-10.249	8.612
1995	580.490	0.014	-8.034	8.401
1996	581.643	1.154	-6.769	8.275
1997	583.919	2.276	-5.567	8.192
1998	586.686	2.766	-5.034	8.146
1999	590.263	3.578	-4.189	8.120
2000	595.398	5.135	-2.637	8.119
2001	605.853	10.455	2.658	8.164
2002	615.412	9.559	1.565	8.356
2003	626.238	10.826	2.677	8.505
2004	635.983	9.745	1.413	8.686
2005	645.931	9.948	1.453	8.827
2006	655.634	9.703	1.061	8.971
2007	664.477	8.842	0.061	9.105
2008	674.184	9.707	0.811	9.213
2009	684.835	10.651	1.618	9.346
2010	696.591	11.756	2.562	9.504

NOTE: TOTALS MAY NOT ADD DUE TO ROUNDING

SOURCE: MAP MODEL SIMULATION S85.81--CREATED FEBRUARY 1985
VARIABLES: POP, DELPOP, POPMIG, AND POPNI9

TABLE A.2. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: EMPLOYMENT

(thousands)

	Basic Sector Employment	Services Sector Employment	Government Sector Employment	Total Wage and Salary Employment	Total Employment
1984	64.738	113.159	86.148	242.254	264.045
1985	67.429	116.722	86.220	248.039	270.371
1986	69.412	120.992	89.697	256.941	280.102
1987	68.571	122.935	88.042	256.408	279.548
1988	66.224	121.811	88.758	253.867	276.792
1989	66.506	121.963	82.764	248.735	271.234
1990	66.749	121.967	82.697	248.889	271.414
1991	69.502	123.051	85.353	254.831	277.906
1992	73.717	125.877	85.069	261.004	284.662
1993	73.922	128.851	84.870	263.711	287.643
1994	69.211	130.561	83.691	259.852	283.463
1995	67.427	131.949	82.594	25S.447	281.970
1996	66.709	133.726	81.746	258.593	282.181
1997	66.897	1360022	80.705	259.856	283.624
1998	67.021	138.554	79.833	263.416	285.408
1999	67.321	141.512	78.919	263.468	287.752
2000	67.945	144.898	78.429	266.642	291.272
2001	68.622	149.205	81.728	2-74-218	299.554
2002	69.094	154.310	81.646	279.241	305.051
2003	70.280	159.206	81.386	284.558	310.872
2004	69.699	164.090	81.150	288.268	314.93%
2005	69.570	168.618	80.832	291.991	319.020
2006	69.673	173.110	80.085	295.499	322.868
2007	69.124	177.479	79.378	298.334	325.980
2008	69.526	181.792	78.827	302.127	330.345
2009	70.236	186.633	78.409	306.800	335.279
2010	71.467	191.951	77.849	312.247	341.267

SOURCE: MAP MODEL SIMULATION S85.B1--CREATED FEBRUARY 1985
VARIABLES: EMNS, EMSP, EMG9, EM98, AND EM99

TABLE A.3. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: REAL PERSONAL INCOME

	Personal Income (millions of 1984 $)	Per Capita Personal Income (1984 $)
1984	8354.207	15528.320
1985	8563.363	15389.860
1986	8843.527	15521.530
1987	8845.613	15505.690
1988	8921.527	15668.370
1989	8921.922	15790.340
1990	8821.137	15611.020
1991	9171.760	16059.300
1992	9402.230	16262.990
1993	9667.920	16597.450
1994	9630.040	16589.890
1995	9740.200	16779.290
1996	9914.790	17046.160
1997	10127.600	17344.180
1998	10346.260	17635.100
1999	10588.090	17937.920
2000	10877.350	18269.040
2001	11326.790	18695.610
2002	11669.610	18962.280
2003	12058.940	19256.160
2004	12364.310	19441.250
2005	12700.640	19662.540
2006	13052.730	19908.560
2007	13364.340	20112.580
2008	13741.340	20382.180
2009	14157.800	20673.290
2010	14616.610	20983.070

SOURCE: MAP MODEL SIMULATION S85.B1--CREATED FEBRUARY 1985
VARIABLES: DF.PI AND DFP.PI

TABLE A.4. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: REAL WAGE RATES

(1984 dollars)

	Basic Sector	Services Sector	Government Sector
1984	39390.160	22606.0S0	27795.090
1985	38720.410	22120.230	28111.340
1986	38210.610	21567.090	28242.380
1987	36383.860	21032.190	28538.270
1988	36265.180	21293.220	28915.840
1989	"37065.030	21475.140	28998.220
1 990	38061.660	21696.410	29380.750
1991	39980.350	21955.500	29900.610
1992	41521.430	22177.320	29699.890
1993	41698.460	22394.050	30077.820
1994	41541.730	22592.420	30451.020
1995	42287.910	22851.960	30857.020
1996	43032.130	23082.360	31373.830
1997	43888.500	23312.920	31966.980
1998	4467'7.940	23543.000	32576.500
1999	45467.240	23773.700	33201.480
2000	46326.380	24006.280	33849.420
2001	47231.050	24242.610	34643.640
2002	47884.230	24456.270	35302.640
2003	48909.840	24687.950	35963.430
2004	49613.320	24912.460	36635.830
2005	50602.480	25151.970	37364.670
2006	51648.210	25393.050	38309.910
2007	52358.940	25635.200	39288.650
2008	53383.110	25889.320	40299.140
2009	54434.640	26141.830	41340.720
2010	55537.570	26396.340	42420.300

SOURCE: MAP MODEL SIMULATION S85.B1--CREATED FEBRUARY 1985
VARIABLES: DF.WRNS, DF.WRSP, AND DF.WRG9

TABLE A.5. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: STATE GOVERNMENT REVENUES

(millions of 1984 dollars)

	Petroleum Revenues	Federal Grants	Interest Earnings	Other Revenues	Total Revenues
1984	3284.178	197.912	152.700	251.071	3518.420
1985	3109.379	202.801	121.801	252.119	3331.905
1986	3103.646	207.846	91.534	257.169	3305.371
1987	3006.559	212.873	102.866	259.789	3244.438
1988	2647.638	217.797	98.915	254.492	2897.867
1989	2538.240	222.924	55.819	249.608	2753.185
1990	2397.115	228.132	34.460	245.177	2610.769
1991	2195.593	233.668	397.726	409.911	2936.913
1992	1983.779	229.030	419.738	544.798.	2901.997
1993	1898.503	234.638	431.754	563.641	2842.304
1994	1739.283	240.325	440.394	562.142	2718.421
1995	1605.808	246.147	447.006	559.435	2612.203
1996	1482.591	252.167	453.351	562.216	2521.925
1997	1343.412	258.396	459.394	567.831	2421.869
1998	1218.198	264.823	464.445	574.968	2330 .5=
1999	1075.354	271.464	468.762	582.868	2227.549
2000	976.323	278.328	472s192	592.418	2159.913
2001	984,627	285.450	928.667	606.423	2643.(?69
2002	931.326	292.828	903.159	621.700	2595.354
2003	880.757	300.417	870.775	635.877	2542.159
2004	832.905	308.236	838.962	648.709	2490.702
2005	787.570	316.274	808.106	660.094	2441.095
2006	745.071	324.557	778.574	672.191	2396.127
2007	704.671	333.090	750.132	683.102	2353.147
2008	666.569	341.885	722.696	694.240	2313.619
2009	630.774	350.993	696.503	707.562	2279.799
2010	597.156	360.421	671.421	722.420	2250.807

SOURCE: MAP MODEL SIMULATION S85.B1--CREATED FEBRUARY 1985
VARIABLES: DF.RP9S, DF.RSFD, DF.RSIN, DF.RSEN, AND DF.RSGF

TABLE A.6. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: STATE GOVERNMENT EXPENDITURES

	Total (millions of 1984 $)	Per Capita (1984 $)
1984	3841.194	7139.789
1985	3860.677	6938.309
1986	3373.093	5920.211
1987	3229.110	5660.383
1988	3387.880	5949.938
1989	2991.635	5294.703
1990	2675.955	4735.711
1991	2857.818	5003.895
1992	2861.362	4949.281
1993	2835.379	4867.648
1994	2724.292	4693.203
1995	2612..999	4501.367
1996	2516.880	4327.188
1997	2419.316	4143.234
1998	2327.806	3967.723
1999	2227.658	3774.006
2000	2153.781	3617.381
2001	2541.752	4395.324
2002	2583.958	4198.742
2003	2536.576	4050.496
2004	2485.762'	3908.534
2005	2432.831	3766.393
2006	2386.758	3640.378
2007	2343.400	3526.686
2008	2301.290	3473.444
2009	2265.831	3308.578
2010	2240.960	3217.038

SOURCE: MAP MODEL SIMULATION S85.B1--CREATED FEBRUARY 1985
VARIABLES: DF.EXGF AND DFP.EXGF

TABLE A.7. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: COMBINED FUNDS BALANCE

	Total (millions of 1984 $)	Per Capita (1984 $)
1984	7539.414	14013.830
1985	7657.699	13762.220
1986	7941.621	13938.570
1987	8266.953	14491.340
1988	8067.078	14167.750
1989	8145.559	14416.300
1990	8655.797	15318.410
1991	8981.082	15725.430
1992	8830.738	15274.480
1993	9043.740	15525.890
1994	9217.820	15S79.760.
1995	9378.830	16356.750
1996	9529.210	16383.250
1997	9657.140	16533.480
1998	9770.920	16554.430
1999	9862.180	16708.110
2000	.9949.950	16711.420
2001	9685.900	15987.210
2002	9339.820	15376.530
2003	8998.789	14369.600
2004	8668.445	1362?9.990
2005	8352.039	12930.230
2006	8047.563	122'74.460
2007	7753.758	11668.970
2008	7472.691	110434.050
2009	7203.816	10519.050
2010	6940.859	9964 .040

SOURCE: MAP MODEL SIMULATION S85.B1--CREATED FEBRUARY 1985
VARIABLES: DF.BAL99 AND DFP.BAL9

APPENDIX B

MAP MODEL STATEWIDE PROJECTIONS
WITH AND WITHOUT OCS DEVELOPMENT

TABLE B.1. STATEWIDE PROJECTIONS WITH ANI) WITHOUT OCS DEVELOPMENT:

BASIC SECTOR EMPLOYMENT

(thousands)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	64.738	64.738	0 .000	0. 000
1985	66.528	670429	0.902	1.356
1986	67.957	69.412	1.456	2.142
1987	66.910	68.571	1.661	2.482
1988	64.756	66.224	1.468	2.267
1989	65.723	66.506	0.783	1.191
1990	65.353	66.749	1.396	2.136
1991	64.442	69.502	5.060	7 . 853
1992	65.626	73.717	8.091	12.329
1993	65.709	73.922	8.213	12.499
1994	64.792	69.211	4.419	6.820
1995	63.326	67.427	4.101	.6.477
1996	62.581	66.709	4.128	6.596
1997	62.721	66.897	4.176	6.659
1998	62.865	67.021	4.156	6.611
1999	63.166	67.321	4.155	6.578
2000	63.782	67.945	4.164	6.528
2001	64.526	68.622	4.096	6.348
2002	65.078	69.094	4.016	6.170
2003	66.343	70.280	3.937	5.934
2004	65.834	69.699	3.865	5.877
2005	65.782	69.570	3.788	5.759
2006	66.033	69.673	3.640	5.513
2007	65.638	69.124	3.486	5.311
2008	66.193	69.526	3.333	5.035
2009	67.048	70.236	3.188	4.755
2010	68.409	71.467	3.058	4.470

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.81— CREATED FEBRUARY 1985

VARIABLE: EMNS

TABLE B.2. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

SERVICES SECTOR EMPLOYMENT

(thousands)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	113.159	113.159	0.000	0.000
1985	116.391	116.722	0.331	0.284
1986	120.128	120.992	0.864	0.719
1987	121.624	122.935	1.311	1.078
1988	120.312	121.811	1.499	1.246
1989	120.650	121.963	1.314	1.089
1990	120.698	121.967	1.269	1.052
1991	120.525	123.051	2.526	2.096
1992	121.158	125.877	4.719	3.895
1993	122.366	128.851	6.485	5.299
1994	123.909	130.561	6.652	5.368
1995	125.618	131.949	6.331	5.040
1996	127.358	133.726	6.367	4.999
1997	129.672	136.022	6.350	4.897
1998	132.350	138.554	6.205	4.688
1999	135.297	141.512	6.215	4.593
2000	138.618	144.898	6.280	4.530
2001	142.885	149.205	6.319	4.423
2002	147.975	154.310	6.336	4.282
2003	152.859	159.206	6.346	4.152
2004	157.733	164.090	6.357	4.030
2005	162.255	168.618	6.363	3.922
2006	166.773	173.110	6.338	3.800
2007	171.196	177.479	6.282	3.670
2008	175.580	181.792	6.213	3.538
2009	180.500	186.633	6.133	3.398
2010	185.903	191.951	6.048	3.253

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.81— CREATED FEBRUARY 1985

VARIABLE: EMSP

TABLE B.3. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

GOVERNMENT EMPLOYMENT

(thousands)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	86.148	86.148	0.000	0.000
1985	86.201	86.220	0.019	0.022
1986	89.624	89.697	0.073	0.082
1987	87.921	88.042	0.121	0.138
1988	88.489	88.158	0.269	0* 304
1989	82.653	82.764	0.112	0.135
1990	82.614	82.697	0.083	0.101
1991	85.053	65.353	0.300	0.352
1992	84.420	85.069	0.648	0.768
1993	83.893	84.870	0.978	1.165
1994	82.503	83.691	1.189	1.441
1995	81.546	82.594	1.048	1.286
1996	80.772	81.746	0.975	1.207
1997	79.815	80.705	0.890	1.115
1998	78.996	79.833	00837	1.059
1999	76.132	78.919	0.787	1.008
2000	77.683	78.429	0.746	0.961
2001	81.005	81.728	0.723	0.892
2002	80.949	81.646	0.697	0.861
2003	80.712	81.386	00674	0.836
2004	80.495	81.150	0.655	0.814
2005	80.231	80.832	0.600	0.748
2006	79.516	80.085	0.569	0.715
2007	78.839	79.378	0.538	0.683
2008	78.315	78.827	0.511	0.653
2009	77.920	78.409	0.489	0.627
2010	77.383	77.849	0.466	0.602

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B1— CREATED FEBRUARY 1985

VARIABLE: EMG9

TABLE B.4. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

REAL PERSONAL INCOME

(millions of 1984 $)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	8354.207	8354.207	0.000	c1 .000
1985	8522.762	8563.363	40.602	0.476
1986	8772.629	8843.527	70.898	0.808
1987	8752.953	8845.613	92.660	10059
1988	8820.762	8921.527	100.766	1.142
1989	8852.141	8921.922	69.781	0.788
1990	8727.863	8821.137	93.273	1.069
1991	8901.684	9171.760	270.074	3.034
1992	8940.383	9402.230	461. 848	5.166
1993	9105.510	9667.920	562.410	6.177
1994	9220.610	9630.040	4090430	4.440
1995	9338.500	9740.200	401.699	4.302
1996	9502.160	9914.790	4120621	40342
1997	9708.320	10127.600	419 . 277	4.319
1998	9927.330	10346.260	418.930	4.220
1999	10161.680	10588.090	426.414	4.196
2000	10441 .190	10877.350'	436.164	4.177
2001	10886.000	11326.790	440.789	4.049
2002	11225.150	11669.610	444. 461	3.960
2003	11610.630	12058.940	448. 309	3.863
2004	11911.760	12364.310	4520547	3.799
2005	12245.100	12700.640	4$5.547	3.720
2006	12598.210	13052.730	454.52?	3.608
2007	12911.970	13364.340	452.367	3.503
2008	13291.730	13741.340	449.602	3.383
2009	13711.050	14157.800	446.742	3.258
2010	14172.580	14616.610	444. 035	3.133

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 ANO S85.B1— CREATED FEBRUARY 1985

VARIABLE: DF.PI

TABLE 8.5. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

REAL PER CAPITA PERSONAL INCOME

(1984 $)

	Without OCS Development	Including Ocs Development	Difference	Percent Difference
1984	15528.32	15528.32	0.00	0.00
1985	15352.24	15389.86	37.62	0.25
1986	15465.10	15521.53	56.43	0.36
1987	15436.13	15505.69	69.56	0.45
1988	15598.57	15668.37	69.80	0.45
1989	15758.24	15790.34	32.10	0.20
1990	15557.17	15611.02	53.84	- 0.35
1991	15845.55	16059.30	213.74	1.35
1992	15890.99	16262.99	372.00	2.34
1993	16163.57	16597.45	433.80	2.68
1994	16382.20	16589.89	207.69	1.27
1995	16610.23	16779.29	169.05	1.02
1996	16896.61	17046.16	149.54	0.89
1997	17216.80	17344.18	127.38	0.74
1998	17531.98	17635.10	103.12	0.59
1999	17845.35	17937.92	92.57	0.52
2000	18182.95	18269.04	86.09	0.47
2001	18623.54	18695.61	72.07	0.39
2002	18894.50	18962.28	67.78	0.36
2003	19190.68	19256.16	65.48	0.34
2004	19372.17	19441.25	69.08	0.36
2005	19591.34	19662.54	71.20	0.36
2006	19839.42	19908.56	69.14	0.35
2007	20044.09	20112.58	68.49	0.34
2008	20316.24	20382.18	65.93	0.32
2009	20609.93	20673.29	63.36	0.31
2010	20921.85	20983.07	61.21	0.29

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B1-- CREATED FEBRUARY 1985

VARIABLE: DFP.PI.

TABLE B.6. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

BASIC SECTOR REAL WAGE RATE

(1984 $)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	39390.16	39390.16	0.00	0.00
1985	38403.80	38720.41	316.61	0.82
1986	37755.16	38210.61	455.45	1.21
1987	35939.70	36383.86	444.17	1.24
1988	35892.71	36265.18	372.46	1.04
1989	36923.83	37065.03	141.20	0.38
1990	37680.95	38061.66	380.71	1.01
1991	38325.44	39980.35	1654.91	4.32
1992	39151.75	41521.43	2369.68	6.05
1993	39650.15	41698.46	2048.31	5.17
1994	40425..59	41541.73	1116.14	2.76
1995	41153.22	42287.91	1134.69	2.76
1996	41793.91	43032.13	1238.22	2.96
1997	42574.00	43888.50	1314.50	3.09
1998	43297.59	44677.94	1380.34	3.19
1999	44021.56	45467.24	1445.68	3.28
2000	44827.69	46326.38	1498.69	3.34
2001	45708.57	47231.05	1522.48	3.33
2002	46320.46	47884.23	1563.77	3.38
2003	47359.43	48909.84	1550.41	3.27
2004	47989.82	49613.32	1623.50	3.38
2005	48943.81	50602.48	1658.67	3.39
2006	50014.36	51648.21	1633.85	3.27
2007	50707.74	52358.94	1651.20	3.26
2008	51774.93	53383.11	1608.18	3.11
2009	52883.66	54434.64	1550.98	2.93
2010	54063.75	55537.57	1473.82	2.73

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B1— CREATED FEBRUARY 1985

VARIABLE: DF.WRNS

TABLE B.7. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

SERVICES SECTOR REAL WAGE RATE

(1984 $)

	Without OCS Development	Including Ocs Development	Difference	Percent Difference
1984	22606.08	22606.08	0.00	0.00
1985	22107.34	22120.23	12.89	0.06
1986	21553.82	21567.09	13.27	0.06
1987	21013.39	21032.19	18.80	0.09
1988	21256.52	21273.22	16.70	0.08
1989	21473.45	21475.14	1.70	0.01
1990	21686.98	21696.41	9.43	0.04
1991	21912.62	21955.50	42.89	0.20
1992	22136.64	22177.32	40.68	0.18
1993	22365.11	22394.05	213.93	0.13
1994	22590.75	22592.42	1.66	0.01
1995	22820.49	22851.96	31.47	0.14
1996	23050.85	23082.36	31.51	0.14
1997	23280.09	23312.92	32.83	0.14
1998	23507.54	23543.00	35.46	0.15
1999	23736.54	23773.70	37.17	0.16
2000	23968.41	24006.28	37.87	0.16
2001	24207.32	24242.61	35.29	0.15
2002	24422.11	24456.27	34.16	0.14
2003	24655.45	24687.95	32.51	0.13
2004	24881.16	24912.46	31.30	0.13
2005	25122.35	25151.97	29.63	0.12
2006	25366.37	25393.05	26.68	0.11
2007	25610.91	25635.20	24.28	0.09
2008	25867.68	25889.32	21.63	0.08
2009	26122.73	26141.83	19.10	0.07
2010	26379.77	26396.34	16.57	0.06

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B1-- CREATED FEBRUARY 1985

VARIABLE: DF.WRSP

TABLE B.8. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

GOVERNMENT SERVICES SECTOR REAL WAGE RATE

(1984 $)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	27795.09	27795.09	0.00	0.00
1985	28110.07	28111.34	1.27	0.00
1986	28238.3'3	28242.38	4.05	0.01
1987	28531.49	28538.27	6.78	0.02
1988	28902.50	28915.84	13.33	0.05
1989	28993.85	28998.22	4.37	0.02
1990	29379.07	29380.75	1.67	0.01
1991	29882.16	29900.61	18.45	0.06
1992	29663.21	29699.89	36.68	0.12
1993	30030.57	30077.82	47.24	0.16
1994	30402.55	30451.02	48.46	0.16
1995	30815.98	30857.02	41.04	0.13
1996	31335.98	31373.83	37.85	0.12
1997	31930.92	31966.98	36.06	0.11
1998	32543.37	32576.50	33.14	0.10
1999	33170.54	33201.48	30.94	0.09
2000	33820.73	33849.42	28.69	0.08
2001	34620.43	34643s64	23.22	0.07
2002	35282.68	35302.64	19.96	0.06
2003	35946.57	35963.43	16.86	0.05
2004	36622.26	36635.83	13.57	0.04
2005	37350.45	37364.67	14.22	0.04
2006	38297.04	38309.91	12.88	0.(K3
2007	39277.04	39288.65	11.61	0.03
2008	40288.73	40299.14	10.41	0.03
2009	41331.47	41340.72	9.25	0.02
2010	42412.09	42420.30	8.22	0.02

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B1— CREATED FEBRUARY 1985

VARIABLE: DF.WRG9

TABLE B.9. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

TOTAL REAL STATE GOVERNMENT REVENUES

(millions of 1984 $)

	Without OCS Development	Including Ocs Development	Difference	Percent Difference
1984	3538.420	3518.420	0 .000	0.000
1985	3331.486	3331.905	0.418	0.013
1986	3303.330	3305.371	2.041	0.062
1987	3240.896	3244.438	3.542	0.109
1988	2894.204	2897.867	3.662	0.127
1989	2751 .388	2753.185	1 .79?	0.065
1990	2610.286	2610.769	0.483	. 0.018
1991	2918.933	2936.913	17.980	0.616
1992	2860.935	2901.997	41.062	T .435
1993	2782.243	2842.304	60.061	2.159
1994	2642.505	2718.421	75.916	2.873
1995	2542.626	2612.203	69.577	2.736
1996	2455.030	2521.925	66.895	2.725
1997	2357.406	2421.869	64.463	2.734
1998	2269.305	2330.548	61.242	2.699
1999	2169.556	2227.549	57.992	2.673
2000	2104.954	2159.913	54.958	2.611
2001	2590.110	2643.069	52.959	2.045
2002	2545.440	2595.354	49.914	1.961
2003	2495.335	2542.159	46.823	1.876
2004	2446.836	2490.702	43.866	1.793
2005	2400.091	2441.095	41.004	1.708
2006	2358.007	2396.127	38.120	1.617
2007	2317.760	2353.147	35.387	1.527
2008	2280.802	2313.619	32.816	1.439
2009	2249.356	2279.799	30.443	1.353
2010	2222.432	2250.807	28.375	1.277

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B1-- CREATED FEBRUARY 1985

VARIABLE: DF.RSGF

TABLE B.10. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

REAL STATE GOVERNMENT GENERAL FUND EXPENDITURES

(millions of 1984 $)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	3841.194	3841.194	0.000	0.000
1985	3860.267	3860.677	0.409	0.011
1986	3371.262	3373.093	1.831	0.054
1987	3225.773	3229.110	3.337	0.103
1988	3369.967	3387.880	17.913	0..532
1989	2985.382	2991.635	6.253	0.209
1990	2675.274	2675.955	0.681	0.025
1991	2842.531	2857.818	15.286	0. 538
1992	2824.322	2861.362	37.040	1.311
1993	2778.661	2835.379	56.718	2.041
1994	2651.391	2724.292	72.900	2.750
1995	2542.746	2612.999	70.252	2.763
1996	2450.164	2516.880	66.716	2.723
1997	2355.054	2419.316	64.261	2.729
1998	2266.616	2327.806	61.190	2.700
1999	2169.666	2227.658	57.992	2.673
2000	2098.827	2153.781	54.954	2.618
2001	2488.951	2541.752	52.801	2.121
2002	2533.998	2583.958	49.960	1.972
2003	2489.733	2536.576	46.843	1.881
2004	2441.868	2485.762	43.895	1.798
2005	2391.729	2432.831	41.102	1.719
2006	2348.505	2386.758	38.253	1.629
2007	2307.884	2343.400	35.517	1.539
2008	2268.401	2301.290	32.889	1 .450
2009	2235.402	2265.831	30.428	1.361
2010	2212.569	2240.960	28.391	1.283

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B1-- CREATED FEBRUARY 1985

VARIABLE: DF.EXGF

TABLE B.11. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

REAL PER CAPITA STATE GOVERNMENT GENERAL FUND EXPENDITURES

(1984 $)

	Without Ocs Development	Including OCS Development	Difference	Percent Difference
1984	7139.79	7139.79	0.00	0.00
1985	6953.58	6938.31	-15.27	-0.22
1986	5943.$3	5920.21	-22.92	-0.39
1987	5688.76	5660.38	-28.38	-0.50
1988	5959.42	5949.94	-9.48	-0.16
1989	5314.46	5294.70	-19.76	-0.37
1990	4768.60	4735.71	-32.89	-0.69
1991	5059.88	5003.89	-55.99	-1.11
1992	5020.06	4949.28	-70.78	-1.41
1993	4932.52	4867.65	-64.87	-1.32
1994	4710.71	4693.20	-17.51	-0 .3?
1995	4522.74	4501.37	-21.37	-0.47
1996	4356.84	4327.19	-29.66	-0.68
1997	4176.46	4143.23	-33.23	-0.80
1998	4002.92	3967.72	-35.19	-0.88
1999	3810.24	3774.01	-36.23	-0.95
2000	3655s03	3617.38	-37. 65	-1.03
2001	4258.04	4195.32	-62.72	-1.47
2002	4265.30	4198.74	-66.55	-1.56
2003	4115.16	4050.50	-64.67	-1.57
2004	3971.22	3908.53	-62.69	-1 .5.8
2005	3826.61	3766.39	-60.21	-1.57
2006	3698.38	3640.38	-58.00	-1.57
2007	3582.68	3526.69	-55.99	-1.56
2008	3467.22	3413.44	-53.78	-1.55
2009	3360.17	3308.58	-51.59	-1.54
2010	3266.24	3217.04	-49.20	-1.51

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B1— CREATED FEBRUARY 1985

VARIABLE: DFP.EXGF

TABLE B.12. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

REAL COMBINED FUNDS BALANCE

(millions of 1984 $)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	7539.414	7539.4-14	0.000	0.000
1985	7657.082	7657.699	0.617	0.008
1986	7939.925	7941.621	1.695	0.021
1987	8263.898	8266.953	3.055	0.037
1 988	8078.188	8067.078	-11.109	-0.138
1989	8161.609	8145.559	-16.051	-0.197
1990	8672.105	8655.797	-16.309	--0.188
1991	8986.203	8981.082	-5.121	-0.057
1992	8824.879	8830.738	5.859	0.066
1993	9029.300	9043.740	14.441	0.160
1994	9199.330	9217.820	18.484	0. 201
1995	9361.650	9378.830	17.180	0.184
1996	9511.410	9529.210	17.797	0.187
1997	9638.940	9657.140	18.199	0.189
1998	9752.840	9770.920	18.078	0.185
1999	9843.950	9862.180	18.230	0.185
2000	9931.470	9949.950'	18.473	0.186
2001	9668.010	9685.900	17.891	0.185
2002	9322.750	9339.820	17.066	0.183
2003	8982.477	8998.789	16.313	0.182
2004	8652.863	8668.445	15.582	0.180
2005	8337.207	8352.039	14.832	0.178
2006	8033.523	8047.563	14.039	0.175
2007	7740.512	7753.758	13.246	0.171
2008	7460.156	7472.691	12.535	0.168
2009	7191 .883	7203.816	11.934	0.166
2010	6929.535	6940.859	11.324	0.163

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.81— CREATED FEBRUARY 1985

VARIABLE: DF.BAL99

TABLE B.13. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

REAL PER CAPITA COMBINED FUNDS BALANCE

(1984 $)

	Without OCS Development	Including Ocs Development	Difference	Percent Difference
1984	4013.83	14013.83	0.00	0.00
1985	3792.87	13762.22	-30.65	-0.22
1986	3997.14	13938.57	-58.57	-0.42
1987	4573.66	14491.34	-82.32	-0.56
1988	4285.40	14167.75	-117.65	-0.82
1989	4528.98	14416.30	-112.68	-0.78
1990	15457.79	15318.41	-139.38	-0.90
1991	15996.01	15725.43	-270.57	-1.69
1992	15685.69	15274.48	-411.20	-2.62
1993	16028.29	15525.89	-502.40	-3.13
1994	16344.41	15879.76	-464.65	-2.84
1995	16651.41	16156.75	-494.65	-2.97
1996	16913.05	16383.25	-529.81	-3.13
1997	17093.75	16538.48	-555.27	-3.25
1998	17223.82	16654.43	-569.39	-3.31
1999	17287.38	16708.11	-579.27	-3.35
2000	17295.30	16711.42	-583.88	-3.38
2001	16539.82	15987.21	-552.61	-3.34
2002	15692.32	15176.53	-515.79	-3.29
2003	14846.72	14369.60	-477.12	-3.21
2004	14072.20	13629.99	-442.21	-3.14
2005	13338.98	12930.23	-408.74	-3.06
2006	2651.04	12274.46	-376.57	-2.98
2007	2016.09	11668.97	-347.13	-2.89
2008	1402.75	11084.05	-318.70	-2.79
2009	0810.56	10519.05	-291.51	-2.70
2010	0229.52	9964.04	-265.48	-2.60

SOURCE: MAP MODEL SIMULATIONS S1OCS.B1 AND S85.B1— CREATED FEBRUARY 1985

VARIABLE: DFP.8AL9

APPENDIX C

MAP REGIONAL MODEL PROJECTIONS

TABLE C.1. REGIONAL MODEL EXOGENOUS EMPLOYMENT ASSUMPTIONS WITH OCS DEVELOPMENT

(thousands)

	Aleutian Islands	Anchorage	Barrow/ North Slope	Bethel	Bristol Bay
1981	3.060	4.731	3.969	0.449	1.832
1982	2.583	5.001	3.808	0.351	1.702
1983	2.487	4.833	6.525	0.356	1.715
1984	2.690	5.896	5.676	0.384	1.736
1985	3.046	6.164	6.781	0.384	1.736
1986	3.237	6.350	8.268	0.385	1.736
1987	3.564	6.363	7.708	0.385	1.736
1988	3.510	6.380	5.790	0.385	1.736
1989	3.178	6.398	5.600	0.386	1.736
1990	3.052	6.421	6.361	0.386	1.736
1991	4.547	6.441	8.070	0.386	1.736
1992	7.580	6.468	7.676	0.387	1.736
1993	7.408	6.497	7.038	0.387	1.736
1994	5.184	6.525	5.682	0.387	1.736
1995	5.140	6.538	5.643	0.388	1.736
1996	5.276	6.552	5.442	0.388	1.736
1997	5.450	6.566	5.365	0.388	1.736
1998	5.631	6.580	5.143	0.389	1.736
1999	5.872	6.595	4.963	0.389	1.736
2000	6.130	6.610	4.964	0.389	1.736
2001	6.082	6.623	4.780	0.390	1.736
2002	6.036	6.637	3.970	0.390	1.736
2003	5.989	6.650	3.927	0.390	1.736
2004	5.943	6.664	3.520	0.391	1.736
2005	5.895	6.680	3.477	0.391	1.736
2006	5.791	6.696	3.422	0.391	1.736
2007	5.688	6.712	2.750	0.392	1.736
2008	5.586	6.728	2.694	0.392	1.736
2009	5.484	6.746	2.637	0.393	1.736
2010	5.380	6.765	2.582	0.393	1.736

SOURCE: SCENARIO C85.B1--CREATED FEBRUARY 1985
VARIABLES: B01, 602, B04, B05, AND B06

TABLE C.1. (continued)

	Cordova/ McCarthy	Fairbanks	Southeast Alaska	Kenai/ Cook Inlet	Kobuk
1981	0.611	0.385	6.716	2.461	0.271
1982	0.497	0.380	6.634	2.471	0.208
1983	0.564	0.415	5.869	2.212	0.200
1984	0.523	0.421	6.902	2.498	0. 234
1985	0. 607	0.430	7.189	2.609	00 239
1986	0.713	0.440	.7.516	2.682	0.345
1987	0.805	0.452	8.554	2.710	0.448
1988	0.791	0.465	8.603	2.873	0.321
1989	0.753	0.479	8.310	3.286	0.620
1990	0.754	0.493	8.446	3.421	0.620
1991	0.754	0.509	8.456	3.505	0.621
1992	0.754	0.526	8.708	3.439	0.621
1993	0.754	0.546	8.605	2.913	0.656
1994	0.754	0.566	8.616	2.699	0.656
1995	0.754	0.588	8.618	2.845	0.657
1996	0.755	0.613	8.600	2.832	0.657
1997	0.755	0.640	8.592	2.819	0.657
1998 "	0.755	0.669	8.594	2. 805	0.657
1999	0.755	0.701	8.586	2.794	0.658
2000	0.732	0.737	8.578	2.781	0.658
2001	0.686	0.757	8.570	2.770	0.658
2002	0.664	0.778	8.573	2.758	0.659
2003	0.641	0.799	8.565	2.747	0.659
2004	0.618	0.822	8. 408	2.736	0.659
2005	0.595	0.846	8.411	2.726	0.659
2006	0.526	0.870	8.403	2.715	0.660
2007	0.526	0.897	8.396	2. 706	0.660
2008	0.527	0.924	8.399	2.696	0.660
2009	0.527	0.952	8.392	2.687	0.661
2010	0.527	0.981	8.385	2.677	0.661

SOURCE: SCENARIO C85.B1--CREATED FEBRUARY 1985
VARIABLES: B08, B09, B11, B12, AND B14

TABLE C1. (continued)

	Kodiak	Kuskokwim	Matanuska/ Susitna	Nome	Seward
1981	2.629	0.171	0.272	0.188	0.489
1982	2.456	0.045	0.244	0.129	0.502
1983	2.828	0.040	0.204	0.110	0.428
1984	2.613	0.044	0.228	0.106	0.520
1985	2.537	0.044	0.154	0.107	0.528
1986	2.557	0.044	0.157	0.108	0.528
1987	2.581	0.045	0.158	0.109	0.528
1988	2 . 6 0 3	0.045	0.159	0.110	0.528
1989	2.628	0.045	0.160	0.111	0.530
1990'	2.636	0.045	0.162	0.112	0.530
1991	2.642	0.045	0.164	0.113	0.530
1992	2.650	0.045	0.165	0.114	0.530
1993	2.660	0.045	0.166	0.114	0.530
1994	2.674	0.045	0.168	0.115	0.530
1995	2.693	0.045	0.170	0.116	0.530
1996	2.717	0.045	0.171	0.117	0.530
1997	2.749	0.045	0.172	0.118	0.530
1998	2.791	0.045	0.175	0.119	0.530
1999	2.848	0.046	0.176	0.120	0.531..
2000	2.908	0.046	0.177	0.121	0.532
2001	2.908	0.046	0.179	0.122	0.532
2002	2.908	0.046	0.181	0.123	0.532
2003	2.909	0.046	0.183	0.124	0.532
2004	2.909	0.046	0.184	0.125	0.532
2005	2.909	0.046	0.185	0.126	0.532
2006	2.859	0.046	0.188	0.127	0.532
2007	2.680	0.046	0.189	0.129	0.533
2008	2.680	0.046	0.191	0.130	0.533
2009	2.680	0.047	0.192	0.131	0.533
2010	2.682	0.047	0.194	0.132	0.533

SOURCE: SCENARIO C85.B1--CREATED FEBRUARY 1985
VARIABLES: B15, 616, 617, B18, AND 821

TABLE C.1. (continued)

	southeast Fairbanks	Upper Yukon	Valdez/ Chitina/ Whittier	Wade Hampton	Yukon/ Koyokuk
1981	0.027	0.038	0.318	0.441	0.272
1982	0.027	0.025	0.390	0.348	0.186
1983	0.050	0.023	0.362	0.350	0.237
%984	0.048	0.023	0.317	0.351	0.271
1985	0.04'7	0.023	0.316	0.351	0.235
1986	0.047	0.024	0.316	0.351	0.245
1987	0.047	0.024	0.317	0.353	0.245
1988	0.047	0.024	0.317	0.351	0.245
1989	0.047	0.024	0.317	0.351	0.246
1990	0.047	0.025	0.318	0.353	0.246
1991	0.047	0.025	0.318	0.351	0.246
1992	0.047	0.025	0.319	0.351	0.246
1993	0.047	0.025	0.319	0.351	0.246
1994	0.047	0.026	0.320	0.351	0.246
1995	0.047	0.026	0.320	0.351	0.246
1996	0.047	0.026	0.320	0.351	0.246
1997	0.047	0.026	0.321	0.351	0.246
1998	0.047	0.027	0.321	0.351	0.246
1999	00 048	0.027	0.322	0.351	0.247
2000	0.048	0.027	0.322	0.351	0.247
2001	0.048	0.02$	0.323	0.351	0.247
2002	0.048	0.028	0.323	0.351	0.247
2003	0.048	0.028	0.324	0.351	0.247
2004	0.048	0.028	0.324	0.351	0.2'47
2005	0.048	0.029	0.325	0.351	0.247
2006	0.048	0.029	0.325	0.351	0.247
2007	0.048	0.029	0.326	0.351	0.247
2008	0.048	0.029	0.326	0.351	0.248
2009	0.048	0.030	0.327	0.351	0.248
2010	0.048	0.030	0.327	0.351	0.248

SOURCE: SCENARIO C85.B1--CREATED FEBRUARY 1985
VARIABLES: B24, B25, B26, B27, AND B29

TABLE C.2. MAP REGIONAL MODEL PROJECTIONS
SOUTHCENTRAL REGION:

BASIC SECTOR EMPLOYMENT

(thousands)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	32.028	32.028	0.000	0.000
1985	32.824	32.905	0.081	0.248
1986	32.747	32.913	0.166	0.506
1987	31.717	31.922	0.204	0.644
1988	31.708	31.928	0.220	0.694
1989	32.501	32.672	0.171	0.525
1990	32.294	32.510	0.216	0.669
1991	31.933	32.480	0.546	1.711
1992	32.513	33.441	0.928	2.853
1993	33.002	34*109	1.108	3.356
1994	32.494	33.420	0.925	2. 84%
1995	31.780	32.641	0.861	2.709
1996	31.491	32.327	0.836	2.654
1997	31.634	32.466	0.832	2.631
1998	31.815	32.636	0.821	2.579
1999	32.025	32.845	0.820	2.562
2000	32.309	33.134"	0.825	2.554
2001	32.957	33.783	0.825	2.504
2002	33.879	34.697	0.818	2.415
2003	34.771	35.582	0.811	2.331
2004	34.869	35.678	0.809	2.320
2005	34.927	35.732	0. 805	20304
2006	35.246	36.038	0.791	2.245
2007	35.589	36.364	0.775	2.178
2008	36.015	36.773	0.758	2.105
2009	36.631	37.379	0.748	2.041
2010	37.561	38.307	0.746	1.986

SOURCE: REGIONAL MODEL SIMULATIONS CIOCS.B1 AND C85.B1-- CREATED FEBRUARY 1985
VARIABLE: B.AG

TABLE C.3. MAP REGIONAL. MODEL PROJECTIONS
SOUTHCENTRAL REGION:

SUPPORT SECTOR EMPLOYMENT

(thousands)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	71.897	71.897	0.000	0.000
1985	74.000	74.181	0.181	0.244
1986	75.564	76.100	0.536	0.709
1987	76.221	77.032	0.811	1.064
1988	75.121	76.049	0.928	1.235
1989	75.554	76.426	0.872	1.154
1990	75.371	76.197	0.826	1.096
1991	74.8'72	76.542	1.670	2.231
1992	75.127	78.517	3.390	4.512
1993	75.739	80.279	4.540	5.994
1994	76.617	81.133	4.516	5.895
1995	77.639	81.816	4.177	5.380
1996	78.708	82.929	4.221	5.363
1997	80.223	84.453	4.230	5.273
1998	81.995	86.137	4.142	5.051
1999	83.979	88.144	4.165	4.960
2000	86.216	90.443	4.228	4.903
2001	88.843	93.112	4.269	4.805
2002	92.331	96.642	4.310	4.668
2003	95.707	100.051	4.343	4.538
2004	99.075	103.457	4.382	4.423
2005	102.174	106.592	4.418	4.324
2006	105.357	109.786	4.429'	4.204
2007	108.453	112.872	4.419	4.075
2008	111.513	115.906	4.393	3.940
2009	114.971	119.332	4.360	3.793
2010	118.823	123.146	4.323	3.638

SOURCE: REGIONAL MODEL SIMULATIONS CIOCS.B1 AND C85.B1-- CREATED FEBRUARY 1985
VARIABLE: S.AG

TABLE C.4. MAP REGIONAL MODEL PROJECTTONS
SOUTHCENTRAL REGION:

GOVERNMENT SECTOR EMPLOYMENT

(thousands)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	39.581	39.581	0.000	0.000
1985	39.602	39.610	0.008	0.019
1986	40.591	40.622	0.030	0.074
1987	39.887	39.937	0.050	0.125
1988	40.122	40.233	0.111	0.277
1989	37.710	37.756	0.046	0.122
1990	37.694	37.729	0.034	- 0.091
1991	38.702	38.826	0.124	0.320
1992	38.441	38.709	0.268	0.697
1993	38.224	38.628	00404	1.057
1994	37.651	38.142	0.491	1.304
1995	37.256	37.690	0.433	1.163
1996	36.938	37.341	-0.403	1.090
1997	36.544	36.912	0.368	1.006
1998	36.207	36.553	0.346	0.955
1999	35.852	36.177	0.325	0.907
2000	35.669	35.977	0.308	0.864
2001	37.044	37.342	0.299	00806
2002	37.023	37.311	0.288	0.778
2003	36.928	37.206	0.279	0.755
2004	36.841	37.111	0.271	0.735
2005	36.735	36.983	0.248	0.675
2006	36.442	36.677	0.235	0.645
2007	36.166	36.389	0.222	0.615
2008	35.953	36.165	0.211	0.588
2009	35.794	35.996	0.202	0.564
2010	35.576	35.768	0.193	0.541

SOURCE: REGIONAL MODEL SIMULATIONS CIOCS.B1 AND C85.B1— CREATED FEBRUARY 1985
VARIABLE: G.AG

APPENDIX D

STATEWIDE AND REGIONAL EXOGENOUS INDUSTRY EMPLOYMENT ASSUMPTIONS

TABLE D.1. TRANS-ALASKA PIPELINE

(thousands of employees]

	Anchorage	Barrow/ North Slope	Fairbanks	Southeast Fairbanks
1984	0.545	0.099	0.025	0.025
1985	0.540	0.098	0.025	0.024
1986	0. 540	0.098	0.025	0.024
1987	0.540	0.098	0.025	0.024
1988	0.540	0.098	0.025	00024
1989	0.540.	0.098	0.025	0.024
1990	0.540	0.098	0.025	0.024
1991	0.540	0.098	0.025	0.024
1992	0.540	0.098	0.025	0.024
1993	0.540	0.098	0.025	0.024
1994	0.540	0.098	0.025	0.024
1995	0.540	0.098	0.025	0.024
1996	0.540	0.098	0.025	0.024
1997	0.540	0.098	0.025	0.024
1998	0.540	0.098	0 .025	0.024
1999	0.540	0.098	0.025	0.024
2000	0.540	0.098	0.025	0.024
2001	0.540	0.098	0.025	0.024
2002	"0.540	0.098	0.025	0.024
2003	0.540	0.098	0.025	0.024
2004	0.540	0.098	0.025	0.024
2005	0.540	0.098	0.025	0.024
2006	0.540	0.098	0.025	0.024
2007	0.540	0.098	0.025	0.024
2008	0.540	0.098	0.025	0.024
2009	0.540	0.098	0.025	0.024
2010	00540	0.098	0.025	0.024

SOURCE: MAP MODEL CASE TAP.F84
VARIABLES: 802 B04 B09 B24

TABLE D.1 (continued)

	Valdez/Chitina/ Whittier	Yukon/ Koyukuk	High Wage Exogenous Construction Employment	Exogenous Transportation Employment
1984	0.231	0.075	0.000	1.000
1985	0.229	0.074	0.000	0.990
1986	0.229	0.074	0.000	0.990
1987	0.229	0.074	0.000	0.990
1988	0.229	0.074	0.000	0.990
1989	0.229	0.074	0.000	0.990
1990	0.229	0.074	0.000	0.990
1991	0.229	0.074	0.000	0.990
1992	0.229	0.074	0.000	0.990
1993	0.229	0.074	0.000	0.990
1994	0.229	0.074	0.000	0.990
1995	0.229	0.074	0.000	0.990
1996	0.229	0.074	0.000	0.990
1997	0.229	0.074	0.000	0.990
1998	0.229	0.074	0.000	0.990
1999	0.229	0.074	0.000	0.990
2000	0.229	0.074	0.000	0.990
2001	0.229	0.074	00000	0.990
2002	0.229	0.074	00000	0.990
2003	0.229	0.074	0.000	0.990
2004	0.229	0.074	0.000	0.990
2005	0.229	0.074	0.000	0.990
2006	0.229	0.074	00000	0.990
2007	0.229	0.074	0.000	0.990
2008	0.229	00074	0.000	0.990
2009	0.229	0.074	0.000	0.990
2010	0.229	0.074	0.000	0.990

SOURCE: MAP MODEL CASE TAP.F84
VARIABLES: B26 B29 EMCNX1 EMT9X

TABLE D.2. NORTH SLOPE PETROLEUM

(thousands of employees)

	Barrow/ North Slope	High Wage Exogenous Construction Employment	Mining Employment
1984	5.456	2.215	3.240
1985	6.014	2.246	3.768
1986	7.191	20880	4.311
1987	6.696	1.286	5.410
1988	4.919	0.429	4.489
1989	5.090	0.489	4.600
1990	5.144	Cl .489	4.655
1991	4.973	0.430	4.543
1992	5.086	0.430	4.656
1993	4.289	0.079	4.210
1994	4.203	0.079	4.124
1995	40080	0.079	4.001
1996	3.844	0.000	3.044
1997	3.749	0". 000	3.749
1998	3.526	0.000	3.526
1999	3.344	0.000	3.344
2000	3.344	0.000	3.344
2001	3.203	0.000	3.203
2002	2.438	0.000	2.438
2003	2.438	0.000	2.438
2004	2.077	0.000	2.077
2005	2.077	0.000	2.077
2006	2.077	00000	2.077
2007	1.461	0.000	1.461
2008	1.461	0.000	1.461
2009	1.461	0.000	1.461
2010	1.461	0.000	1.461

SOURCE: MAP MODEL CASE NSO.84B
VARIABLES: 804 EMCNX1 EMP9

TABLE D.3. COOK INLET PETROLEUM

(thousands of employees)

	Kenai/ Cook Inlet	Mining Employment
1984	0.752	0.752
1985	0.733	0.733
1986	0.715	0.715
1987	0. 697	0. 697
1988	0. 680	0.680
1989	0.663	0.663
1990	0.646	0.646
1991	0.630	0.630
1992	0.614	0.614
1993	0.599	0.599
1994	0.584	0.584
1995	0.569	0. 569
1996	0.555	0.555
1997	0.541	0.541
1998	0.528	0.528
1999	0.514	0.514
2000	0.501	0.501
2001	0.489	0.489
2002	0.477	0.477
2003	0.465	0.465
2004	0.453	0.453
2005	0.442	0.442
2006	0.431	0.431
2007	0.420	0.420
2008	0.410	0.410
2009	0.399	0.399
2010	0.389	0.389

SOURCE: MAP MODEL CASE UPC.F84
VARIABLES: B12 EMP9

TABLE D.4. ANCHORAGE OIL. HEADQUARTERS

(thousands of employees)

	Anchorage	Mining Employment
1984	4.160	4.160
1985	4.424	4.424
1986	4.586	4.586
1987	4.586	4.586
1988	4.586	4.586
1989	4.586	4.586
1990	4.586	4.586
1991	4.586	4.586
1992	4.586	4.586
1993	4.586	4.586
1994	4.586	4.586
1995	4.586	4.586
1996	4.586	4.586
1997	4.586	4.586
1998	4.586	4.586
1999	4.586	4.586
2000	4.586	4.586
2001	4.586	4. 586
2002	4.586	4. 586
2003	4.586	4.586
2004	4.586	4.586
2005	4.586	4.586
2006	4.586	4.586
2007	4.586	4.586
2008	4.586	40 5%6
2009	4.586	4. 5%6
2010	4.586	4.586

SOURCE: MAP MODEL CASE OHQ.F84
VARIABLES: B02 EMP9

TABLE D.5. BELUGA COAL MINING

(thousands of employees)

	Kenai/ Cook Inlet	Low Wage Exogenous Construction Employment	Mining Employment	Exogenous Transportation Employment
1984	0.000	0.000	0.000	0.000
1985	0.000	0.000	0.000	0.000
1986	0.000	0.000	0.000	0.000
1987	0.000	0.000	0.000	0.000
1988	0.000	0.000	0.000	0.000
1989	0.150	0.150	0.000	0.000
1990	0.300	0.300	0.000	0.000
1991	0.400	0.400	0.000	0.000
1992	0.350	0.350	0.000	0.000
1993	0.200	0.200	0.000	0.000
1994	0.363	0.100	0.210	0.053
1995	0.524	0.000	0.419	0.105
1996	0.524	0.000	0.419	0.105
1997	0.524	0.000	0.419	0.105
1998	0.524	0.000	0.419	0.105
1999	0.524	0.000	0.419	0.105
2000	0.524	00000	0.419	0.105
2001	0.524	0.000	0.419	0.105
2002	0.524	0.000	0.419	0.105
2003	0.524	0.000	0.419	0.105
2004	0.524	0.000	0.419	0.105
2005	0.524	0.000	0.419	0.105
2006	0.524	0.000	0.419	0.105
2007	0.524	00000	0.419	0.105
2008	0.524	00000	0.419	0.105
2009	0.524	0.000	0.419	0.105
2010	0.524	0.000	0.419	0.105

SOURCE: MAP MODEL CASE BCL.04T
VARIABLES: B12 EMCNX2 EMP9 EMT9X

TABLE D.6. HEALY COAL EXPORT

(thousands of employees)

	Seward	Yukon/ Koyukuk	Mining Employment	Exogenous Transportation Employment
1984	0.000	0.110	0.110	0.000
1985	0.008	0.120	0.120	0.008
1986	0. 008	0.130	0.130	0.008
1987	0.008	0.130	0.130	0.008
1988	0.008	0.130	0.130	o* 008
1989	0 . 0 0 8	0.130	0.130	0.00%
1990	0.008	0.130	0.130	0.008
1991	0.008	0.130	0.130	0.008
1992	0000$	0.130	0.130	0.008
1993	0.008	0.130	0.130	0.008
1994	0.008	0.130	0.130	0.008
1995	0.008	0.130	0.130	0.008
1996	0.008	0.130	0.130	0.008
1997	0.008	0.130	0.130	0.008
1998	0.008	0.130	0 .130	0.008
1999	0.008	0.130	0.130	0.008
2000	0.008	0.130	0.130	0.008
2001	0.008	" 0.130	0.130	00008
2002	0.008	0.130	0.130	0.008
2003	0.008	0.130	0.130	0.008
2004	0.008	0.130	0.130	0.008
2005	0.008	0.130	0.130	0.008
2006	0.008	0.130	0.130	0.008
2007	0.008	0.130	0.130	0.008
2008	0.008	0.130	0.130	0.008
2009	00008	0.130	0.130	0.008
2010	0 . 008	0.130	0.130	0.008

SOURCE: MAP MODEL CASE HCL.84X
VARIABLES: B21 B29 EMP9 EMT9X

TABLE D .7. QUARTZ HILL MOLYBDENUM MINE

(thousands of employees)

	Southeast Alaska	Low Wage Exogenous Construction Employment	Mining Employment
19 84	0.000	0. 000	0.000
1985	0.020	0.020	0.000
1986	0.220	0.210	0.010
1987	1.125	1.050	0.075
1988	0.960	0.750	0.210
1989	0.700	0.015	0. 685
1990	0.790	0.000	0.790
1991	0.795	0.005	0.790
1992	1.055	0.215	0.840
1993	0.961	0.008	0.953
1994	0.980	00000	0. 980
1995	0.990	0.000	0.990
1996	0.980	0.000	0.980
1997	0.980	0.000	0.980
1998	0.990	0.000	0.990
1999	0.990	0.000	0.990
2000	0.990	0.000	0.990
2001	0.990	0.000	0 .990
2002	1.000	0.000	1.000
2003	1.000	0.000	1.000
2004	1.000	0.000	1.000
2005	1.010	0.000	1 .010
2006	1.010	0.000	1 .010
2007	1.010	0.000	1.010
2008	1.020	0.000	1.020
2009	1.020	0.000	1 .020
2010	1.020	0.000	1 .020

SOURCE: MAP MODEL CASE BXM.F84
VARIABLES: B11 EMCNX2 EMP9

TABLE 0.8. GREENS CREEK MINE

(thousands of employees]

	Southeast Alaska	Low Wage Exogenous ConstructIon Employment	Mining Employment
1984	0.005	0.000	0.005
1985	0.033	0.026	0.007
1986	0.045	0.035	0.010
1987	0.085	0.035	0.050
1988	0.230	0.080	0.150
1989	0.150	0.000	0.150
1990	0.150	0.000	0.150
1991	0.150	0.000	0.150
1992	0.150	0.000	0.150
1993	0.150	0.000	0.150
1994	0.150	0.000	0.150
1995	0.150	0.000	0.150
1996	0.150	0.000	0.150
1997	0.150	0.000	0.150
1998	0.150	0.000	0.150
1999	0.150	0.000	0.150
2000	0.150	00000	0.150
2001	0.150	0.000	0.150
2002	0.150	0 . 000	0.150
2003	0.150	0.000	0.150
2004	00000	o* 000	0.000
2005	0.000	0.000	0.000
2006	0.000	0.000	0.000
2007	00000	0.000	0.000
2008	0.000	0.000	0.000
2009	0.000	0.000	0.000
2010	0.000	0.000	0.000

SOURCE: MAP MODEL CASE GCM.F84
VARIABLES: B11 EMCNX2 EMP9

TABLE D.9. RED DOG MINE

(thousands of employees)

	Anchorage	Kobuk	Low Wage Exogenous construction Employment	Mining Employment
1984	0.005	0.000	0.000	0.005
1985	0.005	0.005	0.005	0.005
1986	0.005	0.111	0.103	0.013
1987	0 .008	0.213	0.205	0.016
1988	0 .008'	0.086	0.078	0.016
1989	00008	0.385	0.000	0.393
1990	0.008	0.385	0.000	0.393
1991	0.008	0.385	00000	0. 393
1992	0.008	0.385	0.000	0.393
1993	0.008	0.420	0.000	0.428
1994	0.008	0.420	00000	0.428
1995	0 .008	0.420	0.000	0.428
1996	0.008	0.420	0.000	0.428
1997	0.008	0.420	0-.000-	0.428
1998	00008	0.420	0 .000	0.428
1999	0.008	0.420	0.000	0.428
2000	0.008	0.420	0.000	0.428
2001	00008	0.420	0.000	0.428
2002	0.008	0.420	0.000	0.428
2003	0.008	0.420	0.000	0.428
2004	0.008	0,420	0.000	0.428
2005	0 . 008	0.420	0.000	0.428
2006	0.008	0.420	0.000	0.428
2007	0.008	0.420	0.000	0.428
2008	0.008	0.420	00000	0.428
2009	0.008	0.420	0.000	0.428
2010	0.008	0.420	0.000	0.428

SOURCE: MAP MODEL CASE RED.F84
VARIABLES: 1302 B14 EMCNX2 EMP9

TABLE D.10. OTHER MINING

(thousands of employees)

	Aleutian Islands	Anchorage	Barrow/ North Slope	Bethel	Cordova/ McCarthy
1984	0.003	0.245	0.121	0.030	0.014
1985	0.003	0.248	0.123	0.031	0.014
1986	0 .003	0.250	0.124	0.031	0.014
1987	0.003	0.253	0.125	0.031	0.015
1988	0.003	0.255	0.126	0.032	0.015
1989	0.003	0.258	0.128	0.032	0.015
1990	0.003	0.261	0.129	0.032	0.015
1991	0.003	0.263	0.130	0.032	0.015
1'392	0.003	0.266	0.132	0.033	0.015.
1993	0.003	0.268	0.133	0.033	0.015
1994	0.003	0.271	0.134	0.033	0.016
1995	0.003	0.274	0.135	0.034	0.016
1996	0.003	0.277	0.137	0.034	0.016
1997	0.003	0.279	0.138	0.034	0.016
1998	0.003	0.282	0.140	0.035	0.016
1999	0.004	0.285	0.141	0.035	0.016
2000	0.004	0.288	0.142	0.036	0.017
2001	0.004	0.291	0.144	0.036	0.017
2002	0 . 004	0.294	0.145	0.036	0.017
2003	0.004	0.297	0.147	0.037	0.017
2004	0.004	0.299	0.148	0.037	0.017
2005	0.004	0.302	0.150	0.037	0.017
2006	0.004	0.305	0.151	0.038	0.018
2007	00004	0.309	0.153	0.038	0.018
2008	0.004	0.312	0.154	0.038	0.018
2009	0.004	0.315	0.156	0.039	0.018
2010	0.004	0.318	0.157	0.039	0.018

SOURCE: MAP MODEL CASE OMN.F84
VARIABLES: 801 B02 804 B05 B08

TABLE D.10 (Cent'irlued)

	Fairbanks	Southeast Alaska	Kenai/ Cook Inlet	Kobuk	Kuskokwim
1984	0.276	0.051	0.025	0.024	00008
1985	0.278	0.051	0.026	0.024	o. 008
1986	0.281	0.052	0.026	0.025	o. 008
1987	0.284	0.052	0.026	0.025	00 008
1988	0.287	0.053	0.026	0.025	0.008
1989	0.290	0.053	0.027	0.025	0.008
1990	0.293	0.054	0.027	0.026	o. 009
1991	0.296	0.054	0.027	0.026	0.009
1992	0.299	0.055	0.027	0.026	0.009
1993	0.302	0.055	0.028	0.027	0.009
1994	0.305	0.056	0.028	0.027	0.009
1995	0.308	0.056	0 . 028	0.027	0.009
1996	0.311	0.057	0.028	0.027	0.009
1997	0.314	00057	00029	0.028	0.009
1998	0.317	0.058	0.029	0.028	0.009
1999	0.320	0.059	0.029	0.028	0.009
2000	0.323	0.059	0.030	0.028	0.009
2001	0.327	0.060	0.030	0.029	0.010
2002	0.330	0.060	0.030	0.029	0.010
2003	0.333	0.061	00031	0.029	0.010
2004	0.336	0.062	0.031	0.030	0.010
2005	00340	0.062	0.031	0.030	0.010
2006	0.343	0.063	0.031	0.030	0.010
2007	0.347	0.063	0.032	0.030	0.010
2008	0.350	0.064	0.032	0.031	0.010
2009	0.354	0.065	0.032	0.031	0.010
2010	0.357	0.065	0.033	0.031	0.010

SOURCE: MAP MODEL CASE OMN.F84
VARIABLES: B09 B11 B12 B14 B16

TABLE D.10 (continued)

	Matanuska/ Susitna	Nome	Seward	Southeast Fairbanks	Upper Yukon
1984	0.022	0.086	00005	0.003	0.023
1985	0.022	00087	0.005	0. 003	0.023
1986	0.023	00088	0.005	0.003	0.024
1987	0.023	0.088	0.005	0.003	0.024
1988	0.023	0. 089	0*005	0.003	0.024
1989	0.023	0.090	0.005	0.003	0.024
1990	0.024	0.091	00005	0.003	0.025
1991	0.024	0.092	0.005	0.003	0.025
1992	00024	0.093	0.005	0.003	0.025
1993	00024	0.094	0.006	0.003	0.025
1994	0.025	0.095	0.006	0.003	0.026
1995	0.025	0.096	0.006	0.003	0.026
1996	0.025	0.097	0.006	0.003	0.026
1997	0.025	0.098	00006	0.003	0.026
1998	0.026	0.099	0.006	0. 003	0.027
1999	0.026	0.100	0.006	0.004	0.027
2000	0.026	0.101	0.006	0.004	0.02?
2001	0.026	0.102	0.006	0.004	0.028
2002	0.027	0.103	00006	0.004	0.028
2003	0.027	0.104	0.006	0.004	0.028
2004	0.027	0.105	0.006	0.004	0.028
2005	0.027	0.106	00006	0.004	0.029
2006	0.028	0.107	0.006	0.004	0.029
2007	0.028	0.108	0.006	0.004	0.029
2008	0.028	0.109	0.006	0.004	0.029
2009	0.028	0.110	00006	0.004	0.030
2010	0.029	0.111	0.007	0.004	0.030

SOURCE: MAP MODEL CASE OMN.F84
VARIABLES: B17 618 621 B24 B25

TABLE D.10 (continued)

	Valdez/Chitina/ Whittier	Yukon/ Koyukuk	Mining Employment
1984	0 .039	0 .009	0.986
1985	0.040	00009	0.996
1986	0.040	0.009	1.006
1987	0.041	0.009	1.016
1988	0.041	0.009	1.026
1989	0.041	0.010	1.036
1990	0.042	0.010	1.047
1991	0.042	0.010	1.057
1992	0.043	0.010	1.068
1993	0.043	0.010	1.078
1994	0.044	0.010	1.089
1995	0.044	0.010	1.100
1996	0.044	0.010	1.111
1997	0.045	0.010	1.122
1998	0.045	0.010	1.133
1999	0.046	0.011	1.145
2000	0.046	0.011	1.156
2001	0.047	0.011	1.168
2002	0 . 047	0.011	1.179
2003	0.048	0.011	1.191
2004	0.048	0.011	1.203
2005	0.049	0.011	1.215
2006	0.049	0.011	-1.227
2007	0.050	0.011	1.240
2008	00 050	0.012	1 .252
2009	0.051	0.012	1.264
2010	0.051	0.012	1.277

SOURCE: MAP MODEL CASE OMN.F84
VARIABLES: B26 B29 EMP9

TABLE D.11. AGRICULTURE

(thousands of employees)

	Aleutian Islands	Anchorage	Fairbanks	Kenai/ Cook Inlet
19$4	0.013	0.174	0.066	0.009
1985	0.013	0.181	0.073	0.009
1986	0.013	0.188	0.080	0.009
1987	0.013	0.196	0.089	0.010
1988	0.013	0.204	0.099	0.010
1989	0.013	0.212	0.110	0.010
1990	0.013	0.220	0.121	0.011
1991	0.013	0.229	0.134	0.011
1992	0.013	0.238	0.148	0.011
1993	0.013	0.248	0.165	0.012
1994	0.013	0.258	0.182	0.012
1995	0.013	0.268	0.201	0.012
1996	0.013	0.279	0.223	0.013
1997	0.013	0.290	0.247	0.013
1998	0.013	0.302	0.273	0.013
1999	0.013	0.314	0.302	0.014
2000	0.013	0.326	0.335	0.014
2001	0.013	0.339	0.351	0.015
2002	0.013	0.353	00369	0.015
2003	0.013	0.367	0.387	0.016
2004	0.013	0.382	0.407	0.016
2005	0.013	0.397	0.42?	0.017
2006	0.013	0.413	0.448	0.017
2007	0.013	0.429	0.471	0.018
2008	0.013	0.446	0.495	0.018
2009	0.013	0.464	0.519	0.019
2010	0.013	0.483	0.545	0.019

SOURCE: MAP MODEL CASE AGR.F83
VARIABLES: B01 B02 B09 812

TABLE D.11 (continued)

	Kodiak	Matanuska/ Susitna	Agriculture Employment
1984	0.006	0.117	0.385
1985	0.006	0.118	0.400
1986	0.006	0.120	0.416
1987	0.006	0.121	0.435
1988	0.006	0.122	0.454
1989	0.007	0.123	0.475
19!30	0 . 007	0.124	0.496
1991	0.007	0.126	0.520
1992	0.007	0.127	0.544
1993	0.007	0.128	0. 573
1994	0.007	0.129	0.601
1995	0.008	0.131	0.633
1996	0.008	0.132	0.668
1997	0. 008	0.133	0.704
1998	c1 .008	0.135	0. 744
1999	0.009	0.136	0.788
2000	0.009	0.137	0.834
2001	0.009	0.139	0.866
2002	0.009	0.140	0.899
2003	0.010	0.142	0.935
2004	0.010	0.143	0.971
2005	0.010	0.144	1.008
2006	0.010	0.146	1.047
2007	0.011	0.147	1.089
2008	0.011	0.149	1.132
2009	0.011	0.150	1.176
2010	0.012	0.151	1.223

SOURCE: MAP MODEL CASE AGR. F83
VARIABLES: B15 B17 EMAGRI

TABLE D.12. LOGGING AND LUMBER

(thousands of employees)

	Anchorage	Cordova/ McCarthy	Fairbanks	Southeast Alaska	Kenai/ Cook Inlet
1984	0.254	0.025	0.054	2.126	0.040
1985	0.254	0.071	0.054	2.264	0.040
1986	0.254	0.140	0.054	2.379	0.040
1987	0.254	0.232	0.054	2.471	0.040
1988	0.254	0.255	0.054	2.540	0.040
1989	0.254	0.255	0.054	2.586	0.040
1990	0.254	0.255	0.054	2.632	0.040
1991	0.254	0.255	0.054	2.632	0.040
1992	0.254	0.255	0.054	2.632	0.040
1993	0.254	0.255	0.054	2.632	0.040
1994	0.254	0.255	0.054	2.632	0.040
1995	0.254	0.255	0.054	2.632	0.040
1996	0.254	0.255	0.054	2.632	0.040
1997	0.254	0.255	0.054	2.632	0.040
1998	0.254	0.255	0.054	2.632	0.040
1999	0.254	0.255	0.054	2.632	0.040
2000	0.254	0.232	0.054	2.632	0.040
2001	0.254	0.186	0.054	2.632	0.040
2002	0.254	0.163	0.054	2.632	0.040
2003	0.254	0.140	0.054	2.632	0.040
2004	0.254	0.117	0.054	2.632	0.040
2005	0.254	0.094	0.054	2.632	0.040
2006	0.254	0.025	0.054	2.632	0.040
2007	0.254	0.025	0.054	2.632	0.040
2008	0.254	0.025	0.054	2.632	0.040
2009	0.254	0.025	0.054	2.632	0.040
2010	0.254	0.025	0.054	2.632	0.040

SOURCE: MAP MODEL CASE FLL.F84
VARIABLES: B02 B08 B09 B11 B12

TABLE D.12 (continued)

	Kodiak	Matanuska/ Susitna	Seward	Southeast Fairbanks	Yukon/ Koyukuk	Low Wage -- Exogenous Manufacturing Employment
1984	0.140	0.014	0.010	0.020	0.032	2.715
1985	0.180	0.014	0.010	0.020	0. 032	2.939
1986	0.194	0.014	0.010	0 .020	0.032	3.137
1987	0.212	0.014	0.010	0.020	0.032	3.339
1988	0.230	0.014	0.010	0.020	0.032	3.449
1 989	0.249	0.014	0.012	0.020	0.032	3.516
1990	0.249	0.014	0.012	0.020	0.032	3.562
1991	0.249	0.014	0.012	0.020	0.032	3. 562
1992	0.249	0.014	0.012	0.020	0. 032	3.562
1993	0.249	0.014	0.012	0.020	0.032	3.562
1994	0.249	0.014	0.012	0.020	0.032	3.562
1995	0.249	0.014	0.012	0.020	0.032	3.562
1996	0.249	0.014	0.012	0.020	0.032	3.562
1997	0.249	0.014	0.012	0.020	0.032	3.562
1998	0.249	0.014	0.012	0 .020	0.032	3.562
1999	0.249	0.014	0.013	0.'-020	0 .032	3.553.
2000	0.249	0.014	0.013	0.020	0. 032	3.540
2001	0.249	0.014	0.013	0.020	.0.032	3.494
2002	0.249	0.014	0.013	0.020	0.032	3.471
2003	0.249	0.014	0.013	0.020	0.032	3.448
2004	0.249	0.014	0.013	0.020	0.032	3.425
2005	00249	0.014	0.013	0.020	0.032	3.402
2006	0.199	0.014	0.013	0 .020	". 'o .032	3.283
2007	0.019	0.014	0.014	0.020	0.032	3.104
2008	0.019	0.014	0.014	0.020	.0.0'32	3.104
2009	0.019	0.014	0.014	0.020	0.032	3.104
2010	0.020	0.014	0.014	0.020	0.032	3.105

SOURCE: MAP MODEL CASE FLL.F84
VARIABLES: B15 B17 B21 B24 B29 EMMX2

TABLE D.13. PULP AND PAPER

(thousands of employees)

	Southeast Alaska	Low Wage Exogenous Manufacturing Employment
1984	00800	0.800
1985	00900	0.900
1986	0.900	0.900
1987	0.900	0.900
1988	0.900	00900
1989	0.900	0. 900
1990	0.900	0.900
1991	0.904	0.904
1992	0.895	0. 895
1993	0.886	00886
1994	0.877	0.877
1995	0.869	0.869
1996	0.860	0.860
1997	0.851	0.851
1998	0.843	0.843
1999	0.834	0.$34.
2000	0.826	0. 826
2001	0.818	0.818
2002	00810	0.810
2003	0.802	00802
2004	0.794	0.794
2005	0.786	0.786
2006	0.778	0.778
2007	0.770	0.770
2008	0.762	0.762
2009	0.755	0.755
2010	0.747	0.747

SOURCE: MAP MODEL CASE FPU.F84
VARIABLES: B11 EMMX2

TABLE D.14. TRADITIONAL COMMERCIAL FISHING

(thousands of employees)

	Aleutian Islands	Bethel	Bristol Bay	Cordova/ McCarthy	Southeast Alaska
1984	1.188	0.296	1.012	0.240	2.100
1985	1.188	0.296	1.012	0.240	2.100
1986	1.188	0.296	1.012	0.240	2.100
1987	1.188	0.296	1.012	0.240	2.100
1988	1.188	0.296	1.012	0.240	2.100
1989	1.188	0.296	1.012	0.'240	2.100
1990	1.188	0.296	1.012	0.240	2.100
1991	1.188	0.296	1.012	0.240	2.100
1992	1.188	0.296	1.012	0.2'40	2.100
1993	1.188	0.296	1.012	0.240	2.100
1994	1.188	0.296	1.012	0 .240	2.100
1995	1.188	0.296	1.012	0. 240	2.100
1996	1.188	0.296	1.012	0.240	2.100
1997	1.188	0.296	1.012	0. 240	2.100
1998	1.188	0.296	1.012	0 . 240	2.100
1999	1.188	0.296	1.012	0.240	2.100
2000	1.188	0.296	1.012	0 . 2 4 0	2.100
2001	1.188	0.296	1.012	0.240	2.100
2002	1.188	0.296	1.012	0.240	2.100
2003	1.188	0.296	1.012	0.240	2.100
2004	1.188	0.296	1.012	0.240	2.100
2005	1.188	0.296	1.012	0.240	2.100
2006	1.188	0.296	1.012	0.240	2.100
2007	1.188	0.296	1.012	0.240	2.100
2008	1.188	0.296	1.012	0.240	2.100
2009	1.188	0.296	1.012	0.240	2.100
2010	1.188	0.296	1.012	0.240	2.100

SOURCE.: MAP MODEL CASE TCF.F83
VARIABLES: B01 B05 B06 B08 B11

TABLE D.14 (continued)

	Kenai/ Cook Inlet	Kobuk	Kodiak	Kuskokwim	Nome
1984	0.792	0.176	1.104	0.032	0.008
1985	0.792	0.176	1.104	0.032	0.008
1986	0.792	0.176	1.104	0.032	0.008
1987	0.792	0.176	1.104	0.032	0.008
1988	0.792	0.176	1.104	0.032	0.008
1989	0.792	0.176	1.104	0.032	0.008
1990	0.792	0.176	1.104	0.032	0.008
1991	0.792	0.176	1.104	0.032	0.008
1992	0.792	0.176	1.104	0.032	0.008
1993	0.792	0.176	1.104	0.032	0.008
1994	0.792	0.176	1.104	0.032	0.008
1995	0.792	0.176	1.104	0.032	0.008
1996	0.792	0.176	1.104	0.032	0.008
1997	0.792	0.176	1.104	0.032	0.008
1998	0.792	0.176	1.104	0.032	0.008
1999	0.792	0.176	1.104	0.032	0.008
2000	0.792	0.176	1.104	0.032	0.008
2001	0.792	0.176	1.104	0.032	0.008
2002	0.792	0.176	1.104	0.032	0.008
2003	0.792	0.176	1.104	0.032	0.008
2004	0.792	0.176	1.104	0.032	0.008
2005	0.792	0.176	1.104	0.032	0.008
2006	0.792	0.176	1.104	0.032	0.008
2007	0.792	0.176	1.104	0.032	0.008
2008	0.792	0.176	1.104	0.032	0.008
2009	0.792	0.176	1.104	0.032	0.008
2010	0.792	0.176	1.104	0.032	0.008

SOURCE: MAP MODEL CASE TCF.F83
VARIABLES: B12 814 B15 B16 B18

TABLE D.14 (continued)

	Seward	Valdez/Chitina/ Whittier	Wade Hampton	Fish Harvesting Employment
1984	0.240	0.024	0.288	7.500
1985	0.240	0.024	0.288	7.500
1986	0.240	0.024	0.288	7.500
1987	00240	0.024	00288	-7.500
1988	0.240	0.024	0.288	7.500
1989	0.240	0.024	0.288	7.500
1990	0.240	00024	0.288	7.500
1991	0.240	0.024	0.288	7.500
1992	0.240	0.024	0.288	7.500
1993	0.240	0.024	0.288	7.500
1994	0.240	0.024	0.288	7.500
1995	0.240	0.024	0.288	7.500
1996	0.240	0.024	0.288	7.500
1997	0.240	0.024	0.288	7.500
1998	0.240	0.024	0.288	7.500
1999	00240	0.024	0.288	7.500
2000	0.240	0.024	0.288	7.500
2001	0.240	0.024	0.288	7.500
2002	0.240	0.024	0.288	7.500
2003	On 240	0.024	0.288	7.500
2004	0.240	0.024	0.288	7.500
2005	0.240	0.024	0.288	7.500
2006	0.240	0.024	0.288	7.500
2007	0.240	0.024	0.288	7.500
2008	0.240	0.024	0.288	7.500
2009	0.240	0.024	0.288	7.500
2010	0.240	0.024	0.288	7.500

SOURCE: MAP MODEL CASE TCF.F83
VARIABLES: B21 B26 B27 EMFISH

TABLE D.15. TRADITIONAL FISH PROCESSING

(thousands of employees)

	Aleutian Islands	Anchorage	Bethel	Bristol Bay	Cordova/ McCarthy
1984	1.415	0.512	0.058	0.725	0.244
1985	1.415	0.512	0.058	0.725	0.244
1986	1.415	0.512	0.058	0.725	0.244
1987	1.415	0.512	0.058	0.725	0.244
1988	1.415	0.512	0.058	0.725	0.244
1989	1.415	0.512	0.058	0.725	0.244
1990	1.415	0.512	0.058	0.725	0.244
1991	1.415	0.512	0.058	0.725	0.244
1992	1.415	0.512	0.058	0.725	0.244
1993	1.415	0.512	0.058	0.725	0.244
1994	1.415	0.512	0.058	0.725	00244
1995	1.415	0.512	0.058	0.725	0.244
1996	1.415	0.512	0.058	0.725	0.244
1997	1.415	0.512	0.058	0.725	0.244
1998	1.415	0.512	0.058	0.725	0.244
1999	1.415	0.512	0.058	0.725	0.244
2000	1.415	0.512	0.058	0.725	0.244
2001	1.415	0.512	0.058	0.725	0.244
2002	1.415	0.512	0.058	0.725	0.244
2003	1.415	0.512	0.058	0.725	0.244
2004	1.415	0.512	0.058	0.725	0.244
2005	1.415	0.512	00058	0.725	0.244
2006	1.415	0.512	00058	0.725	0.244
2007	1.415	0.512	0.058	0.725	0.244
2008	1.415	0.512	0.058	0.725	0.244
2009	1.415	0.512	0.058	0.725	0.244
2010	1.415	0.512	0.058	0.725	0.244

SOURCE: MAP MODEL CASE TFP.F84
VARIABLES: B01 B02 B05 B06 B08

TABLE D.15 (continued)

	Southeast Alaska	Kenai/ Cook Inlet	Kobuk	Kodiak	Kuskokwim
1984	1.821	0.880	0.034	1.225	00004
1985	1.821	0.880	0.034	1.225	0.004
1986	1.821	0.880	0.034	1.225	0.004
1987	1.821	0.880	0.034	1.225	00004
1988	1.821	0.880	0.034	1.225	0. 004
1989	1.821	0.880	0.034	1.'225	0.004
1990	1.821	0.880	0.034	1.225	0.004
1991	1.821	0.880	0.034	1.225	0.004
1992	1.821	00880	0.034	1.225	0.004
1993	1.821	0.880	0.034	1.225	0.004
1994	1.821	0.880	0.034	1.225	0.004
1995	1.821	0.880	0.034	1.225	0.004
1996	1.821	0.880	0.034	1.225	0.004
1997	1.821	0.880	00034	1.225	0 .004
1998	1.821	0.880	0.034	1.225	0. 004
1999	1.821	0.880	0.034	1.225	0.004
2000	1.821	0.880	00034	1.225	0.004
2001	1.821	0.880	0.034	1.225	0.004
2002	1.821	00880	00034	1.225	0.004
2003	1.821	0. 880	0.034	1.225	0.004
2004	1.821	0.880	0.034	1.225	0.004
2005	1.821	0.880	0.034	1.225	0.004
2006	1.821	0.880	0.034	1.225	0.004
2007	1.821	00880	0.034	1.225	0.004
2008	1.821	0.880	0.034	1.225	0.004
2009	1.821	0.880	0.034	1.225	0.004
2010	1.821	0.880	0.034	1.225	0.004

SOURCE: MAP MODEL CASE TFP.F84
VARIABLES: B11 B12 B14 B15 B16

TABLE D.15 (continued)

	Nome	Seward	Valdez/Chitina/ Whittier	Wade Hampton	Low Wage Exogenous Manufacturing Employment
1984	0.013	0.265	0.023	0.063	7.281
1985	0.013	0.265	0.023	0.063	7.281
1986	0.013	(..265	0.023	0.063	7.281
1987	0.013	0.265	0.023	0 .063	7.281
1988	0.013	0.265	0.023	00063	7.281
1989	0.013	0.265	00023	0.063	7.281
1990	0.013	0.265	0.023	0.063	7. 281
1991	0.013	0.265	0.023	0. 063	7.281
1992	0.013	0.265	0.023	0.063	7. 281
1993	0.013	0.265	0.023	0.063	7.281
1994	0.013	0.265	0.023	0.063	7.281
1995	0.013	0.265	0.023	0.063	7.281
1996	0.013	0.265	0.023	0.063	7.281
1997	0.013	0.265	0.023	0. (363	7.281
1998	0.013	0.265	0.023	—0.063	7.281
1999	0.013	0.265	0.023	0 0 6 3	7.281
2000	0.013	0.265	0.023	0.063	7.281
2001	0.013	0.265	0.023	0.063	7.281
2002	0.013	0.265	0.023	0.063	7.281
2003	0.013	0.265	0.023	0.063	7.281
2004	0.013	0.265	0.023	0.063	7.281
2005	0.013	0.265	0.023	0.063	7.281
2006	0.013	0.265	0.023	00063	7.281
2007	0.013	0.265	0.023	00063	7 .281
2008	0.013	0.265	0.023	00063	7.281
2009	0.013	0.265	0.023	0.063	7.281
2010	0.013	0.265	0.023	0.063	7. 281

SOURCE: MAP MODEL CASE TFP.F84
VARIABLES: B18 B21 626 B27 EMMX2

TABLE D.16. COMMERCIAL GROUNDFISHING AND PROCESSING

(thousands of employees)

	Aleutian Islands	Kodiak	Fish Harvesting Employment	Low Wage Exogenous Manufacturing Employment
1984	0.071	0.016	0.081	0.006
1985	0.095	0.022	0.108	0.009
1986	0.120	0.028	0.136	0.012
1987	0.146	0.034	0.164	0.016
1988	0.165	0.038	0.181	0.022
1989	0.200	0.043	0.216	0.027
1990	0.220	0.051	0.229	0.042
1991	0.246	0.057	0.245	0.058
1992	0.280	0.065	0.266	0.079
1993	0.325	0.075	0.292	0.108
1994	0.385	0.089	0.326	0.148
1995	0.463	0.107	0.368	0.202
1996	0.566	0.131	0.421	0.276
1997	0.703	0.163	0.488	0.378
1998	0.884	0.205	0.572	0.517
1999	1.125	0.261	0.678	0.708
2000	1.383	0.321	0.733	0.971
2001	1.383	0.321	0.733	0.971
2002	1.383	0.321	0.733	0.971
2003	1.383	0.321	0.733	0.971
2004	1.383	0.321	0.733	0.971
2005	1.383	0.321	0.733	0.971
2006	1.383	0.321	0.733	0.971
2007	1.383	0.321	0.733	0.971
2008	1.383	0.321	0.733	0.971
2009	1.383	0.321	0.733	0.971
2010	1.383	0.321	0.733	0.971

SOURCE: MAP MODEL CASE BCF.F83
VARIABLES: B01 B15 EMFISH EMMX2

TABLE D.17. STATE HYDROELECTRIC PROJECTS

(thousands of employees]

	Cordova/ McCarthy	Southeast Alaska	Kenai/ Cook Inlet	Kodiak
1984	0.000	0.000	0.000	0.122
1985	0.038	0.000	0.129	0.000
1986	0.075	0.000	0.221	0.000
1987	0.075	0.000	0.265	0.000
1988	0.038	0.000	0.445	0.000
1989	00000	00000	0.725	0.000
1990	0.000	0.000	0.725	0.000
1991	0.000	0.000	0.725	0.000
1992	00000	0.000	0.725	0.000
1993	0.000	0.000	0.363	.0.000
1994	0.000	0.000	00000	0.000
1995	0.000	0.000	0.000	0.000
1996	00000	00000	0.000	0.000
1997	0.000	0.000	0.000	0.000
1998	0.000	0.000	0.000	0.000
1999	0.000	0.000	0.000	0.000
2000	0.000	0.000	-0 . 000	0.000
2001	0.000	0.000	0.000	0.000
2002	0.000	0.000	0.000	0.000
2003	0.000	00000	0.000	0.000
2004	0.000	0.000	0.000	0.000
2005	0.000	0.000	0. 000	0.000
2006	00000	0.000	00000	0.000
2007	0.000	0.000	0.000	0.000
2008	0.000	00000	0.000	00000
2009	0.000	0.000	00000	0.000
2010	0.000	0.000	0 . 000	0.000

SOURCE: MAP MODEL CASE SHP.F83
VARIABLES: B08 B11 B12 B15

TABLE D.17 (continued)

	Matanuska/ Susitna	Yukon/ Koyukuk	Low Wage Exogenous Construction Employment
1984	0.075	0.045	0.242
1985	0.000	0.000	0.167
1986	0.000	0.000	0.296
1987	0.000	0.000	0.340
1988	0.000	0.000	0.483
1989	0.000	0.000	0.725
1990	00000	0.000	0.725
1991	0.000	0.000	0.725
1992	0.000	0.000	0.725
1993	0.000	0.000	0.363
1994	0.000	0.000	0.000
1995	0.000	0.000	0.000
1996	0.000	0.000	0.000
1997	0.000	0.000	0.000
1998	0.000	0.000	0.000
1999	0.000	0.000	0.000
2000	00000	0.000	0.000
2001	0.000	00000	0 .000
2002	0.000	00000	0.000
2003	00000	0.000	0.000
2004	0.000	0.000	0. 000
2005	0.000	0.000	0.000
2006	0.000	0.000	0.000
2007	0.000	0. 000	Cl, 000
2008	00000	0. 000	0.000
2009	0.000	0. 000	0.000
2010	0.000	0.000	0. 000

SOURCE: MAP MODEL CASE SHP.F83
VARIABLES: B17 B29 EMCNX2

TABLE 0.18. LIGHT ARMY DIVISION DEPLOYMENT

(thousands of employees)

	Anchorage	Fairbanks	Active Duty Military Employment
1984	0.000	0.000	0.000
1985	0.000	0.000	0.000
1986	0.650	1.950	2.600
1987	0.650	1.950	2.600
1988	0.650	1.950	2.600
1989	0.650	1.950	2.600
1990	0.650	1.950	2.600
1991	0.650	1.950	2.600
1992	0.650	1.950	2.600
1993	0.650	1.950	2.600
1994	0.650	1.950	2.600
1995	0.650	1.950	2.600
1996	0.650	1.950	2.600
1997	0.650	1.950	2.600
1998	0.650	1.950	2.600
1999	0.650	1.950	2.600
2000	0.650	1.950	2.600
2001	0.650	1.950	2.600
2002	0.650	1.950	2.600
2003	0.650	1.950	2.600
2004	0.650	1.950	2.600
2005	0.650	1.950	2.600
2006	0.650	1.950	2.600
2007	0.650	1.950	2.600
2008	0.650	1.950	2.600
2009	0.650	1.950	2.600
2010	0.650	1.950	2.600

SOURCE: MAP MODEL CASE GFM.JPR
VARIABLES: G02 G09 EMGM

TABLE D.19. FEDERAL GOVERNMENT MILITARY

(thousands of employees)

	Aleutian Islands	Anchorage	Barrow/ North Slope	Bethel	Bristol Bay
1984	2.172	10.422	0.013	0.009	0.308
1985	2.150	10.318	0.013	0.009	0.305
1986	2.129	10.214	0.013	0.009	0.302
1987	2.108	10.112	0.012	63.009	0.299
1988	2.086	10.011	0.012	0.009	0.296
1989	2.066	9.911	0.012	0.008	0.293
1990	2.045	9.812	0.012	0.008	0.290
1991	2.024	9.714	0.012	0.008	0.287
1992	2.004	9.617	0.012	0.008	0.284
1993	1.984	9.520	0.012	0.008	0.281
1994	1.964	9.425	0.012	0.008	0.278
1995	1.945	9.331	0.012	0.008	0.276
1996	1.925	9.238	0.011	0.008	0.273
1997	1.906	9.145	0.011	0.008	0.270
1998	1.887	9.054	0.011	0.008	0.267
1999	1.868	8.963	0.011	0.008	0.265
2000	1.849	8.874	0.011	0.008	0.262
2001	1.831	8.785	0.011	0.008	0.260
2002	1.813	8.697	0.011	0.007	0.257
2003	1.794	8.610	0.011	0.007	0.254
2004	1.777	8.524	0.011	0.007	0.252
2005	1.759	8.439	0.010	0.007	0.249
2006	1.741	8.354	0.010	0.007	0.247
2007	1.724	8.271	0.010	0.007	0.244
2008	1.707	8.188	0.010	0.007	0.242
2009	1.689	8.106	0.010	0.007	0.239
2010	1.673	8.025	0.010	0.007	0.237

SOURCE: MAP MODEL CASE GFM.F84
VARIABLES: G01 G02 G04 G05 G06

TABLE D.19. (continued)

	Cordova/ McCarthy	Fairbanks	Southeast Alaska	Kenai/ Cook Inlet	Kobuk
1984	0.048	5.783	0.739	0.053	0.012
1985	0.047	5.725	0.731	0.053	0.012
1986	0.047	5.668	0.724	0.052	0.012
1987	0.046	5.611	0.717	0.052	0.012
1988	0.046	5.555	0.709	0.051	0.011
1989	0.045	5.499	0.702	0.051	0.011
1990	0.045	5.444	0.695	0.050	0.011
1991	0.044	5.390	0.688	0.050	0.011
1992	00044	5.336	0.681	0.049	0.011
1993	0.043	5.282	0.675	0.049	0.011
1994	0.043	5.230	0.668	0.048	0.011
1995	0.043	5.177	0.661	0.048	0.011
1996	0.042	5.126	0.655	0.047	0.011
1997	0.042	5.074	0.648	0.047	0.010
1998	0.041	5.024	0.642	0.046	0.010
1999	0.041	4.973	0.635	0.046	0.010
2000	0.040	4.924	0.629	0.046	0.010
2001	0.040	4.874	0.623	0.045	0.010
2002	0.040	4.826	0.616	0.045	0.010
2003	0s039	4".777	0.610	0.044	0.010
2004	0.039	4.730	0.604	0.044	0.010
2005	0.038	4.682'	0.598	0.043	0.010
2006	0.038	4.635	0.592	0.043	0.010
2007	0.038	4.589	0.586	0.042	0.009
2008	0.037	4.543	0.580	0.042	0.009
2009	0.037	4.498	0.574	0.042	0.009
2010	0.037	4.453	0.569	0.041	0.009

SOURCE: MAP MODEL CASE GFM.F84
VARIABLES: G08 G09 G11 G12 G14

TABLE D.19. (continued)

	Kodiak	Kuskokwim	Matanuska/ Susitna	Nome	Seward
1984	1.084	0.015	$3.000	0 .039	0.018
1985	1.073	0.015	0.000	0.038	0.018
1986	1.062	0.015	0.000	0.038	0.017
1987	1.052	0.014	0.000	0.037	0.017
1988	1.041	0.014	0.000	0.037	0.017
1989	1.031	0.014	0.000	0.037	0.017
1990	1.021	0.014	0.000	0.036	0.017
1991	1.010	0.014	0.000	0.036	0.017
1992	1.000	0.014	0.000	0.036	0.016
1993	0.990	0.014	0. 000	0.035	0.016
1994	0.'%80	0.013	0.000	0.035	0.016
1995	0.971	0.013	0 .000	0.035,	0.016
1996	0.961	0.013	0.000	0.034	0.016
1997	0.951	0.013	00000	0. 034	0.016
1998	0.942	0.013	00000	0.034	0.015
1999	0.932	0.013	0.000	0.033	0.015
2000	0.923	0.013	0.000	0.033	0.015
2001	0.914	0.013	00000	0.033	0.015
2002	0.905	0.012	0.000	0.032	0.015
2003	0.896	0.012	00000	0 .032	0.015
2004	0.887	0.012	0.000	0.032	0.015
2005	0.878	0.012	0.000	0.031	0.014
2006	0.869	0.012	0.000	0. 031	0.014
2007	0.860	0.012	0.000	0.031	0.014
2008	0.852	0.012	0 .000	0.030	0.014
2009	0.843	0.012	0 .000	0.030	0.014
2010	0.835	0.011	0.000	0.030	0.014

SOURCE: MAP MODEL CASE GFM.F84
VARIABLES: G15 G16 G17 G18 G21

TABLE D.19. (continued)

	Southeast Fairbanks	Upper Yukon	Valdez/ Chitina/ Whittier	Wade Hampton	Yukon/ Koyokuk	Active Duty -- Military Employment
1984	0.807	0.023	0.042	0.009	0.445	22.038
1985	0.799	0.023	0.041	0.009	0.441	21.818
1986	0.791	0.022	0.041	0.009	0.437	21.600
1987	0.783	0.022	0.040	0.009	0.432	21.384
1988	0.775	0.022	0.040	00009	0.428	21.170
1989	0.767	0.022	00040	0.008	0.424	20.958
1990	0.760	0.021	00039	0.008	0.419	20.749
1991	0.752	0.021	0.039	0.008	0.415	20.541
1992	0.745	0.021	0.038	00008	0.411	20.336
1993	0.737	0.021	0.038	0.008	0.407	20.132
1994	0.-730	0.027	0.038	00008	0.403	19.931
1995	0.722	0.020	0.037	0.008	0.399	19.732
1996	0.715	0.020	0.03'7	00008	0.395	19.534
1997	0.708	0.020	0.036	0.008	0.391	19.339
1998	0.701	0.020	0.036	0, 008	0.387	19.146
1999	0.694	0.020	0.036	0. 008	0.3%3	18.954
2000	" 0.687	0.019	0.035	0.008	0.379	18.765
2001	0.680	0.019	0.035	0.008	0.376	18.577
2002	0.673 "	0.019	0.035	0.007	0.372	18.391
2003	0.667	0.019	0:034	0.007	0.368	18.207
2004	0.660	0.019	0.034	0.007	0.364	18.025
2005	0.653	0.018	0.034	0.007	0 .361	17.845
2006	0.647	0.018	0.033	0.007	0.35'7	17.667
2007	0.640	0.018	0.033	0.007	0.354	17.490
2008	0.634	0.018	0.033	00007	0.350	17.315
2009	0.628	0.018	0.032	0.007	0. 347	17.142
2010	0.621	0.018	0.032	0 .007	0.343	16.970

SOURCE: MAP MODEL CASE GFM.F84
VARIABLES: G24 G25 G26 G27 G29 EMGM

TABLE D.20. FEDERAL CIVILIAN GOVERNMENT

(thousands of employees)

	Aleutian Islands	Anchorage	Barrow/ North Slope	Bethel	Bristol Bay
1984	0.698	9.693	0.246	0 .408	0.191
1985	0.702	9.741	0.247	0.410	0.192
1986	0.705	9.790	0.248	0.412	0.193
1987	0.709	9 .839	0.250	0.414	0.194
1988	0.713	9.888	0.251	0.416	0.194
1989	0.716	9.938	0.252	0.418	0.195
1990	0.720	9.987	0.253	0.420	0.196
1991	0.723	10.037	0.255	0.423	0.197
1992	0.727	10.087	0.256	0.425	0. 198
1993	0.731	10.138	0.257	0.427	0.199
1994	0.734	10.189	0.258	0.429	0. 200
1995	0.738	10.240	0.260	0.431	0.201
1996	0.742	10.291	0.261	0.433	0.202
1997	0.745	10.342	0.262	0.435	0.203
1998	0.749	10.394	0.264	0.438	0.204
1999	0.753	10.446	0.265	0.440	0.205
2000	0.756	10.498	0.266	0.442	0.206
2001	0.760	10. 551	0.268	0 .444	0.208
2002	0.764	10.603	0.269	0.446	0.209
2003	0.768	10.6?56	0.270	0.449	0.210
2004	0.772	10.710	0.272	0.451	0.211
2005	0.776	10.763	0.273	0.453	0.212
2006	0.779	10.817	0.274	0.455	0.213
2007	0.783	10.871	0.276	0.458	0.214
2008	0.787	10.925	0.277	0.460	0.215
2009	0.791	10.980	0.279	0.462	0.216
2010	0.795	11.035	0.280	0.465	0.217

SOURCE: MAP MODEL CASE GFC. F84
VARIABLES: G01 G02 G04 G05 G06

TABLE D.20. (continued)

	Cordova/ McCarthy	Fairbanks	Southeast Alaska	Kenai/ Cook Inlet	Kobuk
1984	0.036	20304	2.391	0.103	0. 246
1985	0.036	2.315	2.403	0.104	0.24'3
1986	0.036	2.327	2.415	0.104	0.248
1987	0.036	2.339	2.427	0.105	0.250
1988	0.036	2.350	2.439	0.105	0.251
1989	0.037	2.362	2.452	0.106	0.252
1990	0.037	2.374	2.464	0.106	0.253
1991	00037	2.386	2.476	0.107	0.255
1992	00037	2.398	2.488	0.108	0.256
1993	0.037	2.410	2.501	0.108	0.257
1994	0.037	2.422	2.513	0.109	0.258
1995	0.038	2.434	2.526	0.109	0.260
1996	0.038	2.446	2.539	0.110	0.261
1997	00038	2.458	2.551	0.110	0.262
1998	0.038	2.470	2. 564	0.111	0.264
1999	0.038	2.483"	2.577	0.111	0.265
2000	0.039	2.495	2.590	0.112	0.266
2001	0.039	20508	2.603	0.112	0.268
2002	00039	2.520	2.616	0.113	0.269
2003	0.039	2:533	2.629	0.114	0.270
2004	0.039	2.545	2.642	0.114	0.272
2005	0.040	2.558	2.655	0.115	0.273
2006	0.040	2.571	2.668	0.115	0. 274
2007	0.040	2.584	20682	0.116	0.276
2008	0.040	2. 597	2.695	0.116	0.277
2009	0.040	2.610	2.709	0.117	0.279
2010	0.041	2.623	2.722	0.118	0.280

SOURCE: MAP MODEL CASE GFC.F84
VARIABLES: G08 G09 G11 G12 G14

TABLE D.20. (continued)

	Kodiak	Kuskokwim	Matanuska/ Susitna	Nome	Seward
1984	0.283	0.077	0.096	0.176	0.068
1985	0.285	0.077	0.097	0.177	0.068
1986	0.286	0.077	0.097	0.178	0.068
1987	0.288	0.078	0.098	0.179	0.069
1988	0.289	0.078	0.098	0.180	0.059
1989	0.290	0.079	0.099	0.181	0.069
1990	0.292	0.079	0.099	0.182	0.070
1991	0.293	0.079	0.100	0.183	0.070
1992	0.295	0.080	0.100	0.184	0.070
1993	0.296	0.080	0.101	0.184	0.071
1994	0.298	0.081	0.101	0.185	0.071
1995	0.299	0.081	0.102	0.186	0.072
1996	0.301	0.081	0.102	0.187	0.072
1997	0.302	0.082	0.103	0.188	0.072
1998	0.304	0.082	0.103	0.189	0.073
1999	0.305	0.083	0.104	0.190	0.073
2000	0.307	0.083	0.104	0.191	0.073
2001	0.308	0.083	0.105	0.192	0.074
2002	0.310	0.084	0.105	0.193	0.074
2003	0.311	0.084	0.106	0.194	0.074
2004	0.313	0.085	0.106	0.195	0.075
2005	0.315	0.085	0.107	0.196	0.075
2006	0.316	0.086	0.107	0.197	0.076
2007	0.318	0.086	0.108	0.198	0.076
2008	0.319	00086	0.108	0.199	0.076
2009	0.321	0.087	0.109	0.200	0.077
2010	0.323	0.087	0.110	0.201	0.077

SOURCE: MAP MODEL CASE GFC.F84
VARIABLES: G15 G16 G17 G18 G21

TABLE D.20. (continued)

	Southeast Fairbanks	upper Yukon	Valdez/ Chitina/ Whittier	Wade Hampton	Yukon/ Koyokuk	Federal Civilian Employment
1984	0.333	0.034	0.045	0.134	0.257	17.818
1985	0.335	0.034	0.045	0.134	0.258	17.907
1986	0.337	0.034	0.045	0.135	0.259	17.996
1987	0.338	00034	0.045	0.136	0. 260	18.086
1988	0.340	0.035	0.045	0.136	0.262	18.177
1989	0.342	0.035	0.046	0.137	0.263	18.268
1990	0.343	0.035	0.046	0.138	0 .264	18.359
1991	0.345	0.035	0.046	0.138	0.266	18.451
1992	0.347	0.035	0.046	0.139	0.267	18.543
1993	0.348	0.035	00047	0.140	0.268	18.636
1994	0.350	0.036	00047	0.140	0.270	18.729
1995	0.352	0.036	0.047	0.141	0.271	18.823
1996	0.354	0.036	0.047	0.142	0.272	18.917
1997	0.356	0.036	0.048	0.143	0.274	19.011
1998	0.357	0.036	0.048	0.143	0.275	19.106
1999	0.359	0.036	0.048	0.144	0.277	19.202
2000	0.361	0.037	0.048	0.145	0.278	19.298
2001	0.363	0.037	0.048	0.145	0.279	19.394
2002	0.364	0.037	0.049	0.146	0.281	19.491
2003	0.366	0.037	0.049	0.147	0.282	19.589
2004	0.368	0.037	0.049	0.148	0.283	19.687
2005	0.370	0.038	0.049	0.148	0.285	19.785
2006	0.372	0.038	0.050	0.149	0.286	19.884
2007	0.374	0.038	0.050	0.150	0.288	19.984
2008	0.376	0.038	0.050	0.151	0.289	20. 083
2009	0.377	0.038	0.050	0.151	0.291	20.184
2010	0.379	0.039	0.051	0.152	0.292	20.285

SOURCE: MAP MODEL CASE GFC.F84
VARIABLES: G24 G25 G26 G27 G29 EMGC

APPENDIX E

REVIEW OF MAP MODEL ASSUMPTIONS AND PARAMETERS

Economic and demographic projections using any econometric modeling system such as the MAP model are contingent on a large number of assumptions containing a high degree of uncertainty. One can describe essentially three main categories of such assumptions. We define the three categories and summarize the manner in which we have reviewed and revised the MAP model for the projections descirbed in this report.

The reliability of the assumptions predicting relationships among the economic variables in the model structure itself is perhaps the most obvious set of assumptions leading to projection uncertainty. The MAP system of economic and demographic models also bases its projections on a set of assumptions about the values of a large number of uncertain and unknown variables and parameters considered exogenous to the model. Assumptions about future levels of important exogenous variables are contained in the base case assumptions summarized for this report in Table 1 and Appendix D. There are also values assumed for each of the hundreds of parameters in various relationships specified in the MAP model, chiefly in the economic and the population components.

Analysis of the basic structural validity of the MAP model is beyond the scope of the present study. We concentrate instead upon consideration of specific modifications to the existing structure in order to improve model performance as well as the values chosen for numerous parameters and exogenous variables. A previous study

reported the results of a large number of sensitivity tests run on the MAP statewide model (O.S. Goldsmith et al., Man-in-the-Arctic Program (MAP) Economic Modeling System Technical Documentation Report, ISER, June 1983, Appendix J). The sensitivity tests disclosed that certain assumptions were far more important than others in contributing to projection uncertainty.

In particular, the values chosen for several parameters in the model appear to be more critical to the simulation results than the assumptions about individual base case economic variables. Plausible variations around the values chosen for certain of the parameters of the MAP model caused greater fluctuations in the level of a target projection variable, in this case the number of households, than did plausible variations in base case variable assumptions. Most significant of the parameters considered, as applied to the present study, are the labor force participation rate, the elasticity of support sector activity to wealth, and the parameters of the migration equation.[9]

MAP Model Structure

As mentioned above, previous sensitivity tests have shown that economic and demographic projections are very sensitive to model assumptions about labor force participation, growth of the support sector, and migration decisions. We have made a number of modifications to the structure of the MAP statewide model in order to address these issues as well as to improve the overall

performance of the model. These modifications include changing the definition of data used to project fiscal, demographic, and economic variables and changes in the structure of equations in the model. We summarize the structural changes made specifically for the projections of this report as follows:

1. We have Improved the way the model adjusts personal income by place of work to Income by place of residence. The new residence-adjusting equation relates nonresident income (PIRADJ) to wages and salaries in high-wage construction and mining and to fishing proprietors' "income. We have also added an equation directly estimating employment in Alaska by nonresidents (EMNONRES) as a function of the employment in the mining, manufacturing, construction, and fishing industries.

2. We have respecified the equation predicting net. migration so that the equation predicts total population migration including military (POPMIG9), rather than net civilian migration (POPMIG). We made this change in order to take advantage of much better data series available for total population. We have also completed the accounting of total employment and the labor force by specifying the total Alaska labor force (LF99) as composed explicitly of civilian residents (LFD6), plus nonresidents (EMNONRES), and military (POPM).

3. We have added a new equation predicting the total resident labor force participation rate (LAFPRT) as a function of the Alaska unemployment rate and the ratio of mining, exogenous manufacturing, construction, and fishing employment to total employment. This replaces the parametric specification used in the past for this important variable. The predicted Alaska labor force now moves cyclically, consistent with national trends.

4. Endogenous construction is a large industry in Alaska that is difficult to predict. We revised the specification of endogenous construction in two ways. First, we revised the historical series for endogenous construction employment by removing all North Slope construction not sponsored by the North Slope Borough. Then, we adopted a new specification of the equation for gross product in endogenous construction (XXCN8), using two new state loan variables (EXLOAN1, EXLOAN2).

5. We revised the historical series and changed the equation for predicting gross product in the petroleum industry (XXP9). Historically, we removed purchased construction inputs from value added. Then we used the new data series to estimate the model equation which depends positively on mining employment and real royalty and rental payments and negatively on exogenous construction employment

6. Finally, we made a number of revisions to the fiscal model to reflect a better accounting of state spending. One of the more significant changes was mentioned above, regarding measurement of capital transfers in state loans (EXLOAN1 and EXLOAN2). Another was placing a limit (90 percent on the proportion of the Community and Regional Affairs budget) on the amount that could be allocated directly in transfers to local governments.

Procedure for Updating Model Parameters

We systematically updated, reviewed, and adjusted the economic model parameters and key population model values for the 1985 projections. Most of the main economic parameters in the MAP model, including those in the migration equation, are derived from econometric analysis of historical data. Others, including those in most demographic relationships, are made by assumption, usually based on one or more historical reference data points.

The procedure for revising the economic model parameters based on econometric techniques involved four steps. First, we systematically revised our historical data base to reflect the most recent information. In most cases, we were able to obtain preliminary data for 1983. Then we reestimated all of the stochastic equations of the model for which we had new data (nearly all such equations in the model). As in the past, we tried two alternate specifications

for each equation--ordinary least squares regression (OLS) and generalized least squares, assuming first-order autocorrelation (GLS).

After reviewing the new coefficients for each model equation and examining trial projections with the differing parameter values, we chose the new OLS coefficients to use for the updated model. The final step involved comparing the simulated values for variables in the model for 1983 and 1984 to benchmark figures from the Alaska Department of Labor (Alaska Economic Trends). While the model with the new parameters produced simulated values that now matched closely with the benchmarks, there were also some minor discrepancies. We did not, however, adjust any of the equations in order to make the projections for the initial year more closely match the Alaska Department of Labor benchmarks.

To adjust the demographic parameters, we added the starting values for population by age, sex, race, and military service to match, so far as was possible, data provided by the Alaska Department of Labor (Alaska Population Overview, 1983). Then we reviewed the simulated values for births and deaths, migration, and labor force participation for consistency with published data. The simulated values, using demographic parameters based upon the 1980 U.S. Census, correspond closely to the Alaska Department of Labor benchmark data.

The MAP population model, on the other hand, uses survival rates constructed from five-year cohort-specific death rates, rather than survival rates constructed from life tables. Both methods begin with the 1980 census age-sex-specific deaths, then adjust them in different ways. Although the life-table method is more accurate when data are available to compute the parameter-s for the table, an attribute of the MAP model that is of vital importance to our demographic projections is the division of the population into three categories, each with separate demographic characteristics and model parameters. These are the civilian non-Native population, the Native population, and the military population (see O.S. Goldsmith et al., MAP' Economic Modeling System Technical Documentation Report, ISER, June 1983, Appendix C). Because of the relatively small number of Native men and women born in each year, life-table survival rates are not necessarily accurate. Because Of this, we have not changed" our methodology based upon this criticism. We may decide to do so in the future, however, as additional data become available.

Procedure for Updating Base Case Assumptions

As mentioned in the report, the four categories of base case assumptions needed to make projections with the MAP statewide model are (1) national variables assumptions, (2) exogenous employment assumptions, (3) exogenous tourism assumptions and (4) state revenue and spending assumptions. Regional model projections also require regional exogenous employment assumptions. The first step in reviewing the base case assumptions was to compare our assumed

levels of employment, revenue, national variables, etc., with recent benchmarks, adjusting them as needed to conform to the actual values. Because of the relatively low sensitivity of model results to plausible changes in the four national variables assumptions, we did not review them further (see 0.S. Goldsmith et al., MAP Economic Modeling System Technical Documentation Report, Appendix J).

The remaining exogenous variables assumptions can be divided into two categories: (1) those whose values are principally determined by matters of policy and (2) those whose values are principally determined by market forces. We decided to review only the market-based projections, as there is really no way one can determine who is and who is not an expert in tie field of forecasting long-range state and national policy. Readers "may judge for themselves whether the outcomes of political debates implicit in the assumptions we have.. chosen are consistent with their own expectations. The policy variables in this category include employment in federal civilian and military government, agriculture, federal revenue sharing, and state spending policy. Table t of the report. summarizes our assumptions for these variables.

For the market-determined variables, we reviewed our assumptions for special projects with a large number of individuals "especially knowledgeable about these and similar projects. The names of these individuals providing information about special projects are documented in our scenario case files available at ISER. As a

result of this process, we derived a completely new set of assumptions for the base case used in this study. While the general direction of each project and industry assumption is consistent with information supplied by the reviewer, the specific assumptions were developed by staff of the Institute of Social and Economic Research.

In the past two years, a significant number of independent projections have been published for the overall level of activity in market-determined basic industries in the Alaska economy. Although the economists preparing these published projections make use of the same information as we have used in this report, many also have access to proprietary information that is not available to us. Of course, each of them may interpret the same information in different ways as well.

In Table E.1 we have prepared a summary analysis comparing nine recent, well-prepared forecasts of Alaska basic industry activity to the exogenous industry assumptions used in this report. There is still a substantial level of uncertainty (and thus disagreement among experts) about the future of a North Slope gas pipeline and the struggling pulp industry. However, one can see from the table that the various published forecasts are in reasonable agreement with each other as well as with our basic industry assumptions.

TABLE E.1. PUBLISHED ALASKA BASIC 1NDUSTR% FORECASTS

Basic Industry	Source	Forecast Relative to this Report, Table 1
Petroleum	1	median forecast is substantially lower than ours in 1990, but larger in 2000
	2	lower than ours in 1990; higher in 2000
	4	similar
	5	similar
	6, 7	similar short-term growth; no long-term projection
	8, 9	slower short-term growth; no Icing-term projection
North Slope Gas	1	50 percent probability of tidewater pipeline
	2	assumes gas pipeline constructed in early 1990s, with associated LNG and petro-chemical industries.
	4	no gas pipeline projected
	5	construction of pipeline will begin within "five to ten years"
Coal	1	their median forecast calls for much smaller employment than ours after 1990
	2	lower than ours after 1990
	5	similar
	6, 7	not separately reported
	8, 9	not separately reported
Hardrock Mining	1	similar
	2	similar
	4	similar
	5	similar
	6, 7	not separately reported
	8, 9	not separately reported
Commercial Fishing	1	similar; processing not distinguished from fishing
	5	similar; processing not distinguished from fishing

TABLE E.1 (continued)

Basic Industry	Source	Forecast Relative to this Report, Table 1
Seafood Processing	1	similar; processing not distinguished from fishing
	2	similar
	4	not separately reported
	5	similar; processing not distinguished from fishing
	6, 7	smaller short-term projection; no long-term projection
	8, 9	smaller short--term projection; no long-term projection
Logging and Lumber	1	smaller in 1990; similar in 2000.
	2	similar employment level in 1990; larger in 2000
	3	poor projected market conditions imply slower growth in employment
	5	poor projected short-term market conditions imply slower growth in employment
	6, 7	short-term employment decline; no long-term projection
	8, 9	similar
Pulp and Paper	1	not distinguished from lumber; see above
	2	projects gradually increasing employment; we project gradually decreasing employment
	3	projects greater decline in employment
	5	projects significant probability of permanent closure of one or both of Alaska's pulp mills
	6, 7	not distinguished from lumber; see above
	8, 9	not separately reported
Agriculture	1	projects slower growth
	2	much larger growth to 1990; similar employment levels in 2000
	4	slower growth
	8, 9	similar

SOURCES FOR TABLE E.1

1. A Delphi Forecast of Alaska's Development: the Year 2000 and Beyond, Alaska Pacfic University, June 1983, Chapter 5, "Alaska's Future Economy."

2. 1984 Long Term Energy Report, Alaska Department of Commerce and Economic Development, Office of Energy, Juneau, p. 3.

3. Joseph R. Mehrkens, Timber Supply and Demand 1984, draft, U.S. Department of Agriculture, Forest Service, Alaska Region, Juneau, March 1985.

4. Memorandum from Richard Soule, Regional Economist, Municipality of Anchorage to the Anchorage Economic Development Council, December 18, 1984.

5. Alaska Business Trends: 1985 Economic Forecast, Alaska Pacific Bancorporation, February 1985.

6. Annual Planning Information, Alaska Department of Labor, Research and Analysis Section, January 1984, pp. 33-34.

7. Ed Eboch, "Alaska's Economic Outlook," Alaska Economic Trends, Alaska Department of Labor, January 1985, 1-11.

8. John Van Houten, "Alaska Occupational- Employment Outlook," Alaska Economic Trends, Alaska Department of Labor, July 1984, 1-13.

9. "Alaska Occupational Employment Outlook," unpublished draft, Alaska Department of Labor, 1985.

TABLE E.1 (continued)

Basic Industry	Source	Forecast Relative to this Report, Table 1
Tourism	1	similar
	2	not separately reported
	4	not separately reported
	5	similar
	6, 7	similar
	8, 9	not separately reported
Federal Government	1	similar
	2	not separately reported
	4	similar
	5	similar short-term forecast; no long-term projection
	6, 7	similar short-term forecast for civilian employment; no projection for military
	8, 9	not separately reported

APPENDIX F

OCS OIL AND GAS EMPLOYMENT AND REVENUE ASSUMPTIONS

Appendix F includes documentation of oil and gas assumptions that are not included in Appendix D or the review of Appendix E. Tables F.1 and F.2 show the OCS petroleum development scenarios assumed for all the projections.

Table F.3 shows the derivation of property taxes projected for OCS-related petroleum facilities, assuming that only the oil production shown in Tables F.1 and F.2 is marketed. The resulting property taxes are shown in Table 6 in the main text, along with the statewide employment assumptions derived from the MMS manpower model. Table 9 shows the corresponding regional distribution of OCS employment for the oil-only case. These assumptions are associated with the projections discussed in the main body of the report.

Tables F.4 through F.7 are associated with the projections assuming both oil and gas resources are developed on the North Slope and the OCS. Projections using these assumptions are contained in Appendix G. Table F.4 contains property tax projections for all OCS development facilities, while Table F.5 shows employment projections derived from the MMS manpower model. Tables F.6 and F.7 contain Alaska state tax revenue and employment assumptions for a North Slope gas pipeline similar to the ANGTS project, assuming gas sales commence in 1994.

TABLE F.1. BERING SEA OIL AND GAS PRODUCTION AND ONSHORE FACILITY SCENARIO

	Oil Production		Gas Production		Depreciated Property ($MM)		
	MMBBLS		BCF		Terminals		Shorebase
	Annual	Cum.	Annual	Cum.	LNG	Oil	
1985							
1986							
1987							
1988							
1989							
1990							
1991							
1992							
1993							150
1994	11	11				950	150
1995	64	75			2600	944	149
1996	108	183	28	28	2600	912	144
1997	150	333	102	130	2589	858	135
1998	150	483	350	480	2551	783	124
1999	150	633	550	1030	2418	707	112
2000	150	783	550	1580	2210	632	100
2001	150	933	550	2130	2001	556	88
2002	150	1083	550	2680	1793	481	76
2003	143	1226	550	3230	1584	406	64
2004	136	1362	550	3780	1376	334	53
2005	122	1484	538	4318	1167	265	42
2006	106	1590	520	4838	963	204	32
2007	91	1681	478	5316	766	151	24
2008	73	1754	402	5718	585	105	17
2009	57	1811	330	6048	433	68	11
2010	41	1852	274	6322	308	40	6
2011	27	1879	203	6525	204	19	3
2012	11	1890	147	6672	127	6	1
2013			110	6782	71		
2014			56	6838	30		
2015			22	6860	8		
2016							
2017							
2018							
2019							
2020							
Cum.	1890		6860				

SOURCE: U.S. Department of the Interior, Minerals Management Service. Property values depreciated over schedule of oil production.

TABLE F.2. BEAUFORT SEA OIL AND GAS PRODUCTION AND ONSHORE FACILITY SCENARIO

	Oil Production (MMBBLS)		Gas Production (BCF)		Depreciated Property ($MM) -- Terminals		Shorebase
	Annual	Cum.	Annual	Cum.	LNG	Oil	
1985							
1986							
1987							
1988							
1989							
1990							
1991						250	50
1992						500	100
1993	26	26			250	750	100
1994	76	102			500	736	98
1995	106	208	180	180	750	697	93
1996	106	314	293	473	731	641	85
1997	106	420	305	778	699	585	78
1998	106	526	305	1083	667	530	71
1999	106	632	305	1388	634	474	63
2000	99	731	305	1693	601	419	56
2001	91	822	305	1998	568	367	49
2002	83	905	305	2303	536	319	43
2003	75	980	305	2608	503	275	37
2004	68	1048	305	2913	470	236	31
2005	62	1110	305	3218	438	200	27
2006	56	1166	305	3523	405	168	22
2007	51	1217	305	3828	372	138	18
2008	46	1263	305	4133	340	112	15
2009	40	1303	305	4438	307	88	12
2010	38	1341	305	4743	274	67	9
2011	32	1373	305	5048	241	47	6
2012	30	1403	305	5353	209	30	4
2013	27	1430	305	5658	176	14	2
2014			295	5953	143		
2015			275	6228	112		
2016			255	6483	82		
2017			215	6698	55		
2018			195	6893	32		
2019			102	6995	11		
2020							
Cum.	1430		6995				

SOURCE : U.S. Department of the Interior, Minerals Management Service
Property values depreciated over schedule of oil production.

TABLE F-3. ONSHORE PROPERTY VALUE AND TAXES FROM OCS DEVELOPMENT, OIL ONLY CASE

	Bering Property (1984$)	Bering Tax 0.02*C1	Beaufort Property (1984$)	Beaufort Tax 0.02*C3	Bering Tax (Nominal$)	Beaufort Tax (Nominal$)	Total Tax (Nominal$)
1985					0.000	0.000	0.000
1986					0.000	0.000	0.000
1987					0.000	0.000	0.000
1988					0.000	0.000	0.000
1989					0.000	0.000	0.000
1990					0.000	0.000	0.000
1991			-300.000	6.000	0.000	8.834	8.834
1992			600.000	12.000	0.000	18.870	18.870
1993	150.000	3.000	850.000	17.000	5.038	28.550	33. 589
1994	1100.000	22.000	834. 545	16.691	39.460	29. 938	69.398
1995	1093.598	21.872	789.371	15.787	41.898	30.243	72. 141
1996	1056.349	21.127	726.364	14.527	43.223	29.721	72.944
1997	993.492	19.870	663.357	13.267	43.415	28.989	72.404
1998	906.190	18.124	600.350	12.007	42.293	28.019	70.312
1999	818.889	16.378	537.343	10. 747	40.818	26.784	67.601
moo	731.587	14.632	474.336	9.487	38.946	25.251	64. 197
2001	644.286	12.886	415.490	8.310	36.631	23.622	60.253
2002	556.984	11.140	361.399	7.228	33.820	21.944	55. 765
2003	469.683	9.394	312.063	6.241	30.459	20.237	50.696
2004	386.455	7.729	267.483	5.350	26.766	18.526	45.291
2005	307.302	6.146	227.063	4.541	22.731	16.796	39.526
2006	236.296	4.726	190.210	3.804	18.667	15.026	33.6'33
2007	174.603	3.492	156.923	3.138	14.731	13.240	27.971
2008	121.640	2.433	126.608	2.532	10. 961	11.408	22.369
2009	79.153	1.583	99.266	1.985	7.617	9.553	17.170
2010	45.979	0.920	75.490	1.510	4.726	7.759	12.484
2011	22.116	0.442	52.902	1.058	2.428	5.807	8.235
2012	6.402	0.128	33.881	0.678	0.751	3.972	4.723
2013	0	0	16.049	0.321	0	2.009	2.009
2014							
2015							
2016							
2017							
2018							
2019							
2020							

SOURCE: Properly values from Table F.1 and F.2, excluding gas-related facilities. U.S. Consumer Price Index from Table F.4.

TABLE F-4. ONSHORE PROPERTY VALUE AND TAXES FROM OCS OIL AND GAS DEVELOPMENT

	Bering Property (1984$)	Bering Tax 0.02*C1	Beaufort Property (1984$)	Beaufort Tax 0.02%3	CPI growth rate	CPI Index	Bering Tax (Nominal$)	Beaufort Tax (Nominal$)	Total Tax (Nominal$)
1985					0.042	? .042	0.000	0.000	0.000
1986					0.046	1.090	0.000	0.000	0.000
1987					0.062	1.158	0.000	0.000	0.000
1988					0.062	1.229	0.000	0.000	0.000
1989					0.062	1.305	0.000	0.000	0.000
1990					0.062	1.386	0.000	0.000	0.000
1991			300	6.000	0.062	1.472	0.000	8.834	8.834
1992			600	12.000	0.068	1.573	0.000	18.870	18.870
1993	150	3.000	1100	22.000	0.068	1.679	5.038	36.948	41.986
1994	1100	22.000	1335	26.691	0.068	1.794	39.460	47.874	87.334
1995	3694	73.872	1539	30.787	0.068	1.916	141.510	58.977	200.486
1996	3656	73.127	1457	29.141	0.068	2.046	149.608	59.619	209.228
1997	3583	71.658	1363	27.253	0.068	2.185	156.571	59.547	216.118
1998	3457	69.138	1267	25.339	0.068	2.334	161.339	59.130	220.469
1999	3237	64.739	1171	23.424	0.068	2.492	161.347	58.380	219.726
2000	2941	58.824	1076	21.510	0.068	2662	156.574	57.255	213.828
2001	2645	52.909	984	19.679	0.068	2.843	150.406	55.943	206.349
2002	2350	46.994	897	17.943	0.068	3.036	142.675	54.477	197.152
2003	2054	41.079	815	16.303	0.068	3.242	133. 197	52.861	186.058
2004	1762	35.245	738	14.757	0.068	3.463	122.053	51.103	173.X6
2005	1475	29.493	665	13.295	0.068	3.698	109.078	49.170	158.248
2006	1200	23.995	595	11.904	0.068	3.950	94. 778	47.018	141.796
2007	941	18.819	529	10.584	0.068	4.219	79.389	44.648	124.038
2008	707	14. 137	466	9.323	0.068	4.505	63.691	42.006	105.697
2009	512	10.240	406	8.123	0.068	4.812	49.271	39.084	88.355
2010	354	7.075	350	6.993	0.068	5.139	36.357	35.937	72.293
2011	226	4.520	294	5.887	0.068	5.488	24.810	32.311	57.122
2012	133	2.667	243	4.853	0.068	5.862	15.635	28.445	44.080
2013			192		0.068	6.260			
2014			143		0.068	6.686			
2015			112		0.068	7.141			
2016			82		0.068	7.626			
2017			55		0.068	8.145			
2018			32		0.068	8.699			
2019			11		0.068	9.290			
2020					0.068	9.922			

SOURCE: Property values from Table F. 1 and F.2. Growth rate of U.S. Consumer Price Index from Table 1.

TABLE F.5. OCS DEVELOPMENT ASSUMPTIONS, OIL AND GAS CASE

(thousands of employees)
(millions of current $)

	High Wage Exogenous Construction Employment	Mining Employment	Exogenous Transportation Employment	State Property Tax Revenue
1984	0.000	0.000	0.000	0.000
1985	0.349	0.411	0.118	0.000
1986	0.564	0.632	0.177	0.000
1987	0.430	0.900	0.276	0.000
1988	0.215	0.910	0.275	0.000
1989	0.030	0.545	0.138	0.000
1990	0.225	0.924	0.174	0.000
1991	1.811	2.759	0.411	8.834
1992	2.634	5.569	0.620	18.870
1993	1.990	7.672	00863	41.986
1994	0.296	4.309	0.686	87.334
1995	0.196	4.227	0.940	200.486
1996	0.196	4.191	0.980	209.228
1997	0.196	'3.554	0.990	216.118
1998	0.196	3.574	0.990	220.469
1999	0.196	3.58-?	0.990	219.726
2000	0.196	3.587	0.990	213.828
2001	0.196	3.515	0.968	206.349
2002	0.196	3.445	0.946	197.152
2003	0.196	3.373	0.924	186.058
2004	0.196	3.302	0.902	173.156
2005	0.196	3.231	0.880	158.248
2006	0.185	3.047	0.825	141.796
2007	0.174	2.864	0.770	124.038
2008	0.162	2.681	0.715	105.697
2009	0.151	2.497	0.660	88.355
2010	0.140	2.313	0.605	72.293

SOURCE: MAP MODEL CASE OCS.C85
VARIABLES: EMCNX1 EMP9 EMT9X RPPS

TABLE F.5 (continued)

	Aleutian Islands	Anchorage	Barrow/ North Slope
1984	0.000	00000	0.000
1985	0.332	0.000	0.546
1986	0.498	00020	0.855
1987	0.798	0.020	0.788
1988	0.725	0.028	0.647
1989	0.358	0.040	0.285
1990	0.212	0.048	1.063
1991	1.853	0.060	3.068
1992	4.796	0.080	3.947
1993	6.050	0.100	4.375
1994	3.226	0.120	1.945
1995	3.634	0.120	1.609
1996	3.325	0.120	1.922
1997	2.681	0.120	1.939
1998	2.688	0.120	1.952
1999	2.701	0.120	1.952
2000	2.701	0.120	1.952
2001	2.657	0.116	1.906
2002	2.614	0.112	1.861
2003	20570	0.108	1.815
2004	20527	0.104	1.769
2005	2.483	0.100	1.724
2006	2.294	0.096	1.667
2007	2.105	0.092	1.611
2008	1.916	0.088	1.554
2009	1.727	0.084	1.497
2010	1.538	0.080	1.440

SOURCE: MAP MODEL. CASE OCS.C85
VARIABLES: B01 802 B04

TABLE F.6. NORTH SLOPE GAS PIPELINE

(millions of employees)
(millions of current $)

	High Wage Exogenous Construction Employment	Mining Employment	Exogenous Transportation Employment	State Property Tax Revenue	State Corporate Petroleum Tax Revenue
1984	0.000	0.000	0.000	0.000	0.000
1985	0.000	0.000	0.000	0.000	0.4300
1986	0.000	0.000	63.000	0.000	0.000
1987	0.217	0.000	0.000	0.000	0.000
1988	0.217	0.000	0.000	0.000	0.000
1989	0.563	0.000	0.000	1.625	0.000
1990	2.435	0.000	0.000	10.356	0.000
1991	7.103	0.000	0.000	25.662	0.000
1992	10.589	0.160	0.000	97.884	0.000
1993	6.074	0.200	0.119	194.444	0.000
1994	0.468	0.200	0.119	267.957	138.444
1995	0.000	0.200	0.119	298e102	133.550
1996	0.000	0.200	0.119	287.809	127.349
1997	0.000	0.200	0.119	293.779	119.688
1998	0.000	0.200	0.119	299.231	113.301
1999	0.000	0.200	0.119	304.065	105.492
2000	0.000	0.200	0.119	308.173	99.411
2001	0.000	0.200	0.119	311.434	92.014
2002	0.000	0.200	0.119	313.713	86.932
2003	0.000	0.200	0.119	318.898	80.734
2004	0.000	0.200	0.119	319.028	73.290
2005	0.000	0.200	0.119	317.700	69.065
2006	0.000	0.200	0.119	314.716	63.927
2007	0.000	0.200	0.119	309.858	57.770
2008	0.000	0.200	0.119	3020883	50.481
2009	0.000	0.200	0.119	293.527	47.923
2010	0.000	0.200	0.119	281.499	38.386

SOURCE: MAP MODEL CASE NWG.MG3
VARIABLES: EMCNX1 EMP9 EMT9X RPPS RTCSPX

TABLE F.6 (continued]

	Barrow/ North Slope	Fairbanks	Southeast Fairbanks	Yukon/ Koyukuk
1984	0.000	0.000	0.000	0.000
1985	0.000	0.000	0.000	00000
1986	0.000	0.000	0.000	0.000
1987	0.046	0.069	0.037	0.065
1988	0.046	0.069	0:037	0.065
1989	0.209	0.225	0 .047	0.082
1990	0.787	0.741	0.330	0.577
1991	2.207	1.637	1.185	2.074
1992	2.997	2.062	2.069	3.621
1993	1.663	1.491	1.191	2. 048
1994	0.331	0.145	0.126	. 0.185
1995	0.228	0.008	00043	0.040
1996	0.228	0.008	0.043	0.040
1997	0.228	0.008	0.043	0.040
1998	0.228	0.008	0.043	0.040
1999	0.228	0.008	0.043	0.040
2000	0.228	0.008	0. 043	0.040
2001	0.228	0.008	0.043	0.040 . . .
2002	0.228	0.008	0.043	0.040
2003	0.228	0.008	0.043	0.040
2004	0.228	0.008	0.043	0.040
2005	0.228	00008	0.043	0.040
2006	0.228	0.008	0.043	0.040
2007	0.228	0.008	0.043	0.040
2008	0.228	0.008	0.043	0 . 040
2009	0.228	0.008	0.043	0.040
2010	0.228	0.008	0.043	0.040

SOURCE: MAP MODEL CASE NWG . MG3
VARIABLES: B04 809 B24 825

APPENDIX G

MAP MODEL STATEWIDE PROJECTIONS INCLUDING NORTH SLOPE AND OCS GAS DEVELOPMENT

TABLE G.1. EXOGENOUS EMPLOYMENT ASSUMPTIONS FOR MAP STATEWIDE MODEL

OIL ANO GAS CASE

(thousands of employees)

	Agricultural Employment	Mining Employment	High Wage Exogenous Construction Employment	Low Wage Exogenous Construction Employment	Exogenous Transportation Employment
1984	0.385	9.258	2.215	0.242	-1.000
1985	0.400	10.464	2.595	0.218	1.116
1986	0.416	11.413	3.444	0.644	1.175
1987	0.435	12.880	1.933	1.630	1.274
1988	0.454	12.197	0.861	1.391	1.293
1989	0.475	12.788	1.052	0.890	1.136
1990	0.496	13.321	3.149	1.025	1.172
1991	0.520	15.038	9.344	1.130	1.409
1992	0.544	18.166	13.653	1.290	1.618
1993	0.573	20.006	8.143	0.571	1.980
1994	0.601	16.790	0.843	0.100	1.856
1995	0.633	16.800	0.275	0.000	2.162
1996	0.668	16.594	0.196	0. 000	2.202
1997	0.704	15.859	0.196	0.000	2.212
1998	0.744	15.663	0.196	0.000	2.212
1999	0.788	15.493	0.196	0.000	2.212
2000	0.834	15.491	0.196	0.000	2.212
2001	0.866	15.278	0.196	0.000	2.190
2002	0.899	14.453	0.196	0.000	2.168
2003	0.935	14.381	0.196	0.000	2.146
2004	0.971	13.799	0.196	0 .000	2.124
2005	1.008	13.738	0.196	0.000	2.102
2006	1.047	13.555	0.185	0.000	2.047
2007	1.089	12.758	0.174	0.000	1.992
2008	1.132	12.587	0.162	0.000	1.937
2009	1.176	12.405	0.151	0.000	1.882
2010	1.223	12.223	0.140	0.000	1.827

SOURCE: MAP MODEL INPUT SCENARIO S85.B4--CREATED FEBRUARY 1985

TABLE G.1 (continued)

	High Wage Exogenous Manufacturing Employment	Low Wage Exogenous Manufacturing Employment	Fish Harvesting Employment	Active Duty Military	Civilian Federal Employment
1984	00000	10.802	7.581	22.038	17.818
1985	0.000	11.129	7.608	21.818	17.907
1986	0.000	11.330	7.636	24.200	17.996
1987	0.000	11.536	7.664	23.984	18.086
1988	0.000	11.652	7.681	23.770	18.177
1989	0.000	11.724	7.716	23.558	18.268
1990	0.000	11.785	7.729	230349	18.359
1991	0.000	11.805	7.745	23.141	18.451
1992	0.000	11.817	7.766	22.936	18.543
1993	0.000	11.837	7.792	22.732	18.636
1994	0.000	11.868	7.826	22.531	18.729
1995	0.000	11.914	7.868	22.332	18.823
1996	0.000	11.979	7.921	22.134	18.917
1997	0.000	12.072	7.988	21.939	19.011
1998	0.000	12.203	8.072	21.746	19.106
1999	0.000	12.386	8.178	21.554	19.202
2000	0.000	12.618	8.233	21 .365	19.298
2001	0.000	12.564	8.233	21.177	19.394
2002	0.000	12.533	8.233	20.991	19.491
2003	0.000	12.502	8.233	20.807	19.589
2004	00000	12.471	8.233	20.625	19.687
2005	0.000	12.440	8.233	20.445	19.785
2006	0.000	12.313	8.233	20.266	19.884
2007	0.000	12.126	8.233	20.090	19.984
2008	0.000	12.118	8.233	19.915	20.083
2009	0.000	12.111	8.233	19.742	20.184
2070	0.000	12.104	8.233	19.570	20.285

SOURCE: MAP MODEL INPUT SCENARIO S85.B4--CREATED FEBRUARY 1985

TABLE G.2. EXOGENOUS REVENUE ASSUMPTIONS FOR MAP STATEWIDE MODEL OIL AND GAS CASE

(millions of current dollar-s)

	State Production Tax Revenue	State Royalty Income	State Bonus Payment Revenue	State Property Tax Revenue	State Corporate Petroleum Tax Revenue
1984	1392.400	1396.700	20.200	131.000	265.100
1985	1350.000	1390.000	17.600	121.000	250. 000
1986	1350.000	1460.000	0.000	148.000	275.000
1987	1350.000	1460.000	0.000	183.000	300.000
1988	1100.000	1460.000	0.000	204.000	285.000
1989	1060.000	1500.000	0 . 000	221.625	295.000
1990	1050.000	1480.000	0.000	230.356	305.000
1991	970.000	1440.000	0.000	254.496	300.000
1992	940.000	1460.000	0.000	340.754	290.000
1993	950.000	7470.000	0.000	464.430	285.000
1994	870.000	1430.000	0.000	582.291	413.444
1995	830.000	1400.000	0.000	727.588	393.550
1996	790.000	1360.000	0.000	735.037	377.349
1997	740.000	1300.000	0.000	749.897	359.688
1998	680.000	1270.000	0.000	759.700	333.301
1999	600.000	1190.000	0.000	763.791	315.492
2000	540.000	1170.000	0.000	762.0(31	294.413
2001	600.000	1260.000	0.000	757.783	287.014
2002	600.000	1260.000	0.000	750.865	281.932
2003	600.000	1260.000	0.000	744.956	275.734
2004	600.000	1260.000	0 . 000	732.184	268.290
2005	6000000	1260.000	0.000	715.948	264.065
2006	600.000	1260.000	0.000	696.512	258.927
2007	600.000	1260.000	0.000	673.896	252.770
2008	600.000	1260.000	0.000	648.580	245.481
2009	600.000	1260.000	0.000	621.882	242.923
2010	600.000	1260.000	0.000	593.792	233.386

SOURCE: MAP MODEL INPUT SCENARIO S85.B4--CREATED FEBRUARY 1985

TABLE G.3. EXOGENOUS TOURISM ASSUMPTIONS FOR MAP STATEWIDE MODEL OIL AND GAS CASE

(thousands of tourists)

	Tourists Visiting Alaska
1984	560.000
1985	590.000
1986	620.000
1987	650.000
1988	680.000
1989	710.000
1990	740.000
1991	770.000
1992	800.000
1993	830.000
1994	860.000
1995	890.000
1996	920.000
1997	950.000
1998	980.000
1999	1010.000
2000	1040.000
2001	1070.000
2002	1100.000
2003	1130.000
2004	1160.000
2005	190.000
2006	220.000
2007	250.000
2008	280.000
2009	310.000
2010	340.000

SOURCE: MAP MODEL INPUT SCENARIO S85.B4--CREATED FEBRUARY 1985

TABLE G.4. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: OIL AND GAS CASE

SUMMARY

	Total Population (000)	Total Employment (000)	Per Capita Government Revenues (1984 $)	Per Capita General Fund Expenditures (1984 $)	Per Capita Combined Funds Balance (1984 $)
1984	537.998	264.045	6539.836	7139.789	14013.830
1985	556.429	270.371	5988.012	6938.309	13762.220
1986	569.766	280.110	5801.277	5920.137	13938.390
1987	570.804	279.879	5684.148	5657.281	14483.280
1988	569.880	277.261	5086.086	5948.660	14153.330
1989	566.116	272.270	4867.309	5288.945	14387.640
1990	569.415	275.672	4605.645	4737.898	- 15213.140
1991	584.591	291.051	5097.023	4952.793	15394.610
1992	604.137	309.177	5007.875	4916.738	14680.510
1993	612.652	313.276	4977.293	4943.145	14855.830
1994	605.795	300.620	5007.887	4983.949	15332.990
1995	605.733	296.759	4895.770	4882.457	15596.630
1996	607.291	296.038	4692.453	4685.926	15795.920
1997	608.868	295.891	4489.117	4484.441	15958.810
1998	611.119	296.704	4297.477	4292.563	16079.370
1999	614.155	298.413	4081.494	4081.829	16142.620
2000	618.580	301.384	3915.829	3906.403	16163.380
2001	628.269	309.237	4598.031	4437.480	15488.130
2002	637.066	314.523	4435.453	4418.207	14726.090
2003	647.190	320.218	4262.250	4254.730	13963.960
2004	656.155	324.021	4101.496	4(395.690	13264.640
2005	665.183	327.678	3948.852	3937.511	12604.790
2006	674.052	331.190	3807.555	3795.067	1982.940
2007	682.105	333.970	3676.987	3664.297	1466.530
2008	691.059	337.801	3549.880	3533.681	0848.020
2009	700.972	342.590	3432.209	3413.278	0307.930
2010	712.046	348.284	3317.581	3304.504	9775.640

SOURCE: MAP MODEL SIMULATION S85.B4--CREATED FEBRUARY 1985
VARIABLES: POP, EM99, PCREV, DFP.EXGF, AND DFP.BAL9

TABLE G.5. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: OIL AND GAS CASE

POPULATION AND COMPONENTS OF CHANGE

(thousands)

	Total Population	Change in Population	Net Migration	Natural Increase
1984	537.998		18.850	9.168
1985	556.429	18.431	9.264	9.605
1986	569.766	13.337	-1.404	9.797
1987	5700804	1.038	-8.238	9.702
1988	569.880	-0.924	-9.939	9.445
1989	566.116	-3.764	-12.534	9.169
1990	569.415	3.300	-5.161	8.843
1991	584.591	15.176	6.845	8.750
1992	604.137	19.546	10.970	8.996
1993	612.652	8.515	-0.405	9.339
1994	605.795	-6.857	-15.824	9.351
1995	605.733	-0.063	-8.680	8.956
1996	607.291	1.558	-6.903	8.811
1997	608.868	1.578	-6. 787	8.716
1998	611.119	2.251	-6.035	8.630
1999	614.155	3.036	-5.200	8.574
2000	618.580	4.425	-3.7'74	8.546
2001	628.269	9.689	1.485	8.561
2002	637.066	8.797	0.436	8.724
2003	647.190	10.123	1.633	8.847
2004	656.155	8.966	0.297	9.004
2005	665.183	9.028	0.239	9.120
2006	674.052	8.869	-00044	9.238
2007	682.105	8.053	-0.974	9.348
2008	691.059	8.954	-0.166	9.435
2009	700.972	9.912	0.675	9.548
2010	712.046	11.075	1.696	9.686

NOTE: TOTALS MAY NOT ADD DUE TO ROUNDING

SOURCE: MAP MODEL SIMULATION S85.B4--CREATED FEBRUARY 1985
VARIABLES: POP, DELPOP, POPMIG, AND POPNI9

TABLE G.6. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: OIL AND GAS CASE

EMPLOYMENT

(thousands)

	Basic Sector Employment	Services Sector Employment	Government Sector Employment	Total Wage and Salary Employment	Total Employment
1984	64.738	113.159	86.148	242.254	264.045
1985	67.430	116.722	86.220	248.040	270.371
1986	69.419	120.994	89.697	256.949	280.110
1987	68.931	123.002	88.047	256.712	279.879
1988	66.502	121.973	88*786	254.297	277.261
1989	67.204	122.270	82.796	249.686	272.270
1990	69.749	123.077	82.846	252.796	275.672
1991	78.552	126.626	85.874	266.873	2910051
1992	89.050	133.696	86.431	283.423	309.177
1993	86.641	139.575	87.060	287.142	313.276
1994	73.837	139.809	86.974	275.553	3000620
1995	71.316	139.193	86.250	271.986	296.759
1996	70.288	140.671	85.079	271.279	296.03S
1997	69.602	142.517	83.773	271.086	295.891-
1998	69.622	144.422	82.659	273.755	296.704
1999	69.852	147.041	81.520	273.224	298.413
2000	70.404	150.158	80.821	275.891	3010384
2001	71.029	154.230	83.978	283.065	309.237
2002	71.522	159.210	83.791	287.889	314.523
2003	72.727	164.053	83.437	293.083	320.218
2004	72.056	168'.906	83.058	296.549	324.021
2005	71.834	173.385	82.459	299.801	327.678
2006	71.827	177.790	81.572	303.078	331.190
2007	71.167	182.073	80.730	305.609	333.970
2008	71.458	186.292	80.050	309.094	337.801
2009	72.028	191.029	79.533	313.449	342.590
2010	73.159	196.240	78.886	318.624	348.284

SOURCE: MAP MODEL SIMULATION S85.B4--CREATED FEBRUARY 1985
VARIABLES: EMNS, EMSP, EMG9, EM98, AND EM99

TABLE G.7. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: OIL AND GAS CASE

REAL PERSONAL. INCOME

	Personal Income (millions of 1984 $)	Per Capita Personal Income (1984 $)
1984	8354.207	15528.320
1985	8563.348	15389.830
1986	8843.832	15521.860
1987	8853.301	15510.220
1988	8932.512	15674.380
1989	8947.109	15804.380
1990	8927.074	15677.610
1991	9494.190	16240.730
1992	10035.050	16610.550
1993	10372.420	16930.350
1994	10149.170	16753.460
1995	10232.050	16892.020
1996	0389.770	17108.400
1997	0544.840	17318.740
1998	0741.120	17576.150
1999	0971.040	17863.640
2000	1249.680	18186.300
2001	11691.950	18609.770
2002	12035.400	18891.900
2003	12427.650	19202.480
2004	12730.770	19402.060
2005	13061.280	19635.620
2006	13407.350	19890.680
2007	13712.620	20103.380
2008	14082.750	20378.490
2009	14491.030	20672.770
2010	14943.720	20987.000

SOURCE: MAP MODEL SIMULATION S85.B4--CREATED FEBRUARY 1985
VARIABLES: DF.PI AND DFP.PI

TABLE G.8. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: OIL AND GAS CASE

REAL WAGE RATES

(1984 dollars)

	Basic Sector	Services Sector	Government Sector
1984	39390.160	22606.080	27795.090
1985	38720.770	22120.230	28111.340
1986	38212.190	21567.120	28242.390
1987	36507.020	21033.190	28538.600
1988	36402.050	21272.680	28917.130
1989	37414.640	21475.960	29001.220
1990	39513.800	21705.660	29396.740
1991	43679.430	21969.520	29934.756
1992	46453.370	22180.730	29771.600
1993	45537.890	22363.090	30175.940
1994	42350.360	22532.640	30555.900
1995	42847.200	22837.580	30938.570
1996	43599.140	23070.750	31439.560"
1997	44239.680	23302.910	32023.790
1998	45059.860	23541.350	32624.140
1999	45878.320	23775.920	33241.290
2000	46757.780	24011.500	33881.220
2001	47686.370	24250.580	34658.140
2002	48376.660	24467.020	35305.340
2003	49418.190	24700.020	35952.970
2004	50165.790	24925.420	36615.670
2005	51187.130	25165.680	37353.540
2006	52227.940	25405.670	38292.600
2007	52951.500	25646.670	39265.600
2008	53962.730	25899.430	40270.740
2009	54994.500	26150.630	41307.210
2010	56069.720	26404.070	42381.870

SOURCE: MAP MODEL SIMULATION S85.B4--CREATED FEBRUARY 1985
VARIABLES: DF.WRNS, DF.WRSP, AND DF.WRG9

TABLE G.9. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: OIL AND GAS CASE

STATE GOVERNMENT REVENUES

(millions of 1984 dollars)

	Petroleum Revenues	Federal Grants	Interest Earnings	Other Revenues	Total Revenues
1984	3284.178	197.912	152.700	251.071	3518.420
1985	3109.379	'202.801	121.801	252.119	3331.905
1986	3103.646	207.846	91.534	25-7.169	3305.374
1987	3006.615	212.877	102.868	259.832	3244.537
1988	2647.687	217.801	98.918	255.036	2898.460
1989	2539.929	222.956	55.708	250.31 8	2755.462
1990	2407.101	228.318	34.358	247.103	2622.525
1991	2217.863	234.022	398 * 309	429.922	2979.677
1992	2053.617	229. 538	421.055	597.193	3025.445
1993	2032.058	235.281	434.497	634.532	3049.350
1994	1996.701	240.829	444.056	616.443	3033.755
1995	1924.134	246.437	451.814	589.626	2965.529
1996	1778.901	252.436	458.624	588.365	2849.684
1997	1626.379	258.635	464.258	591.365	2733.283
1998	1488.287	265.019	469.013	595.979	2626.271
1999	1330.350	271.638	473.081	602 .608	2506.669
2000	1215:692	278.484	476.253	633.262	2422.254
2001	1208.143	285.590	932.692	624.556	2888.804
2002	1140.106	292.958	906.899	639.443	2825.679
2003	1075.935	300.541	874.263	653.477	2758.487
2004	1012.678	308.355	842.190	666.159	2691.220
2005	953.062	316.386	811.052	677.202	2626.708
2006	896.047	3240661	781.282	688 .805	2566.490
2007	840.947	333.185	752.596	699 .243	2508.091
2008	788.186	341.972	724.919	709.902	2453.178
2009	739.692	3510069	698.492	722.683	2405.882
2010	692.169	360.486	673.226	737.021	2362.272

SOURCE: MAP MODEL SIMULATION S85.B4--CREATED FEBRUARY 1985
VARIABLES: DF.RP9S, DF.RSFD, DF.RSIN, DF.RSEN, AND DF.RSGF

TABLE G.10. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: OIL AND GAS CASE

STATE GOVERNMENT EXPENDITURES

	Total (millions of 1984 $)	Per Capita (1984 $)
1984	3841.194	7139.789
1985	3860.677	6938.309
1986	3373.095	5920.137
1987	3229.202	5657.281
1988	3390.023	5948 .660
1989	2994.156	5288.945
1990	2686.444	4717.898
1991	2895.361	4952.793
1992	2970.386	4%16.738.
1993	3027.206	4941.145
1994	3019.255	4$83.949
1995	2957.466	4882.457
1996	2845.721	46435.926
1997	2730.437	4484.441
1998	2623.269	4292.563
1999	2506.875	40431.829
2000	2416.424	3906.403
2001	2787.936	4437.480
2002	2814.692"	4418.207
2003	2753.620	4254.730
2004	2687.409	4095 .690
2005	2619.166	35'37o511
2006	2558.072	3795.067
2007	2499.436	3664.297
2008	2441.984	3533.681
2009	2392.612	3473.278
2010	2352.960	33104.504

SOURCE: MAP MODEL SIMULATION S85.B4--CREATED FEBRUARY 1985
VARIABLES: DF.EXGF AND DFP.EXGF

TABLE G.11. STATEWIDE PROJECTIONS INCLUDING OCS DEVELOPMENT: OIL AND GAS CASE

COMBINED FUNDS BALANCE

	Total (millions of 1984 $)	Per Capita (1984 $)
1984	7539.414	14013.830
1985	7657.699	13762.220
1986	7941.629	13938.390
1987	8267.117	14483.280
1988	8065.699	14153.330
1989	8145.070	14387.640
1990	8662.594	15213.140
1991	899'3.555	15394.610
1992	8869.043	14680.510
1993	9101.460	14$55.830-
1994	9288.660	15332.990
1995	9447.390	15596.630
1996	9592.720	15795.920
1997	9716.820	15958.810
1998	9826.410	16079.370
1999	9914.070	16142.620
2000	9998.340	16163.380
2001	9730.720	15488.130
2002	9381.500	14726.090
2003	9037.340	13963.960
2004	8703.664	13264.640
2005	8384.492	12604.790
2006	8077.121	11982.940
2007	7780.453	11406.530
2008	7496.625	10848.020
2009	7225.566	10307.930
2010	6960.715	9775.640

SOURCE: MAP MODEL SIMULATION S85.B4--CREATED FEBRUARY 1985
VARIABLES: DF.BAL99 AND DFP.BAL9

TABLE G.12. STATEWIDE PROJECTIONS MITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

TOTAL POPULATION

(thousands)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	537.998	537.998	00000	0.000
1985	555.148	556.429	1.281	0.231
1986	567.253	569.766	2.513	0.443
1987	567.363	570.804	3.441	0.606
1988	565.952	569.880	3.928	0.694
1989	562.810	566.116	3.306	0.587
1990	565.236	569.415	4.179	0.739
1991	574.626	584.591	9.965	1.734
1992	585.734	604.137	18.403	3.142
1993	586.592	612.652	26.060	4.443
1994	581.395	605.795	240401	4.197
1995	579.358	605.733	%?6.375	4.552
1996	578.911	607.291	28.380	4.902
1997	579.793	608.868	29.075	5.015
1998	581.360	611.119	29.759	5.119
1999	583.712	614.155	30.443	5.215
2000	587.642	618.580	30.938	5.265
2001	597.096	628.269	31.173	5.221
2002	605.785	637.066	31.282	5.164
2003	615.914	647.190	31.276	5.078
2004	625.119	656.155	31.036	4.965
2005	634.548	665.183	30.635	4.828
2006	643.984	674.052	30.068	4.669
2007	652.712	682.105	29.393	4.503
2008	662.422	691.059	28.637	4.323
2009	673.198	700.972	27.774	4.126
2010	685.189	712.046	26.857	3.920

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B4--CREATED FEBRUARY 1985
VARIABLE: POP

TABLE G.13. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

BASIC SECTOR EMPLOYMENT

(thousands)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	64.738	64.738	0.000	0.000
1985	66.528	67.430	0.902	1.356
1986	67.957	69.419	1.463	2.153
1987	67.165	680831	1.665	2.480
1988	65.024	66.502	1.478	2.273
1989	66.406	670204	0.798	1.201
1990	68.276	69.749	1.473	2.158
1991	73.025	78.552	5.526	7.568
1992	78.985	89.050	10.065	12.742
1993	74.435	86.641	12.207	16.399
1994	67.204	73.837	6.633	9.870
1995	64.886	71.316	6.429	9.909
1996	63.872	70.288	6.416	10.045
1997	63.887	690602	5.714	8.944
1998	63.931	69 .622	5.691	8.901
1999	64.156	69.852	5.696	8.878
2000	64.'714	70.404	5.690	8.793
2001	65.416	71.029	5.613	8.581
2002	65.929	71.522	5.593	8.483
2003	67.162	72.727	5.565	8.286
2004	66.637	72.056	5.419	8.132
2005	66.557	71..834	5.277	7.928
2006	66.787	71.829	5.040	7.547
2007	66.373	71.167	4.794	7.223
2008	66.913	71.458	4.545	6.792
2009	67.770	7'2.028	4.258	6.283
2010	69.170	73.159	3.988	5.766

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B4--CREATED FEBRUARY 1985
VARIABLE: EMNS

TABLE G.14. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

SERVICES SECTOR EMPLOYMENT

(thousands)

	Without OCS Development	Including Ocs Development	Difference	Percent Difference
1984	113.159	113.159	0.000	0.000
1985	116.391	116.722	0.331	0.284
1986	120.128	120.994	0.865	0.720
1987	121.687	123.002	1.315	1.081
1988	120.470	121.973	1.503	1.248
1989	120.948	122.270	1.322	1.093
1990	121.760	123.077	1.316	1.081
1991	123.953	126.626	2.673	2.157
1992	128.281	133.696	5.415	4.221
1993	131.195	139.575	80380	6.387
1994	130.743	139.809	9.066	6.934
1995	130.456	139.193	—8.737	6.697
1996	131.490	140.671	9.181	6.982
1997	133.260	142.517	9.257	6.946
1998	135.478	144.422	8.945	6.602
1999	138.095	147.041	8.946	6.478
2000	141.175	150.158	8.983	6.363
2001	145.260	154.230	8.971	6.176
2002	150.218	159.210	8.992	5.986
2003	155.013	164.053	9.041	5.832
2004	159.835	1680906	9.072	5.676
2005	164.325	173.385	9.061	5.514
2006	168.811	177.790	8.979	5.319
2007	1'?3.231	182.073	80842	5.104
2008	177.621	186.292	8.671	4.8%2
2009	182.561	191.029	8.469	4.639
2010	188.005	196.240	8.235	4.380

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B4--CREATED FEBRUARY 1985
VARIABLE: EMSP

TABLE G.15. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

GOVERNMENT EMPLOYMENT

(thousands)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	86.148	86.148	0.000	0.000
1985	86.201	86.220	0.019	0.022
1986	89.624	89.697	0.073	0.082
1987	87.925	88.047	0.121	0.138
1988	88.516	88.786	0.270	0.304
1989	82.684	82.796	0.113	0.136
1990	82.756	82.846	0.090	0.108
1991	85.578	85.874	0.295	0.345
1992	85.744	86.431	0.687	0.801
1993	85.870	870060	1.190	1.386
1994	85.480	86.974	1.494	1.748
1995	84.266	86.250	1.984	2.354
1996	83.125	85.079	1.954	2.351
1997	81.927	83.773	1.846	2.253
1998	80.916	82.659	1.744	2.155
1999	79.880	81.520	1.640	2.053
2000	79.291	80.821	1.531	1.930
2001	82.515	83.978	1.462	1.772
2002	82.391	83.791	1.400	1.700
2003	82.105	83.437	1.332	1.622
2004	81.839	83.058	1.219	1.490
2005	81.380	82.459	1.078	1.325
2006	80.581	81.572	0.992	1.231
2007	79.824	80.730	0.906	1.134
2008	79.224	80.050	0.826	1.043
2009	78.777	79.533	0.755	0.959
2010	78.176	78.886	0.709	0.907

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B4--CREATED FEBRUARY 1985
VARIABLE: EMG9

TABLE G.16. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

TOTAL EMPLOYMENT

(thousands)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	264.045	264.045	0.000	0.000
1985	269.119	270.371	1.252	0.465
1986	277.709	280.110	2.401	0.865
1987	276.778	279.879	3.102	1.121
1988	274.010	277.261	3.251	1.186
1989	270.038	272.270	2.232	0.827
1990	272.793	275.672	2.879	1.055
1991	282.556	291.051	8.495	3.006
1992	293.011	309.177	16.166	5.517
1993	291.500	313.276	21.7-71	7.471
1994	283.427	300.620	17.193	6.066
1995	279.609	296.759	17.150	6.134
1996	278.487	296.038	17.551	6.302
1997	279.074	295.891	16.817	6.026
1998	280.325	296.704	16.379	5.843
1999	282.132	298.413	16.281	5.771
2000	285.180	301.384	16.204	5.682
2001	293.191	3090237	16.046	5.473
2002	298.538	314.523	15.985	5.354
2003	304.281	320.218	15.937	5.238
2004	308.311	324.021	15.710	5.095
2005	312.262	327.678	15.416	4.937
2006	316.179	331.190	15.011	4.748
2007	319.428	333.970	14.542	4.552
2008	323.759	337.801	14.042	4.337
2009	329.108	342.590	13.482	4.097
2010	335.352	348.284	12.932	3.856

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B4--CREATED FEBRUARY 1985
VARIABLE: EM99

TABLE G.17. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

REAL PERSONAL INCOME

(millions of 1984 $)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	8354.207	8354.207	0.000	0.000
1985	8522.762	8563.348	40.586	0.476
1986	8772.629	8843.832	71.203	0.812
1987	8760.340	8853.301	92.961	1.061
1988	8831.250	8932.512	101.262	1.147
1989	8876.344	8947.109	70.766	0.797
1990	8828.645	8927.074	98.430	1.115
1991	9210.770	9494.190	2830426	3.077
1992	9486.770	10035.050	548 .289	5.780
1993	9611.820	10372.420	760.598	7.913
1994	9570.050	10149.170	579.121	6.051
1995	9624.290	10232.050	-6'07.762	6.315
1996	9755.580	10389.770	634.195	6.501
1997	9936.320	10544.840	608 . 520	6.124
1998	10134',090	10741.120	607.035	5.990
1999	10354.020	10971.040	6170023	5.959
2000	10622.960	11249.680	626.719	5.900
2001	11060.640	11691.950	631.309	5.708
2002	11394.980	12035.400	640.422	5.620
2003	11777.880	12427.650	649 .770	5.517
2004	12078.200	12730.770	652.566	5. 403
2005	12407.320	13061 .280	653.957	5.271
2006	12759.540	13407.350	647. 809	5.077
2007	13073.300	13712.620	639.320	4.890
2008	13453.630	14(382.750	629.321	4.676
2009	33875.470	14491 .030	615.56.3	4.436
2010	14341.730	14943.720	601 .992	4.197

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B4--CREATED FEBRUARY 1985
VARIABLE: DF.PI

TABLE G.18. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

REAL PER CAPITA PERSONAL INCOME

(1984 $)

	Without OCS Development	Including Ocs Development	Difference	Percent Difference
1984	15528.32	15528.32	0.00	0.00
1985	15352.24	15389.83	37.59	0.24
1986	15465.10	15521.86	56.75	0.37
1987	15440.44	15510.22	69.78	0.45
1988	15604.24	15674.38	70.14	0.45
1989	15771.48	15804.38	32.90	0.21
1990	15619.38	15677.61	58.23	0.37
1991	16029.13	16240.73	211.60	1.32
1992	16196.36	16610.55	414.19	2.56
1993	16385.88	16930.35	544.48	3.32
1994	16460.51	16753.46	292.95	1.78
1995	16612.00	16892.02	2%0.02	1.69
1996	16851.61	17108.40	256.79	1.52
1997	17137.70	17318.74	181.05	1.06
1998	17431.67	17576.15	144.48	0.83
1999	17738.24	17863.64.	125.40	0 . 7 ?
2000	18077.27	18186.30	109.03	0.60
2001	18524.04	18609.77	85.73	0.46
2002	1B810.27	18891.90	81.63	0.43
2003	19122.62	19202.48	79.86	0.42
2004	19321.43	19402.06	80063	0.42
2005	19553.00	19635.62	82.62	0.42
2006	19813.44	19890.68	77.23	0.39
2007	20029.19	20103.38	74.19	0.37
2008	20309.74	20378.49	68.75	0.34
2009	20611.29	20672.77	61.49	0.30
'2010	20931.05	20987.00	55.96	0.27

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B4--CREATED FEBRUARY 1985
VARIABLE: DFP.PI

TABLE G.19. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

BASIC SECTOR REAL WAGE RATE

(1984 $)

	Without OCS development	Including OCS Development	Difference	Percent Difference
1984	39390.16	39390.16	0.00	0.00
1985	38403.80	38720.77	316.96	0.83
1986	37755.16	38212.19	457.03	1.21
1987	36068.21	36507.02	438.81	1.22
1988	36033.48	36402.05	368.57	1.02
1989	37277.07	37414.64	137.57	0.37
1990	39177.92	39513.80	335.88	0.86
1991	42431.59	43679.43	1247.83	2.94
1992	44828.24	46453.37	1625.13	3.63
1993	43337.37	45537.89	2200.52	5.08
1994	40853.26	42350.36	1497.10	3.66
1995	41259.01	42847.20	1588.20	3.85
1996	41897.64	43599.14	1701.50	4.06
1997	42679.99	44239.68	1559.70	3.65
1998	43407.76	45059.86	1652.10	3.81
1999	44136.20	45878.32	1742.12	3.95
2000	44945.35	46757.78	1812.43	4.03
2001	45829.41	47686.37	1856.95	4.05
2002	46447.36	48376.66	1929.30	4.15
2003	47485.64	49418.19	1932.55	4.07
2004	48126.44	50165.79	2039.35	4.24
2005	49086,62	51187.13	2100.52	4.28
2006	50160.99	52227.94	2066.95	4.12
2007	50864.61	52951.50	2086.89	4.10
2008	51935.34	53962.73	2027.38	3.90
2009	53047.91	54994.50	1946.60	3.67
2010	54233.16	56069.72	1836.55	3.39

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND. S85.B4--CREATED FEBRUARY 1985
VARIABLE: DF.WRNS

TABLE G.20. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

SERVICES SECTOR REAL WAGE RATE

(1984 $)

	Without OCS Development	Including OCS Development	"Difference	Percent Difference
1984	22606.0%	22606.08	0.00	0.00
1985	22107.34	22120.23	12.89	0.06
1986	21553.82	21567.12	13.30	0.06
1987	21014.34	21033.19	18.85	0.09
1988	21256.00	21272.68	16.68	0.08
1989	21474.32	21475.96	1.64	0.01
19!30	21694.45	21705.66	11.21	0.05
1991	21927.40	21969.52	42.11	0.19
1992	22131.55	22180.73	49.18	0.22
1993	22314.43	22363.09	48.66	0.22
1994	22535.94	22532.64	-3.29	-0.01
1995	22796.59	22837.58	-71.00	0.18
1996	23031.08	23070.75	39.67	0.17
1997	23265.09	23302.91	37.83	0.16
1998	23497.11	23541 .35	44.24	0.19
1999	23729.59	23775.92	46.33	0.20
2000	23963.98	24011.50	47.52	0.20
2001	24204.76	24250.58	45.82	0.19
2002	24421.33	24467.02	45.69	0.19
2003	24655.79	24700.02	44.22	0.18
2004	24882.41	24925.42	43.01	0.17
2005	25123.75	25165.68	41.94	0.17
2006	25368.43	25405.67	37.24	0.15
2007	25613.29	25646.67	33.39	0.13
2008	25870.14	25899.43	29.28	0.11
2009	26125.39	26150.63	25.23	0.10
2010	26382.50	26404.07	21.57	0.08

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B4--CREATED FEBRUARY 1985
VARIABLE: DF.WRSP

TABLE G.21. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

GOVERNMENT SECTOR REAL WAGE RATE

(1984 $)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	27795.09	27795.09	0.00	0.00
1985	28110.07	28111.34	1.27	0.00
1986	28238.33	28242.39	4.05	0.01
1987	28531.82	28538.60	6.79	0.02
1988	28903.80	28917.13	13.33	0.05
1989	28996.38	29001.22	4.84	0.02
1990	29392.91	29396.74	3.83	0.01
1991	'29922.0?	29934.75	12.68	0.04
1992	29744.18	29771.60	27.41	0.09
1993	30135.60	30175.94	40.34	0.13
1994	30508.25	30555.90	47.66	0.16
1995	30886.94	30938.57	51.63	0.17
1996	31391.51	31439.56	48.05	0.15
1997	31979.23	32023.79	44.56	0.14
1998	32585.32	32624.14	38.82	0.12
1999	33207.01	33241.29	34.28	0.10
2000	33851.82	33881.22	29.39	0.09
2001	34639..59	34658.14	18.55	0.05
2002	35294.16	35305.34	11.18	0.03
2003	35950.13	35952.97	2.84	0.01
2004	36616.53	36615.67	-0.86	-0. 00
2005	37352.57	37353.54	0.96	0.00
2006	38294.81	38292.60	-2.21	-0001
2007	39270.71	39255.60	-5.11	-0.01
2008	40278.49	40270.74	-7.75	-0.02
2009	41317.24	41307.21	-10.03	-0.02
2010	42394.36	42381.87	-12.49	-0. 03

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B4--CREATED FEBRUARY 1985
VARIABLE: DF.WRG9

TABLE G.22. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

TOTAL REAL STATE GOVERNMENT REVENUES

(millions of 1984 $)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	3518.420	3518.420	00000	0.000
1985	3331.486	3331.905	0.418	0.013
1986	3303.330	3305.374	2.043	0.062
1987	3240.989	3244.537	3.548	0.109
1988	2894.793	2898.460	3.667	0.127
1989	2753.567	2755.462	1.895	0.069
1990	2621.642	2622.525	0.883	0.034
1991	2962.652	2979.677	17.025	0.575
1992	2983.459	3025.445	41.986	1.407
1993	2976.363	3049.350	72.987	2.452
1994	2933.790	3033.755	99.965	-3.407
1995	2812.213	2965.529	153.316	5.452
1996	2696.828	2849.684	152.856	5.668
1997	2583.592	2733.283	149.691	5.794
1998	2481.873	2626.271	144.398	5.818
1999	2368.729	2506.669	137.940	5.823
2000	2292.277	2422.254	129.977	5.670
2001	2765.955	2888.804	122.850	4.441
2002	2710.905	2825.679	114.773	40234
2003	2651.818	2758.487	106.668	4.022
2004	2592.800	2691.220	98.420	3.796
2005	2536.760	2626.708	89.948	3.546
2006	2485.173	2566.490	81.317	3.272
2007	2435.290	2508.091	72.801	2.989
2008	2388.514	2453.178	64.664	2.707
2009	2348.656	2405.882	57.226	2.437
2010	2311.655	2362.272	50.617	2.190

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B4--CREATED FE8RUARY 1985
VARIABLE: DF.RSGF

TABLE G.23. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

REAL STATE GOVERNMENT GENERAL FUND EXPENDITURES

(millions of 1984 $)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	3841.194	3841.194	0.000	0.0.00
1985	3860.267	3860.677	0.409	0.011
1986	3371 .26'2	3373.095	1.833	0.054
1987	3225.863	3229.202	3.339	0.103
1988	3372.052	3390.023	17.971	0 .533
1989	2987.780	2994.156	6.377	0.213
1990	2685.354	2686.444	1.091	0.041
1991	2881.025	2895.361	14.336	0.498
1992	2932.848	2970.386	37.538	1.280
1993	2959.639	3027.206	67.567	2.283
1994	2924.197	3019.255	95.057	3.251
1995	2813.996	2957.466	143.470	5.098
1996	2694.161	2845.721	151.560	5.626
1997	2581.624	2730.437	148.813	5.764
1998	.2479.392	2623.269	143.876	5.803
1999	2369.160	2506.875	137.715	5.813
2000	2286.341	2416.424	130.083	5.690
2001	2665.051	2787.936	122.885	4.611
2002	2699.643	2814.692	115.049	4.262
2003	2646.189	2753.620	107.430	4.060
2004	2588.159	2687.409	99.250	3.835
2005	2528.672	2619.166	90.494	3.579
2006	2476.078	2558.0'72	81.994	3.311
2007	2425.904	2499.436	73.531	3.031
2008	2376.631	2441.984	65.353	2.750
2009	2334.830	2392.612	57 .781	2.475
2010	2302.260	2352.960	50 .700	2.202

SOURCE: MAP MODEL SIMULATIONS S1OCS.B1 AND S85.B4--CREATED FEBRUARY 1985

VARIABLE: DF.EXGF

TABLE G.24. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

REAL PER CAPITA STATE GOVERNMENT GENERAL FUND EXPENDITURES

(1984 $)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	7139.79	7139.79	0.00	0.00
1985	6953.58	6938.31	-15.27	-0.22
1986	5943.13	5920.14	-23.00	-0.39
1987	5685.71	5657.28	-28.43	-0.50
1988	5958.20	5948.66	-9.54	-0.16
1989	5308.68	5288.95	-19.73	-0.37
1990	4750.85	4717.90	-32.95	-0.69
1991	5013.73	4952.79	-60.94	-1.22
1992	5007.13	4916.74	-90.39	-1.81
1993	5045.48	4941.14	-104.33	-2.07
1994	5029.63	4983.95	-45.68	-0.91
1995	4857.09	4882.46	25.36	0.52
1996	4653.84	4685.93	32.08	0.69
1997	4452.66	4484.44	31.78	0.71
1998	4264.81	4292.56	27.75	0.65
1999	4058.78	4081.83	23.04	0.57
2000	3890.70	3906.40	15.70	0.40
2001	4463.35	4437.48	-25.87	-0.58
2002	4456.44	4418.21	-38.23	-0.86
2003	4296.36	4254.73	-41.63	-0.97
2004	4140.26	4095.69	-44.57	-1.08
2005	3984.99	3937.51	-47.48	-1.19
2006	3844.94	3795.07	-49.87	-1.30
2007	3716.65	3664.30	-52.36	-1.41
2008	3587.79	3533.68	-54.11	-1.51
2009	3468.27	3413.28	-54.99	-1.59
2010	3360.04	3304.50	-55.53	-1.65

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B4--CREATED FEBRUARY 1985
VARIABLE: DFP.EXGF

TABLE G.25. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

REAL COMBINED FUNDS BALANCE

(millions of 1984 $)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	7539.414	7539.414	0.000	0.000
1985	7657.082	7657.699	0.617	0.008
1986	7939.926	7941.629	1.703	0.021
1987	8264.070	8267.117	3.047	0.037
1988	8076.867	8065.699	-11.168	-0.138
1989	8160.914	8145.070	-15.844	-0.194
1990	8677.703	8662.594	-15.109	-0.174
1991	9008.180	8999.555	-8.629	-0.096
1992	8868.359	8869.043	0.684	0.008
1993	9089.880	9101.460	11.586	0.127
1994	9268.250	9288.660	20.410	0.220
1995	9416.870	9447.390	30.523	0.324
1996	9559.900	9592.?20	32.816	0.343
1997	9683.520	9716.820	33.293	0.344
1998	9794.130	9826.410	32.281	0.330
1999	9882.310	9914.070	31.762	0.321
2000	9967.380	9998.340	30.969	0.311
2001	9701.410	9730.720	29.305	0.302
2002	9353.990	9381.500	27.508	0.294
2003	9011.960	9037.340	25.371	0.282
2004	8680.402	8703.664	23.262	0.268
2005	8362.992	8384.492	21.500	0.257
2006	8057.523	8077.121	19.598	0.243
2007	7762.785	7780.453	17.668	0.228
200$	7480.777	7496.625	15.848	0.212
2009	7211.344	7225.566	14.223	0.197
2010	6947.582	6960.715	13.133	0.189

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B4--CREATED FEBRUARY 1985

VARIABLE: DF.BAL99

TABLE G.26. STATEWIDE PROJECTIONS WITH AND WITHOUT OCS DEVELOPMENT:

OIL AND GAS CASE

REAL PER CAPITA COMBINED FUNDS BALANCE

(1984 $)

	Without OCS Development	Including OCS Development	Difference	Percent Difference
1984	14013.83	14013.83	0.00	0.00
1985	13792.87	13762.22	-30.65	-0.22
1986	13997.14	13938.39	-58.75	-0.42
1987	14565.75	14483.28	-82.47	-0.57
1988	14271.29	14153.33	-117.96	-0.83
1989	14500.30	14387.64	-112.66	-0078
1990	15352.34	15213.14	-139.21	-0.91
1991	15676.59	15394.61	-281.98	-1.80
1992	15140.58	14680.51	-460.07	-3.04
1993	15496.07	14855.83	-640.25	-4.13
1994	15941.40	15332.99	-608.41	-3.82
1995	16253.98	15596.63	-657.35	-4.04
1996	16513.61	5795.92	-717.68	-4.35
1997	16701.69	5958.81	-742.88	-4.45
1998	16846.91	6079.37	-767.55	-4. 56
1999	16930.12	6142.62	-787.50	-4.65
2000	16961.64	6163.38	-798.27	-4.71
2001	16247.65	5488.13	-759.52	-4067
2002	15441.11	4726.09	-715.02	-4.63
2003	14631.86	13963.96	-667090	-4.56
2004	13885.99	13264.64	-621.35	-4047
2005	13179.84	12604.79	-574.65	-4.36
2006	12511.99	11982.94	-529.05	-4.23
2007	11893.12	11406.53	-486.59	-4.09
2008	11293.06	10848.02	-445.04	-3.94
2009	10712.07	10307.93	-404.15	-3.77
2010	10139.65	9775.64	-364.01	-3.59

SOURCE: MAP MODEL SIMULATIONS SIOCS.B1 AND S85.B4--CREATED FEBRUARY 1985
VARIABLE: DFP.BAL9