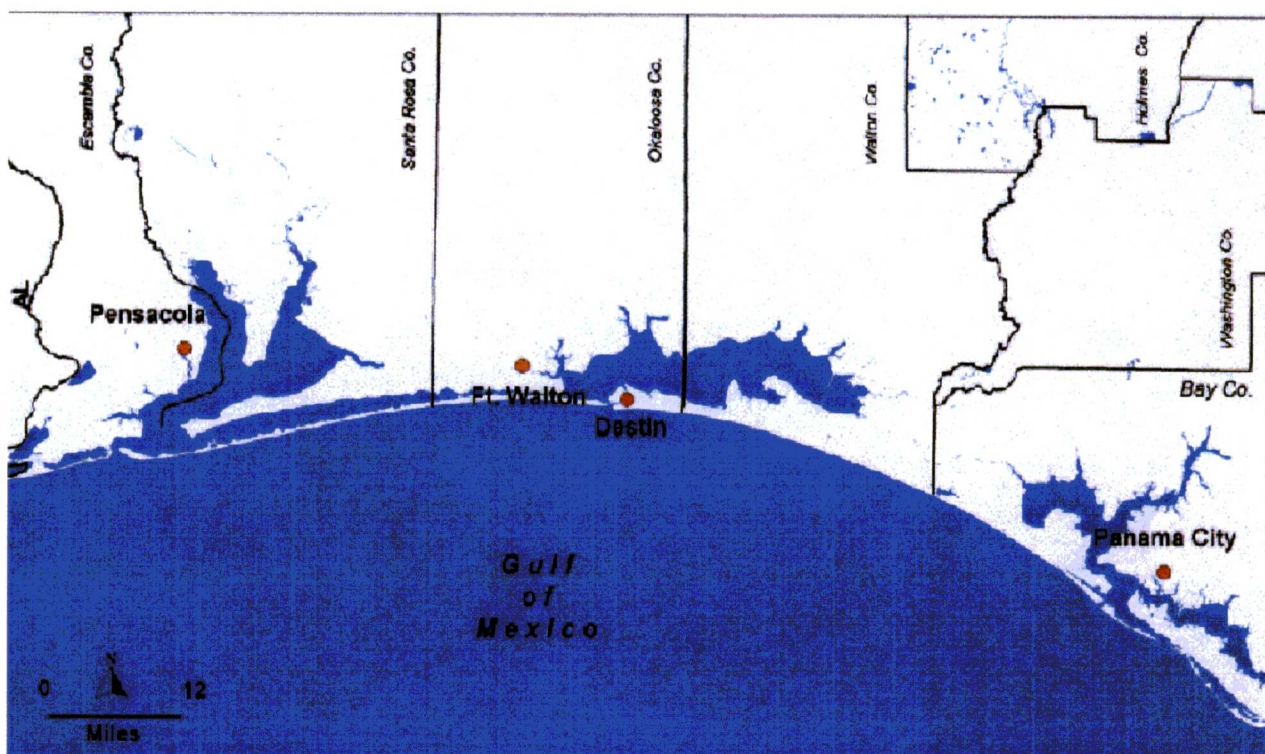


# Socioeconomic Baseline and Projections of the Impact of an OCS Onshore Base for Selected Florida Panhandle Communities

## Volume II: Technical Description of the MMS Florida Panhandle Model



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Prepared under MMS Contract  
1435-01-96-CT-30821  
by  
Research and Planning Consultants, Inc.  
Austin, Texas

Published by

**U.S. Department of the Interior  
Minerals Management Service  
Gulf of Mexico OCS Region**

**New Orleans  
May 2002**

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## **CITATION**

Suggested citation:

Luke, R. T., E.S. Schubert, G. Olsson, and F.L. Leistritz. 2002. Socioeconomic Baseline and Projection Model for Selected Florida Panhandle Communities, Volume II: Technical Description of the MMS Florida Panhandle Model. U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study MMS 2002-025. 87 pp.

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## **Technical Description of the MMS Florida Panhandle Model**

### **Overview of Methodology**

RPC has developed a set of economic-demographic models in which population, labor force, output, final demand, unemployment, and economic and retiree migration are all linked in five-year periods. This economic-demographic model projects both baseline and impact-related economic activity through the interaction of output, labor force, and migration from 1995 through 2045.

For purposes of this study, the RPC team defined the Florida Panhandle as the five counties of Escambia, Santa Rosa, Okaloosa, Walton, and Bay. Within the Panhandle are three metropolitan areas, Fort Walton Beach, Panama City, and Pensacola. The three areas of the Florida Panhandle are defined as follows:

Fort Walton Beach:	Okaloosa and Walton Counties
Panama City:	Bay County
Pensacola:	Escambia and Santa Rosa Counties

The definitions of the Panama City and Pensacola areas are identical to their metropolitan statistical areas (MSAs). The Fort Walton Beach MSA is defined as Okaloosa County. Since Walton County is not part of an MSA, RPC had to decide whether to include Walton County as part of the Fort Walton Beach area or the Panama City area. A review of data on commuter movements across counties indicated that Walton County's workforce had closer ties to Okaloosa County than to Bay County, so RPC chose to include Walton County as part of the Fort Walton Beach area for this project. (BEA, 1998)

Discussion of the model will be divided into the following parts:

- Demographic Module
- Economic Module
- Labor Market Module
- Baseline Projections
- Public Services and Fiscal Impact Module

### **Demographic Module**

RPC based its demographic module on a cohort-component model that many demographers use. The cohort-component module uses information about the existing age, sex, and racial composition of the population in an area to project the population of an area over time. The Florida Bureau of Economic and Business Research (BEBR) uses this approach to generate detailed population projections at the county level.



RPC used data supplied by BEBR to construct its demographic module. The starting point for projecting the population and labor force before economic migration in each county is the 1995 Age, Sex, Ratio cohorts (persons of the same sex and race born in the same five-year period) for each county (Tables 1.1-1.5). The model applies five-year survival rates for each cohort (Tables 2 and 3). The module then applies age- and race-specific fertility rates to the number of women in childbearing ages (10-44) to determine births by current residents (Tables 4.1-4.5). The model determines migration for people over 65 years old by applying outmigration rates to the surviving population and immigration rates to the population of the U.S. excluding the county in question (Tables 5.1-5.5). The demographic module also estimates the labor supply for each period by applying labor participation rates by age, sex, and race cohort that the Bureau of Labor Statistics publishes (Table 6). The labor supply comes from the area's pool of people ages 16 through 64.

The model then compares the area's available labor supply with the projections of labor demand (from the economic model) for the county for the relevant period. The supply of and demand for labor is balanced through migration of workers (and associated household members). If local labor supply exceeds projected demand (after allowing for unemployment), some of the area's working age population out-migrates. On the other hand, if the projected labor demand exceeds the estimated local labor supply (as is typical in the Florida Panhandle counties), workers are assumed to immigrate from other areas. (For a detailed discussion of the rationale and procedures associated with this economic-demographic interface, see Leistriz et al. 1990).

**Table 1.1**

**Estimated Distribution of the Population of Bay County  
by Age, Sex, and Race in 1995**

<u>Age Cohort</u>	<u>White Male</u>	<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>	<u>Total</u>
0-4	4,139	3,982	946	911	9,978
5-9	4,331	4,189	961	925	10,406
10-14	4,068	3,798	895	849	9,610
15-19	3,902	3,604	797	814	9,117
20-24	4,006	3,749	749	795	9,299
25-29	4,175	3,981	717	782	9,655
30-34	5,031	4,806	784	868	11,489
35-39	5,105	4,985	703	895	11,688
40-44	4,558	4,527	574	718	10,377
45-49	4,228	4,211	409	457	9,305
50-54	3,299	3,349	222	351	7,221
55-59	2,876	3,147	202	320	6,545
60-64	2,816	2,991	186	278	6,271
65-69	2,664	3,088	166	265	6,183
70-74	2,116	2,578	142	227	5,063
75-79	1,370	1,770	110	174	3,424
80-84	744	1,239	65	114	2,162
85+	373	870	40	97	1,380
Total	59,801	60,864	8,668	9,840	139,173

Source: Florida Bureau of Economic and Business Research, personal communication, June Nogle, 1996-1999.

**Table 1.2**

**Estimated Distribution of the Population of Escambia County  
by Age, Sex, and Race in 1995**

<u>Age Cohort</u>	<u>White Male</u>	<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>	<u>Total</u>
0-4	7,061	6,795	3,513	3,382	20,751
5-9	6,776	6,465	3,407	3,296	19,944
10-14	6,637	6,373	3,224	3,128	19,362
15-19	7,507	6,798	2,943	2,871	20,119
20-24	8,636	7,727	2,760	2,637	21,760
25-29	9,554	8,372	2,577	2,718	23,221
30-34	9,200	8,581	2,437	2,749	22,967
35-39	8,662	8,348	2,200	2,806	22,016
40-44	7,706	7,972	1,800	2,323	19,801
45-49	7,305	7,577	1,431	1,877	18,190
50-54	5,808	6,118	1,063	1,473	14,462
55-59	4,904	5,263	985	1,331	12,483
60-64	4,469	4,975	812	1,186	11,442
65-69	4,240	5,107	730	1,050	11,127
70-74	3,842	4,965	549	893	10,249
75-79	2,480	3,489	395	629	6,993
80-84	1,400	2,466	217	506	4,589
85+	758	1,931	156	421	3,266
Total	106,945	109,322	31,199	35,276	282,742

Source: Florida Bureau of Economic and Business Research, personal communication, June Nogle, 1996-1999.

**Table 1.3**

**Estimated Distribution of the Population of Okaloosa County  
by Age, Sex, and Race in 1995**

<u>Age Cohort</u>	<u>White Male</u>	<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>	<u>Total</u>
0-4	5,098	4,905	977	940	11,920
5-9	5,483	5,273	1,118	1,098	12,972
10-14	5,015	4,797	1,009	946	11,767
15-19	4,247	4,109	895	872	10,123
20-24	5,083	4,786	888	863	11,620
25-29	5,916	5,232	1,021	984	13,153
30-34	7,192	6,425	1,080	1,042	15,739
35-39	6,513	5,934	868	986	14,301
40-44	5,406	5,160	741	919	12,226
45-49	4,712	4,496	471	656	10,335
50-54	3,519	3,516	259	403	7,697
55-59	3,051	3,385	196	311	6,943
60-64	3,139	3,141	162	250	6,692
65-69	2,602	3,019	116	197	5,934
70-74	2,188	2,650	75	127	5,040
75-79	1,448	1,671	49	59	3,227
80-84	616	1,058	23	46	1,743
85+	347	861	14	53	1,275
Total	71,575	70,418	9,962	10,752	162,707

Source: Florida Bureau of Economic and Business Research, personal communication, June Nogle, 1996-1999.

**Table 1.4**

**Estimated Distribution of the Population of Santa Rosa County  
by Age, Sex, and Race in 1995**

<u>Age Cohort</u>	<u>White Male</u>	<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>	<u>Total</u>
0-4	3,259	3,136	258	249	6,902
5-9	3,604	3,354	278	259	7,495
10-14	3,310	3,105	265	229	6,909
15-19	3,021	2,809	243	250	6,323
20-24	2,819	2,572	284	242	5,917
25-29	3,502	3,329	301	242	7,374
30-34	3,973	3,923	297	283	8,476
35-39	3,887	3,904	233	243	8,267
40-44	3,424	3,541	208	263	7,436
45-49	3,071	3,037	158	188	6,454
50-54	2,499	2,618	105	129	5,351
55-59	2,143	2,183	87	132	4,545
60-64	1,879	1,949	72	109	4,009
65-69	1,725	1,954	58	76	3,813
70-74	1,347	1,601	41	76	3,065
75-79	778	965	22	36	1,801
80-84	430	705	13	40	1,188
85+	213	496	16	41	766
Total	44,884	45,181	2,939	3,087	96,091

Source: Florida Bureau of Economic and Business Research, personal communication, June Nogle, 1996-1999.

**Table 1.5**

**Estimated Distribution of the Population of Walton County  
by Age, Sex, and Race in 1995**

<u>Age Cohort</u>	<u>White Male</u>	<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>	<u>Total</u>
0-4	857	825	110	106	1,898
5-9	972	906	108	95	2,081
10-14	974	903	106	119	2,102
15-19	1,002	921	139	106	2,168
20-24	1,021	852	180	90	2,143
25-29	841	726	208	79	1,854
30-34	1,184	1,134	221	95	2,634
35-39	1,137	1,099	190	100	2,526
40-44	1,017	977	147	99	2,240
45-49	1,122	1,052	93	88	2,355
50-54	964	960	59	72	2,055
55-59	826	929	57	65	1,877
60-64	917	965	47	70	1,999
65-69	831	943	44	51	1,869
70-74	666	763	33	47	1,509
75-79	418	531	23	35	1,007
80-84	258	368	16	20	662
85+	131	266	12	27	436
Total	15,138	15,120	1,793	1,364	33,415

Source: Florida Bureau of Economic and Business Research, personal communication, June Nogle, 1996-1999.

**Table 2****Survival Rates by Age, Sex, and Race in 1995**

<u>From</u>	<u>To</u>	<u>Surviving</u>		<u>Non-White Male</u>	<u>Non-White Female</u>
		<u>White Male</u>	<u>White Female</u>		
Birth	1-4	0.99455	0.99608	0.98940	0.99150
1-4	5-9	0.99379	0.99566	0.98821	0.99064
5-9	10-14	0.99838	0.99910	0.99782	0.99854
10-14	15-19	0.99628	0.99824	0.99403	0.99780
15-19	20-24	0.99369	0.99740	0.98724	0.99611
20-24	25-29	0.99189	0.99713	0.98217	0.99329
25-29	30-34	0.98989	0.99629	0.97849	0.98967
30-34	35-39	0.98686	0.99508	0.97367	0.98720
35-39	40-44	0.98342	0.99375	0.96731	0.98439
40-44	45-49	0.97910	0.99047	0.96076	0.98074
45-49	50-54	0.96990	0.98501	0.94510	0.97116
50-54	55-59	0.95332	0.97661	0.91853	0.95762
55-59	60-64	0.93138	0.96419	0.88689	0.93864
60-64	65-69	0.90589	0.94788	0.84374	0.90788
65-69	70-74	0.86749	0.92337	0.78712	0.87553
70-74	75-79	0.80893	0.88199	0.72039	0.82700
75-79	80-84	0.71888	0.81223	0.64231	0.75010
80-84	85+	0.50228	0.57733	0.50871	0.58450

Source: Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 3****Adjustments to Survival Rates from 2000 to 2045**

<u>Age Cohort</u>	<u>Years 2000-2005</u>		<u>Years 2010-2015</u>		<u>Year 2020 and Later</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Birth	1.00138	1.00112	1.00263	1.00213	1.00388	1.00314
1-4	1.00020	1.00013	1.00037	1.00025	1.00055	1.00037
5-9	1.00015	1.00010	1.00028	1.00019	1.00042	1.00028
10-14	1.00030	1.00020	1.00058	1.00037	1.00086	1.00055
15-19	1.00055	1.00025	1.00104	1.00047	1.00154	1.00070
20-24	1.00054	1.00019	1.00103	1.00036	1.00152	1.00053
25-29	1.00020	1.00012	1.00038	1.00023	1.00057	1.00034
30-34	0.99977	1.00011	0.99956	1.00022	0.99934	1.00032
35-39	0.99973	1.00040	0.99949	1.00077	0.99925	1.00113
40-44	1.00055	1.00093	1.00105	1.00177	1.00155	1.00261
45-49	1.00267	1.00173	1.00511	1.00330	1.00754	1.00488
50-54	1.00535	1.00248	1.01022	1.00474	1.01509	1.00700
55-59	1.00837	1.00310	1.01598	1.00592	1.02359	1.00873
60-64	1.01226	1.00289	1.02340	1.00552	1.03454	1.00815
65-69	1.01889	1.00332	1.03606	1.00633	1.05323	1.00934
70-74	1.02861	1.00729	1.05462	1.01391	1.08063	1.02053
75-79	1.03940	1.01699	1.07522	1.03243	1.11104	1.04788
80-84	1.03435	1.03087	1.06559	1.05893	1.09682	1.08700

Source: Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.



**Table 4.1**

**Five-Year Fertility Rates by Age, Sex, and Race in Bay County**

<u>Age Cohort</u>	<u>White Fertility Rates</u>	<u>Non-White Fertility Rates</u>	<u>Non-White Adjustment Factor</u>
10-14	0.00139	0.00435	0.90
15-19	0.06808	0.11031	0.90
20-24	0.14293	0.18274	0.90
25-29	0.10837	0.12495	0.90
30-34	0.06064	0.06560	0.90
35-39	0.01896	0.02889	0.90
40-44	0.00250	0.00335	0.90

Source: Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 4.2**

**Five-Year Fertility Rates by Age, Sex, and Race in Escambia County**

<u>Age Cohort</u>	<u>White Fertility Rates</u>	<u>Non-White Fertility Rates</u>	<u>Non-White Adjustment Factor</u>
10-14	0.00064	0.00584	0.90
15-19	0.05117	0.12746	0.90
20-24	0.10979	0.20213	0.90
25-29	0.10966	0.14216	0.90
30-34	0.06331	0.06598	0.90
35-39	0.02471	0.02674	0.90
40-44	0.00219	0.00548	0.90

Source: Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 4.3**

**Five-Year Fertility Rates by Age, Sex, and Race in Okaloosa County**

<u>Age Cohort</u>	<u>White Fertility Rates</u>	<u>Non-White Fertility Rates</u>	<u>Non-White Adjustment Factor</u>
10-14	0.00059	0.00342	0.90
15-19	0.05519	0.10166	0.90
20-24	0.14211	0.17961	0.90
25-29	0.11388	0.12416	0.90
30-34	0.06363	0.06239	0.90
35-39	0.02089	0.02813	0.90
40-44	0.00394	0.00392	0.90

Source: Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 4.4**

**Five-Year Fertility Rates by Age, Sex, and Race in Santa Rosa County**

<u>Age Cohort</u>	<u>White Fertility Rates</u>	<u>Non-White Fertility Rates</u>	<u>Non-White Adjustment Factor</u>
10-14	0.00063	0.00126	0.95
15-19	0.05936	0.07132	0.95
20-24	0.13773	0.18213	0.95
25-29	0.11536	0.13360	0.95
30-34	0.05956	0.06614	0.95
35-39	0.02127	0.01444	0.95
40-44	0.00298	0.00775	0.95

Source: Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 4.5****Five-Year Fertility Rates by Age, Sex, and Race in Walton County**

<u>Age Cohort</u>	<u>White Fertility Rates</u>	<u>Non-White Fertility Rates</u>	<u>Non-White Adjustment Factor</u>
10-14	0.00083	0.00672	0.90
15-19	0.07503	0.09297	0.90
20-24	0.14136	0.14050	0.90
25-29	0.08833	0.16024	0.90
30-34	0.05305	0.07125	0.90
35-39	0.02134	0.02073	0.90
40-44	0.00280	0.00951	0.90

Source: Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 5.1****Immigration and Outmigration Rates of People Over 65 Years Old (Bay County)**

<u>Age Cohort</u>	<u>Immigration Rates</u>				<u>Outmigration Rates</u>			
	<u>White Male</u>	<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>	<u>White Male</u>	<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>
65-69	0.00006	0.00006	0.00002	0.00002	0.10939	0.10939	0.05882	0.05882
70-74	0.00004	0.00004	0.00002	0.00002	0.08228	0.08228	0.04159	0.04159
75-79	0.00004	0.00004	0.00002	0.00002	0.09269	0.09269	0.04193	0.04193
80-84	0.00003	0.00003	0.00002	0.00002	0.12186	0.12186	0.06361	0.06361

Source: Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 5.2**

**Inmigration and Outmigration Rates of People Over 65 Years Old  
(Escambia County)**

<u>Age Cohort</u>	<u>Inmigration Rates</u>				<u>Outmigration Rates</u>			
	<u>White Male</u>	<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>	<u>White Male</u>	<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>
65-69	0.00010	0.00010	0.00008	0.00008	0.06565	0.06565	0.05348	0.05348
70-74	0.00007	0.00007	0.00005	0.00005	0.05841	0.05841	0.03781	0.03781
75-79	0.00009	0.00009	0.00005	0.00005	0.06539	0.06539	0.03812	0.03812
80-84	0.00007	0.00007	0.00007	0.00007	0.09734	0.09734	0.05782	0.05783

Source: Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 5.3**

**Inmigration and Outmigration Rates of People Over 65 Years Old  
(Okaloosa County)**

<u>Age Cohort</u>	<u>Inmigration Rates</u>				<u>Outmigration Rates</u>			
	<u>White Male</u>	<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>	<u>White Male</u>	<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>
65-69	0.00006	0.00006	0.00004	0.00004	0.07448	0.07448	0.06952	0.06952
70-74	0.00005	0.00005	0.00002	0.00002	0.05885	0.05885	0.04916	0.04916
75-79	0.00004	0.00004	0.00001	0.00001	0.06928	0.06928	0.04955	0.04955
80-84	0.00003	0.00003	0.00002	0.00001	0.06260	0.06260	0.07517	0.07517

Source: Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 5.4**

**Inmigration and Outmigration Rates of People Over 65 Years Old  
(Santa Rosa County)**

<u>Age Cohort</u>	<u>White Male</u>	<u>Inmigration Rates</u>			<u>Outmigration Rates</u>			
		<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>	<u>White Male</u>	<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>
65-69	0.00004	0.00004	0.00001	0.00001	0.09131	0.09131	0.06952	0.06952
70-74	0.00002	0.00002	0.00001	0.00001	0.08313	0.08313	0.04916	0.04916
75-79	0.00002	0.00002	0.00001	0.00001	0.06473	0.06473	0.04955	0.04955
80-84	0.00002	0.00002	0.00001	0.00001	0.10000	0.10000	0.07517	0.07517

Source: Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 5.5**

**Inmigration and Outmigration Rates of People Over 65 Years Old  
(Walton County)**

<u>Age Cohort</u>	<u>White Male</u>	<u>Inmigration Rates</u>			<u>Outmigration Rates</u>			
		<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>	<u>White Male</u>	<u>White Female</u>	<u>Non-White Male</u>	<u>Non-White Female</u>
65-69	0.00002	0.00002	0.00001	0.00001	0.05418	0.05418	0.08021	0.08021
70-74	0.00002	0.00002	0.00000	0.00000	0.04638	0.04638	0.05672	0.05672
75-79	0.00001	0.00001	0.00000	0.00000	0.04315	0.04315	0.05718	0.05718
80-84	0.00001	0.00001	0.00000	0.00000	0.05779	0.05779	0.08674	0.08674

Source: Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 6****Labor Participation Rates by Age, Sex, and Race  
(in percent)**

Age	2000				2005				2010-2045			
	White <u>Male</u>	White <u>Female</u>	Black <u>Male</u>	Black <u>Female</u>	White <u>Male</u>	White <u>Female</u>	Black <u>Male</u>	Black <u>Female</u>	White <u>Male</u>	White <u>Female</u>	Black <u>Male</u>	Black <u>Female</u>
16-19	56.7	54.7	39.2	39.5	55.9	54.4	38.0	39.8	55.6	54.3	37.9	39.9
20-24	84.2	73.6	72.2	65.6	84.0	73.8	71.3	66.7	83.9	73.8	70.9	66.9
25-29	93.9	77.3	87.7	74.9	93.8	78.5	87.1	75.0	93.8	78.8	87.0	75.1
30-34	94.5	76.3	85.9	77.5	94.3	77.5	84.7	78.4	94.2	77.7	84.5	78.6
35-39	93.3	77.8	83.4	79.7	92.8	79.1	81.9	80.8	92.7	79.4	81.7	81.0
40-44	93.0	80.3	81.9	78.3	92.2	81.8	80.3	79.0	92.0	82.0	80.1	79.1
45-49	92.0	81.5	80.0	75.8	91.3	84.0	78.3	76.7	91.2	84.5	78.1	76.9
50-54	87.6	74.6	72.6	68.4	87.2	77.4	71.5	69.7	87.1	77.9	71.3	69.9
55-59	80.3	63.7	65.9	61.1	80.4	66.9	65.2	64.3	80.4	67.5	65.1	65.0
60-64	55.3	40.4	41.8	34.2	55.3	42.2	40.5	34.6	55.0	42.4	40.2	34.5

Source: U.S. Bureau of Labor Statistics website, <http://www.bls.gov/emplab1.htm>

**Economic Module**

The economic module is representative of the economic relationships in the study area. The economic module uses an "input / output" approach to estimate the level of output for each economic sector and regional employment by sector.<sup>1</sup> Like other input-output models, the MMS Florida Panhandle module assumed that economic activity in the Florida Panhandle is largely dependent on the basic industries of the area. The basic industries are those that earn income for the region by generating income from goods and services sold to people or institutions outside the region.

In the case of the Florida Panhandle, tourism and the operation of military bases are two basic industries. Spending on tourism comes from people who live outside the Florida Panhandle who visit the area to enjoy the area's scenic beauty and to fish. The military spends taxpayer dollars in the Florida Panhandle generated from all U.S. residents. When the demands for any of the basic sectors increase, then the demands for the sector's outputs increase. For instance, an increase in tourism increases spending on hotels, restaurants, and boat rentals. Other sectors within the regional economy provide goods and services that are consumed primarily by residents of the

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<sup>1</sup>For an introduction on the topic of input/output models and their use in regional economics, see Hoover and Giarratani (1984), Leontief (1953), and Miller and Blair (1985).

Florida Panhandle (e.g., retail trade and service sectors). Because these sectors primarily serve a local market, they are often referred to as nonbasic sectors. In addition, some firms and/or sectors market their products or services primarily to other business and industrial customers within the region, rather than exporting (i.e., selling to customers outside the region) or selling directly to final consumers (e.g., households).

The logic of input-output analysis is that an increase in demand for an area's exports or other final products (collectively referred to as sales to final demand) results in successive rounds of spending and respending, as the firm/sector that initially receives payment for the sale must in turn purchase additional inputs (or intermediate products), hire more labor, etc. Input-output (I-O) analysis is essentially a technique for tabulating and describing the linkages between sectors (groups of similar economic units) within an economy. I-O models thus provide a means of measuring the effect of an initial stimulus (i.e., additional sales to final demand) to a given sector on all other sectors of the regional economy (Miller and Blair 1985, Leistritz and Murdock 1981).

The economic model used IMPLAN software and data to generate detailed employment, output, and input-output matrices for 1994, the year for which most recent data was available when RPC built the economic module.<sup>2</sup> While IMPLAN can generate modeling information for as many as 528 industries or sectors of the study area, RPC structured the economic module into 23 industries that represented the broad industrial groupings the Bureau of Economic Analysis uses in its employment projections for metropolitan statistical areas and the subsectors involved in the impact portion of the model: the tourism industry, the military, commercial fishing, and Outer Continental Shelf (OCS) oil and natural gas activity.<sup>3</sup> (see Table 7).

The model generates a variety of scenarios described in the User's Guide. RPC developed a set of input / output matrices known as Type II multipliers and the associated Leontief-inverse matrices for projecting the impacts that changes in OCS, tourism, or military expenditures would have on the economy of the three metropolitan areas of the Florida Panhandle over time. The Leontief-inverse matrices measure the direct, indirect, and induced effects of these impacts based on the size and type of interrelationships among the 23 sectors of the study areas. Type II multipliers are closed with respect to households, already incorporates the economic impacts of additional spending and any net migration (see Tables 8.1 - 8.3).

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<sup>2</sup>In 1998 MMS concluded a contract with the Minnesota Implan Group, the maker of IMPLAN, to provide software and data for future modeling projects that the MMS plans to undertake.

<sup>3</sup>The MMS Florida Panhandle model uses two counties, Okaloosa and Walton, to represent the Fort Walton Beach area. Okaloosa is the Fort Walton Beach MSA. Therefore, to project employment and population in both counties, RPC used BEA projections of the Pensacola Economic Area (which includes the Pensacola MSA, the FWB MSA, and Walton County) and subtracted the projection from the Pensacola MSA.

commuting patterns of offshore workers in the Gulf of Mexico. Gramling and Brabant (1986) estimate that 70 percent of offshore workers live more than 100 miles from where they meet to go offshore (i.e., an onshore support base). If an onshore base were located in Panama City or Pensacola, these commuting workers and their families would not spend their incomes in the Florida Panhandle. As shown in Table 8.4, RPC adjusted for these commuting workers by lowering projected expenditures in SIC category 1389 "Other Oil and Gas Services" by half when compared to Table 2.6 in the Final Report.<sup>4</sup>

**Table 7**  
**Industrial Sectors Used in MMS Florida Panhandle Model**

Agriculture (excluding Commercial Fishing)  
 Commercial Fishing  
 Mining (excluding Maintenance and Repairs of Oil and Gas Wells)  
 Maintenance and Repair of Oil and Gas Wells  
 Construction  
 Non-Durable Manufacturing  
 Durable Manufacturing  
 Transportation, Communications, & Utilities (excluding Air & Water Transportation)  
 Water Transportation  
 Air Transportation  
 Wholesale Trade  
 Retail Trade (excluding Eating & Drinking Places)  
 Eating & Drinking Places  
 Finance, Insurance, and Real Estate  
 Services (excluding the six service categories listed below)  
 Hotel and Lodging Places  
 Equipment Rental and Leasing Services  
 Amusement and Recreation Services, N.E.C.  
 Engineering, Architectural Services  
 Accounting, Auditing and Bookkeeping Services  
 Research, Development & Testing Services  
 Government (excluding Federal Government - Military)  
 Federal Government - Military

Sources: Minnesota IMPLAN Group, Inc. 1997.

IMPLAN professional version 1.1 Software, User's Guide, Analysis Guide, and Data Guide. Stillwater, Mn. and RPC

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<sup>4</sup>In its impact study on Destin Dome, Chevron (1997) does not appear to adjust for commuting offshore workers or assumes that all offshore workers are local. This assumption might be consistent with an effort to show the maximum potential economic impact of the project on Mobile, Alabama.



**Table 8.1**

**Impact Multiplier Matrix for the Fort Walton Beach Area  
(direct, indirect, and induced effects)**

<u>Sector</u>	<u>1</u>	<u>25</u>	<u>28</u>	<u>48</u>	<u>57</u>	<u>58</u>	<u>133</u>	<u>433</u>	<u>436</u>	<u>437</u>	<u>447</u>	<u>448</u>
1	1.021927	2.27E-03	7.42E-04	3.08E-03	3.05E-03	2.19E-02	2.86E-03	1.77E-03	1.94E-03	2.14E-03	2.32E-03	2.31E-03
25	1.65E-04	1.0007778	5.68E-05	1.47E-04	2.66E-04	4.77E-04	1.25E-04	1.26E-04	1.43E-04	1.58E-04	1.73E-04	2.02E-04
28	2.56E-04	2.94E-04	1.001253	6.32E-04	4.36E-04	2.67E-03	6.28E-04	2.61E-03	6.11E-04	5.96E-04	3.88E-04	3.58E-04
48	1.47E-02	1.66E-02	1.17E-02	1.015247	1.96E-02	1.81E-02	2.51E-02	8.56E-02	3.74E-02	3.56E-02	3.62E-02	3.61E-02
57	9.62E-06	1.10E-05	3.76E-02	2.38E-05	1.000016	1.00E-04	2.36E-05	9.79E-05	2.30E-05	2.24E-05	1.46E-05	1.35E-05
58	2.92E-02	4.22E-02	1.09E-02	0.029978	4.68E-02	1.07337	3.08E-02	2.49E-02	3.19E-02	0.038936	3.49E-02	3.13E-02
133	7.94E-03	1.32E-02	6.54E-03	3.92E-02	2.03E-02	1.05E-02	1.051725	1.40E-02	2.81E-02	1.40E-02	1.18E-02	1.08E-02
433	3.93E-02	3.80E-02	2.89E-02	5.01E-02	6.45E-02	6.03E-02	5.68E-02	1.171789	0.131819	1.25E-01	7.03E-02	6.56E-02
436	1.55E-03	6.05E-03	1.15E-03	1.80E-03	2.57E-03	2.42E-03	1.82E-03	2.45E-03	1.124539	4.19E-03	1.86E-03	1.83E-03
437	3.22E-03	3.00E-03	1.53E-03	3.35E-03	8.34E-03	3.37E-03	4.59E-03	4.35E-03	4.86E-03	1.035498	9.70E-03	4.36E-03
447	2.43E-02	3.68E-02	1.27E-02	3.98E-02	3.89E-02	4.35E-02	5.21E-02	2.65E-02	3.98E-02	4.85E-02	1.044537	2.65E-02
448	6.11E-02	6.01E-02	2.16E-02	1.03E-01	9.71E-02	4.23E-02	4.67E-02	7.16E-02	4.35E-02	5.40E-02	6.67E-02	1.07774
454	2.72E-02	2.56E-02	9.49E-03	2.46E-02	4.38E-02	1.89E-02	2.09E-02	2.17E-02	1.89E-02	3.39E-02	3.23E-02	3.54E-02
456	8.42E-02	8.41E-02	3.33E-02	8.52E-02	1.33E-01	6.19E-02	0.069686	8.32E-02	0.131221	9.52E-02	1.08E-01	1.08E-01
463	5.26E-02	4.56E-02	5.00E-02	4.92E-02	7.23E-02	4.06E-02	4.57E-02	6.23E-02	9.72E-02	6.82E-02	1.03E-01	1.03E-01
464	1.44E-01	1.56E-01	5.89E-02	0.154351	2.29E-01	1.32E-01	1.46E-01	1.73E-01	0.331808	0.231357	0.278185	2.44E-01
473	1.13E-03	1.86E-03	6.37E-04	5.90E-03	3.50E-03	2.33E-03	2.89E-03	2.33E-03	8.11E-03	9.20E-03	4.87E-03	2.93E-03
488	3.97E-03	3.67E-03	1.34E-03	3.47E-03	6.40E-03	2.64E-03	2.89E-03	2.91E-03	2.50E-03	3.11E-03	3.84E-03	4.75E-03
506	5.12E-04	7.01E-04	2.31E-03	0.022139	7.33E-04	1.90E-03	1.47E-03	2.43E-03	1.33E-03	1.12E-03	1.47E-03	1.08E-03
507	2.31E-03	2.29E-03	1.14E-03	3.78E-03	4.12E-03	4.37E-03	3.24E-03	3.67E-03	4.53E-03	3.95E-03	6.71E-03	4.80E-03
509	4.06E-04	6.44E-04	2.57E-04	7.33E-04	6.88E-04	7.24E-04	6.98E-04	1.09E-03	9.02E-03	1.10E-03	1.89E-03	1.20E-03
510	1.47E-02	1.47E-02	8.22E-03	1.65E-02	2.37E-02	1.75E-02	1.72E-02	3.71E-02	3.02E-02	2.97E-02	0.02452	2.41E-02
519	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Table 8.1 (continued)**  
**Impact Multiplier Matrix for the Fort Walton Beach Area**  
**(direct, indirect, and induced effects)**

Sector	454	456	463	464	473	488	506	507	509	510	519
1	5.13E-03	2.05E-03	2.39E-03	2.92E-03	1.95E-03	4.18E-03	2.63E-03	2.53E-03	2.96E-03	3.33E-03	3.53E-03
25	2.00E-03	7.71E-05	8.25E-05	2.25E-04	1.61E-04	2.18E-04	2.30E-04	2.16E-04	2.58E-04	3.06E-04	3.37E-04
28	5.21E-04	1.83E-04	2.10E-04	4.16E-04	3.10E-04	3.47E-04	3.57E-04	3.58E-04	4.06E-04	5.92E-04	4.27E-04
48	3.70E-02	3.37E-02	8.01E-02	4.00E-02	2.68E-02	4.12E-02	2.53E-02	2.51E-02	2.69E-02	0.057824	2.35E-02
57	1.96E-05	6.88E-06	7.89E-06	1.56E-05	1.17E-05	1.30E-05	1.34E-05	1.35E-05	1.53E-05	2.23E-05	1.61E-05
58	7.18E-02	1.40E-02	0.016312	4.49E-02	2.82E-02	3.52E-02	3.65E-02	3.70E-02	4.22E-02	4.39E-02	4.62E-02
133	1.05E-02	5.60E-03	7.39E-03	1.79E-02	1.36E-02	1.30E-02	1.26E-02	1.43E-02	1.80E-02	1.55E-02	1.50E-02
433	7.05E-02	3.39E-02	3.48E-02	6.72E-02	5.63E-02	5.79E-02	6.22E-02	6.26E-02	6.87E-02	7.92E-02	7.10E-02
436	1.86E-03	7.28E-04	8.00E-04	2.17E-03	1.48E-03	2.50E-03	2.09E-03	1.93E-03	2.37E-03	3.18E-03	2.88E-03
437	3.84E-03	3.09E-03	2.44E-03	7.21E-03	4.85E-03	4.55E-03	6.44E-03	6.48E-03	1.34E-02	6.67E-03	5.89E-03
447	5.88E-02	1.18E-02	1.38E-02	3.69E-02	2.62E-02	2.92E-02	3.00E-02	3.34E-02	3.56E-02	3.87E-02	3.91E-02
448	6.02E-02	3.06E-02	3.36E-02	8.52E-02	5.98E-02	7.26E-02	8.53E-02	7.88E-02	9.59E-02	1.14E-01	1.25E-01
454	1.027655	1.41E-02	1.60E-02	3.68E-02	2.80E-02	3.33E-02	3.88E-02	3.74E-02	4.43E-02	5.05E-02	5.62E-02
456	0.095459	1.151266	8.04E-02	1.18E-01	1.00E-01	1.06E-01	1.31E-01	1.14E-01	1.37E-01	1.53E-01	1.68E-01
463	1.04E-01	7.84E-02	1.152447	1.16E-01	8.73E-02	1.26E-01	1.12E-01	1.10E-01	1.00E-01	8.47E-02	8.96E-02
464	2.15E-01	1.29E-01	0.133023	1.283711	0.332419	0.264122	0.362818	0.424157	2.93E-01	2.67E-01	2.87E-01
473	2.65E-03	2.56E-03	1.45E-03	3.61E-03	1.007211	3.12E-03	1.87E-03	1.95E-03	3.72E-03	2.11E-03	2.05E-03
488	3.77E-03	1.74E-03	1.76E-03	5.23E-03	3.75E-03	1.00453	5.50E-03	5.04E-03	6.12E-03	7.38E-03	8.24E-03
506	1.13E-03	1.32E-03	2.05E-03	1.64E-03	1.00E-03	1.19E-03	1.032285	1.33E-03	4.18E-03	3.09E-03	8.63E-04
507	5.15E-03	6.27E-03	3.86E-03	8.59E-03	1.15E-02	4.64E-03	4.93E-02	1.075543	0.006886	3.52E-03	3.45E-03
509	1.61E-03	1.22E-03	1.20E-03	1.57E-03	1.40E-03	1.88E-03	1.09E-03	1.82E-03	1.011012	7.95E-04	7.51E-04
510	2.17E-02	2.02E-02	1.41E-02	2.84E-02	2.81E-02	2.44E-02	2.30E-02	2.26E-02	2.83E-02	1.028742	2.82E-02
519	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00

Sources: RPC. Minnesota IMPLAN Group, Inc. 1997. IMPLAN professional version 1.1 Software, User's Guide, Analysis Guide, and Data Guide. Stillwater, MN.

**Table 8.2**  
**Impact Multiplier Matrix for the Panama City Area**  
**(direct, indirect, and induced effects)**

<u>Sector</u>	<u>1</u>	<u>25</u>	<u>28</u>	<u>48</u>	<u>57</u>	<u>58</u>	<u>133</u>	<u>433</u>	<u>436</u>	<u>437</u>	<u>447</u>	<u>448</u>
1	1.018056	1.31E-03	2.55E-04	1.52E-03	1.63E-03	1.10E-02	1.39E-03	9.16E-04	1.04E-03	1.13E-03	1.25E-03	1.22E-03
25	5.49E-05	1.000178	9.02E-06	3.54E-05	6.25E-05	1.13E-04	2.75E-05	3.02E-05	3.53E-05	3.59E-05	4.24E-05	4.73E-05
28	2.21E-04	1.87E-04	1.00035	3.21E-04	2.52E-04	1.45E-03	3.20E-04	1.30E-03	3.12E-04	3.32E-04	2.18E-04	2.00E-04
48	2.26E-02	1.81E-02	7.06E-03	1.01551	2.03E-02	1.92E-02	2.47E-02	8.69E-02	3.67E-02	3.80E-02	3.62E-02	3.65E-02
57	5.84E-06	4.94E-06	2.65E-02	8.50E-06	1.000006	3.83E-05	8.46E-06	3.45E-05	8.27E-06	8.78E-06	5.77E-06	5.30E-06
58	6.86E-02	6.89E-02	1.10E-02	0.046558	7.38E-02	1.117922	4.56E-02	3.96E-02	5.01E-02	0.061587	5.54E-02	4.94E-02
133	8.75E-03	1.06E-02	3.02E-03	2.84E-02	1.55E-02	8.10E-03	1.038578	1.07E-02	2.06E-02	1.09E-02	8.97E-03	8.21E-03
433	6.29E-02	4.52E-02	1.87E-02	5.36E-02	7.10E-02	6.68E-02	5.84E-02	1.181191	0.134881	1.39E-01	7.62E-02	7.11E-02
436	2.30E-03	6.22E-03	7.02E-04	1.83E-03	2.64E-03	2.54E-03	1.76E-03	2.50E-03	1.118582	4.43E-03	1.95E-03	1.88E-03
437	4.68E-03	3.26E-03	9.84E-04	3.35E-03	8.31E-03	3.44E-03	4.40E-03	4.36E-03	4.84E-03	1.037759	9.46E-03	4.32E-03
447	5.36E-02	5.64E-02	1.15E-02	5.60E-02	5.75E-02	6.62E-02	7.25E-02	3.90E-02	5.67E-02	7.32E-02	1.064529	3.91E-02
448	8.80E-02	6.61E-02	1.47E-02	1.02E-01	9.92E-02	4.10E-02	4.37E-02	7.33E-02	4.71E-02	5.18E-02	7.02E-02	1.079291
454	3.87E-02	2.80E-02	6.47E-03	2.52E-02	4.43E-02	1.82E-02	1.94E-02	2.24E-02	2.05E-02	3.36E-02	3.35E-02	3.58E-02
456	1.22E-01	9.22E-02	2.22E-02	8.70E-02	1.35E-01	6.07E-02	0.065749	8.57E-02	0.13276	9.44E-02	1.12E-01	1.10E-01
463	7.93E-02	5.05E-02	2.96E-02	5.02E-02	7.45E-02	4.10E-02	4.39E-02	6.35E-02	9.54E-02	6.91E-02	1.03E-01	1.04E-01
464	1.89E-01	1.55E-01	3.55E-02	0.142499	2.13E-01	1.21E-01	1.27E-01	1.61E-01	0.296639	0.214246	0.25507	2.24E-01
473	1.72E-03	2.02E-03	4.16E-04	5.64E-03	3.58E-03	2.51E-03	2.85E-03	2.37E-03	7.80E-03	9.96E-03	4.80E-03	2.95E-03
488	5.77E-03	4.12E-03	9.44E-04	3.66E-03	6.63E-03	2.57E-03	2.73E-03	3.07E-03	2.80E-03	2.96E-03	4.16E-03	4.94E-03
506	5.84E-04	5.73E-04	9.68E-04	0.015683	5.70E-04	1.53E-03	1.07E-03	1.77E-03	9.71E-04	8.68E-04	1.08E-03	7.99E-04
507	4.62E-03	3.24E-03	9.15E-04	4.55E-03	5.44E-03	6.07E-03	4.11E-03	4.79E-03	5.68E-03	5.33E-03	8.54E-03	6.21E-03
509	1.12E-03	1.27E-03	2.95E-04	1.33E-03	1.30E-03	1.42E-03	1.26E-03	2.03E-03	1.58E-02	2.14E-03	3.41E-03	2.20E-03
510	1.99E-02	1.50E-02	4.67E-03	1.53E-02	2.23E-02	1.61E-02	1.48E-02	3.21E-02	2.58E-02	2.68E-02	0.022907	2.25E-02
519	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Table 8.2 (continued)**  
**Impact Multiplier Matrix for the Panama City Area**  
**(direct, indirect, and induced effects)**

<u>Sector</u>	<u>454</u>	<u>456</u>	<u>463</u>	<u>464</u>	<u>473</u>	<u>488</u>	<u>506</u>	<u>507</u>	<u>509</u>	<u>510</u>	<u>519</u>
1	2.70E-03	1.11E-03	1.21E-03	1.53E-03	1.04E-03	2.10E-03	1.38E-03	1.37E-03	1.53E-03	1.77E-03	1.86E-03
25	4.44E-04	2.03E-05	2.08E-05	5.29E-05	3.84E-05	5.08E-05	5.33E-05	5.24E-05	5.77E-05	7.25E-05	7.84E-05
28	3.12E-04	1.11E-04	1.19E-04	2.33E-04	1.74E-04	1.97E-04	2.04E-04	2.07E-04	2.33E-04	3.25E-04	2.47E-04
48	3.83E-02	3.73E-02	8.18E-02	3.86E-02	2.65E-02	4.17E-02	2.55E-02	2.49E-02	2.86E-02	0.057338	2.42E-02
57	8.27E-06	2.93E-06	3.15E-06	6.16E-06	4.60E-06	5.22E-06	5.39E-06	5.48E-06	6.18E-06	8.60E-06	6.55E-06
58	1.12E-01	2.44E-02	0.026813	6.87E-02	4.45E-02	5.52E-02	5.73E-02	5.89E-02	6.62E-02	7.03E-02	7.29E-02
133	8.16E-03	4.65E-03	5.72E-03	1.31E-02	1.02E-02	9.81E-03	9.48E-03	1.07E-02	1.45E-02	1.19E-02	1.14E-02
433	7.80E-02	4.04E-02	3.90E-02	7.17E-02	6.11E-02	6.31E-02	6.81E-02	6.92E-02	7.60E-02	8.67E-02	7.81E-02
436	1.97E-03	8.34E-04	8.70E-04	2.20E-03	1.54E-03	2.55E-03	2.13E-03	2.04E-03	2.36E-03	3.26E-03	2.95E-03
437	4.01E-03	3.37E-03	2.52E-03	6.90E-03	4.73E-03	4.50E-03	6.35E-03	6.29E-03	1.51E-02	6.65E-03	5.86E-03
447	8.69E-02	1.91E-02	2.10E-02	5.30E-02	3.82E-02	4.28E-02	4.38E-02	4.91E-02	5.22E-02	5.78E-02	5.78E-02
448	6.32E-02	3.48E-02	3.61E-02	8.64E-02	6.19E-02	7.38E-02	8.61E-02	8.32E-02	9.31E-02	1.18E-01	1.27E-01
454	1.028805	1.59E-02	1.71E-02	3.72E-02	2.87E-02	3.36E-02	3.88E-02	3.90E-02	4.30E-02	5.19E-02	5.66E-02
456	0.099699	1.166747	8.45E-02	1.19E-01	1.02E-01	1.07E-01	1.32E-01	1.19E-01	1.35E-01	1.58E-01	1.71E-01
463	1.07E-01	8.61E-02	1.154683	1.13E-01	8.61E-02	1.26E-01	1.13E-01	1.08E-01	1.05E-01	8.80E-02	9.18E-02
464	2.03E-01	1.30E-01	0.126432	1.253814	0.298423	0.241711	0.33336	0.375976	2.74E-01	2.50E-01	2.65E-01
473	2.79E-03	2.81E-03	1.49E-03	3.48E-03	1.007016	3.15E-03	1.88E-03	1.95E-03	4.20E-03	2.19E-03	2.12E-03
488	4.02E-03	2.03E-03	1.97E-03	5.43E-03	3.96E-03	1.004683	5.64E-03	5.44E-03	5.98E-03	7.76E-03	8.51E-03
506	8.80E-04	1.07E-03	1.50E-03	1.16E-03	7.25E-04	8.84E-04	1.024924	9.60E-04	3.75E-03	2.23E-03	6.62E-04
507	6.91E-03	8.92E-03	5.09E-03	1.06E-02	1.45E-02	6.00E-03	6.54E-02	1.090855	0.010029	4.62E-03	4.51E-03
509	3.03E-03	2.44E-03	2.25E-03	2.74E-03	2.50E-03	3.46E-03	2.02E-03	3.16E-03	1.024414	1.50E-03	1.40E-03
510	2.05E-02	2.12E-02	1.38E-02	2.61E-02	2.64E-02	2.30E-02	2.14E-02	2.13E-02	2.72E-02	1.027143	2.66E-02
519	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00

Sources: RPC.

Minnesota IMPLAN Group, Inc. 1997.

IMPLAN professional version 1.1 Software, User's Guide, Analysis Guide, and Data Guide. Stillwater, MN.

**Table 8.3**  
**Impact Multiplier Matrix for the Pensacola Area**  
**(direct, indirect, and induced effects)**

<u>Sector</u>	<u>1</u>	<u>25</u>	<u>28</u>	<u>48</u>	<u>57</u>	<u>58</u>	<u>133</u>	<u>433</u>	<u>436</u>	<u>437</u>	<u>447</u>	<u>448</u>
1	1.042142	3.66E-03	1.98E-03	3.88E-03	4.31E-03	2.30E-02	3.82E-03	2.31E-03	2.95E-03	3.23E-03	3.38E-03	3.21E-03
25	5.89E-05	1.000275	4.28E-05	5.76E-05	9.87E-05	1.71E-04	4.98E-05	4.58E-05	5.90E-05	6.22E-05	6.89E-05	7.55E-05
28	9.47E-04	1.10E-03	1.005929	1.83E-03	1.39E-03	7.65E-03	1.91E-03	6.48E-03	1.59E-03	1.62E-03	1.18E-03	1.07E-03
48	1.79E-02	1.88E-02	2.11E-02	1.015999	2.03E-02	1.98E-02	2.69E-02	7.95E-02	3.75E-02	3.67E-02	3.65E-02	3.64E-02
57	1.42E-05	1.64E-05	1.50E-02	2.73E-05	1.000021	1.14E-04	2.85E-05	9.69E-05	2.38E-05	2.42E-05	1.76E-05	1.60E-05
58	8.88E-02	1.16E-01	5.32E-02	0.07903	1.21E-01	1.184163	8.30E-02	6.21E-02	8.79E-02	0.10307	9.40E-02	8.33E-02
133	6.70E-03	1.17E-02	9.41E-03	3.16E-02	1.68E-02	8.97E-03	1.045098	1.08E-02	2.29E-02	1.17E-02	9.78E-03	8.91E-03
433	4.68E-02	4.80E-02	5.61E-02	5.57E-02	7.18E-02	6.91E-02	6.47E-02	1.167543	0.139536	1.35E-01	7.78E-02	7.22E-02
436	1.71E-03	6.35E-03	2.13E-03	1.92E-03	2.72E-03	2.65E-03	1.99E-03	2.37E-03	1.121075	4.38E-03	2.04E-03	1.96E-03
437	3.68E-03	3.68E-03	2.93E-03	3.73E-03	8.89E-03	3.92E-03	5.16E-03	4.37E-03	5.46E-03	1.037744	1.02E-02	4.71E-03
447	4.16E-02	5.69E-02	3.33E-02	5.63E-02	5.70E-02	6.48E-02	7.69E-02	3.61E-02	5.77E-02	7.07E-02	1.064026	3.92E-02
448	5.91E-02	6.91E-02	4.44E-02	1.05E-01	9.95E-02	4.77E-02	4.94E-02	6.91E-02	4.95E-02	5.67E-02	7.20E-02	1.080538
454	2.54E-02	2.91E-02	1.93E-02	2.57E-02	4.40E-02	2.10E-02	2.18E-02	2.12E-02	2.14E-02	3.48E-02	3.40E-02	3.60E-02
456	8.33E-02	9.66E-02	6.69E-02	8.98E-02	1.36E-01	6.96E-02	0.074124	8.12E-02	0.13742	9.96E-02	1.15E-01	1.12E-01
463	5.88E-02	5.13E-02	8.71E-02	5.07E-02	7.25E-02	4.45E-02	4.77E-02	5.83E-02	9.68E-02	6.91E-02	1.02E-01	1.02E-01
464	1.48E-01	1.85E-01	1.23E-01	0.169384	2.44E-01	1.52E-01	1.62E-01	1.74E-01	0.351285	0.249491	0.296153	2.58E-01
473	1.31E-03	2.13E-03	1.16E-03	5.82E-03	3.65E-03	2.56E-03	3.14E-03	2.24E-03	8.07E-03	9.51E-03	4.90E-03	3.01E-03
488	2.33E-03	2.65E-03	1.74E-03	2.30E-03	4.07E-03	1.85E-03	1.90E-03	1.81E-03	1.81E-03	2.04E-03	2.62E-03	3.07E-03
506	8.45E-04	1.11E-03	5.11E-03	0.027763	1.08E-03	2.67E-03	2.09E-03	2.93E-03	1.85E-03	1.56E-03	1.98E-03	1.47E-03
507	1.05E-03	9.48E-04	7.61E-04	1.47E-03	1.51E-03	1.66E-03	1.25E-03	1.24E-03	1.64E-03	1.46E-03	2.36E-03	1.71E-03
509	1.04E-03	1.67E-03	1.11E-03	1.75E-03	1.67E-03	1.83E-03	1.76E-03	2.38E-03	2.04E-02	2.65E-03	4.35E-03	2.80E-03
510	1.48E-02	1.64E-02	1.50E-02	1.63E-02	2.33E-02	1.74E-02	1.68E-02	2.94E-02	2.72E-02	2.61E-02	0.024393	2.40E-02
519	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Table 8.3 (continued)**  
**Impact Multiplier Matrix for the Pensacola Area**  
**(direct, indirect, and induced effects)**

<u>Sector</u>	<u>454</u>	<u>456</u>	<u>463</u>	<u>464</u>	<u>473</u>	<u>488</u>	<u>506</u>	<u>507</u>	<u>509</u>	<u>510</u>	<u>519</u>
1	7.13E-03	2.57E-03	2.70E-03	4.16E-03	2.84E-03	5.16E-03	3.62E-03	3.52E-03	4.02E-03	4.52E-03	4.79E-03
25	6.88E-04	3.19E-05	2.77E-05	8.83E-05	6.29E-05	8.11E-05	8.42E-05	7.95E-05	8.83E-05	1.11E-04	1.22E-04
28	1.81E-03	5.62E-04	5.78E-04	1.30E-03	9.61E-04	1.09E-03	1.11E-03	1.11E-03	1.29E-03	1.83E-03	1.35E-03
48	3.93E-02	3.51E-02	8.09E-02	3.81E-02	2.69E-02	4.19E-02	2.54E-02	2.45E-02	3.01E-02	0.063354	2.41E-02
57	2.70E-05	8.40E-06	8.64E-06	1.94E-05	1.44E-05	1.63E-05	1.66E-05	1.65E-05	1.93E-05	2.74E-05	2.01E-05
58	1.87E-01	4.01E-02	0.039582	1.16E-01	7.74E-02	9.31E-02	9.60E-02	9.65E-02	1.11E-01	1.15E-01	1.21E-01
133	8.97E-03	4.86E-03	5.66E-03	1.42E-02	1.11E-02	1.07E-02	1.01E-02	1.12E-02	1.65E-02	1.29E-02	1.23E-02
433	8.15E-02	3.91E-02	3.59E-02	7.41E-02	6.29E-02	6.46E-02	6.85E-02	6.79E-02	7.81E-02	8.87E-02	7.87E-02
436	2.12E-03	8.51E-04	7.67E-04	2.37E-03	1.64E-03	2.63E-03	2.19E-03	2.03E-03	2.40E-03	3.38E-03	3.02E-03
437	4.48E-03	3.47E-03	2.44E-03	7.41E-03	5.19E-03	4.93E-03	6.78E-03	6.63E-03	1.81E-02	7.28E-03	6.32E-03
447	8.75E-02	1.86E-02	1.84E-02	5.37E-02	3.88E-02	4.30E-02	4.33E-02	4.73E-02	5.23E-02	5.68E-02	5.72E-02
448	6.53E-02	3.45E-02	3.07E-02	9.12E-02	6.42E-02	7.51E-02	8.65E-02	8.00E-02	9.04E-02	1.16E-01	1.27E-01
454	1.029437	1.56E-02	1.45E-02	3.90E-02	2.94E-02	3.38E-02	3.86E-02	3.72E-02	4.16E-02	5.03E-02	5.61E-02
456	0.103051	1.158221	7.70E-02	1.26E-01	1.05E-01	1.09E-01	1.33E-01	1.16E-01	1.34E-01	1.55E-01	1.71E-01
463	1.07E-01	7.98E-02	1.147671	1.10E-01	8.56E-02	1.24E-01	1.10E-01	1.04E-01	1.08E-01	8.45E-02	8.91E-02
464	2.39E-01	1.43E-01	0.131536	1.295952	0.345466	0.280011	0.376838	0.424518	3.25E-01	2.83E-01	3.04E-01
473	2.95E-03	2.69E-03	1.44E-03	3.49E-03	1.007102	3.23E-03	1.95E-03	1.98E-03	4.73E-03	2.27E-03	2.18E-03
488	2.54E-03	1.24E-03	9.84E-04	3.53E-03	2.52E-03	1.002919	3.47E-03	3.19E-03	3.52E-03	4.65E-03	5.21E-03
506	1.70E-03	1.80E-03	2.63E-03	2.08E-03	1.35E-03	1.64E-03	1.043208	1.74E-03	7.62E-03	4.48E-03	1.24E-03
507	1.97E-03	2.28E-03	1.35E-03	2.80E-03	3.95E-03	1.67E-03	1.78E-02	1.025868	0.003101	1.31E-03	1.26E-03
509	3.95E-03	2.90E-03	2.77E-03	3.39E-03	3.19E-03	4.41E-03	2.49E-03	4.00E-03	1.036055	1.93E-03	1.79E-03
510	2.25E-02	2.12E-02	1.48E-02	2.80E-02	2.79E-02	2.50E-02	2.29E-02	2.21E-02	2.92E-02	1.028129	2.79E-02
519	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E+00

Sources: RPC.

Minnesota IMPLAN Group, Inc. 1997.

IMPLAN professional version 1.1 Software, User's Guide, Analysis Guide, and Data Guide. Stillwater, MN.

**Table 8.4**  
**Industries Associated with Operation and Maintenance**  
**of Offshore Oil and Gas Platforms**  
**Adjusted for Commuting Patterns of Offshore Workers**

Code Number			Operation and Maintenance Spending			
			Typical <u>Supply Base</u>	<u>Percent of Total</u>	Florida Panhandle <u>Supply Base</u>	<u>Percent of Total</u>
132	39	Oil & gas operations	X	36.3%		0.0%
1389	57	Other oil and gas services excl. commuting workers	X	9.2%	X	17.5%
1389	57	Other oil and gas services: commuting offshore workers only		9.2%		17.5%
2899	209	Chemical, not elsewhere classified	X	0.9%		0.0%
291	210	Petroleum fuel	X	4.4%		0.0%
324	232	Hydraulic cement	X	0.7%		0.0%
3559	331	Special industry machinery, not elsewhere classified	X	5.1%		0.0%
44	436	Water transportation	X	4.0%	X	7.6%
45	437	Air transportation	X	3.8%	X	7.2%
58	454	Eating and drinking places	X	1.7%	X	3.2%
7359	473	Miscellaneous equipment rent / lease	X	1.4%	X	2.7%
871	506	Environmental and engineering services	X	14.7%	X	27.9%
872	507	Accounting / miscellaneous business services	X	4.2%	X	8.0%
873	509	Test / research services	X	4.5%	X	8.6%
		Total for a typical onshore base		100.0%		
		<b>Total for Florida Panhandle onshore base</b>		<b>52.6%</b>		<b>100.0%</b>

\* Assumes no more than 30% of offshore workers are locals

Sources: RPC

Chevron, *Destine Dome Unit 56, Development and Production Plan*, July, 1997.

The model generates impacts of OCS-related activity on the Florida Panhandle by multiplying a final demand vector of projected OCS expenditures that would occur in the Florida Panhandle by the Type II multiplier matrix.

To examine the impact of OCS activity or a decline in tourism or military expenditures within the Florida Panhandle, the model multiplies these expenditures by sector by a Type II multiplier to generate the change in total output by sector resulting from the scenario inputs chosen. The model would generate change in labor demand by multiplying output per sector by output per employee by sector.

### **Labor Market (Economic-Demographic Interaction) Module**

The Economic-Demographic interface is the component of the model that links the projections of required employment from the economic module (labor demand) with projections of people in the workforce generated by the demographic module (labor supply). In the MMS Florida Panhandle model, interaction is at the metropolitan area rather than at the county level. For instance, in the Pensacola submodel, output is projected for the entire Pensacola area rather than for Escambia and Santa Rosa Counties individually.

The purpose of this module is to ensure that the size of the labor force rises or falls to the level that ensures equilibrium in the labor market over time. When the labor force in any given year is too small (large) for the underlying labor demand, the model will increase (decrease) the number of workers in the area through migration to restore market equilibrium. This type of migration is called economic migration, which affects age cohorts under 65 years of age. Economic migration differs from the retiree migration discussed above in that the availability of work in the area is the primary motivation for economic migration, whereas the state of the job market has little or no impact on the movement of retirees.

The triggering mechanism in the model is the unemployment rate.<sup>5</sup> If the unemployment rate in a given year is less than four percent, then the model will immigrate workers and their families. Four percent figure is based on recent trends in unemployment and makes the economic model more consistent with BEBR's population projections. These low unemployment rates are also consistent with the area's net immigration of recent years (Tables 9,10). If the unemployment rate in a given year is more than thirteen percent, the model will outmigrate workers and their families.<sup>6</sup> If the unemployment rate in a given year is between four percent and thirteen percent, no economic migration occurs. The module distributes economic migrants (1) by the proportion for each county within a metropolitan area that is consistent with baseline economic immigration, and (2) using the age, sex, and race distribution of economic migration (working-age people and their families) developed based on information that BEBR provided (Tables 11.1 - 11.5). These changes are injected back into the demographic module for use in projecting population and labor supply for the next five-year period.

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<sup>5</sup>This approach was adapted from Murdock and Leistriz, et al (1979)

<sup>6</sup>RPC based the 13 percent for the outmigration rate from TAMS.



**Table 9**  
**Unemployment Rates in the Florida Panhandle**  
**(1990 - 1997)**

County	1990	1991	1992	1993	1994	1995	1996	1997
Bay	8.9%	7.9%	9.1%	9.2%	8.5%	6.7%	6.0%	6.6%
Escambia	5.6%	5.7%	5.6%	5.0%	4.7%	4.3%	4.1%	4.2%
Okaloosa	5.7%	6.1%	6.1%	6.1%	5.2%	4.4%	3.8%	3.6%
Santa Rosa	5.3%	5.3%	5.3%	4.5%	4.2%	4.1%	3.5%	3.6%
Walton	6.2%	6.7%	5.3%	5.4%	5.0%	4.4%	4.3%	4.3%
Florida	6.0%	7.4%	8.2%	7.0%	6.6%	5.5%	5.1%	4.8%
United States	5.6%	6.8%	7.4%	6.8%	6.1%	5.6%	5.4%	4.9%

Source: Florida Department of Labor and Employment Security, personal communication.

**Table 10****Immigration into the Florida Panhandle for selected MSA's  
(1970 - 1990)**

Year	Fort Walton Beach: Okaloosa County only	Pensacola: Escambia and Santa Rosa Counties	Panama City: Bay County
1970	2780	1842	854
1971	302	2860	1125
1972	3571	6613	770
1973	282	641	1245
1974	-204	596	3922
1975	5481	5497	1824
1976	-1537	4071	1843
1977	897	434	707
1978	-8	-1532	568
1979	1115	215	1870
1980	-1997	-821	76
1981	1489	2573	1610
1982	1566	2359	2468
1983	1476	3082	1355
1984	2050	3520	4233
1985	2907	2479	6601
1986	1684	952	2789
1987	1795	3385	961
1988	2200	2764	494
1989	1697	3319	-30
1990	1686	1434	-1157

Source: Bureau of Economic and Business Research, University of Florida, personal communication, June Nogle, 1996-1999.

**Table 11.1**

**Inmigration and Outmigration Rates of Workers and Their Families  
(Bay County)**

Distribution of Inmigrating Children

<u>Age</u>	<u>White</u>		<u>Non-White</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
0-4	8%	8%	4%	4%
5-9	8%	8%	4%	4%
10-14	5%	5%	6%	6%
15-19	12%	12%	3%	3%

Distribution of Inmigrating Adults

<u>Age</u>	<u>White</u>		<u>Non-White</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20-24	5%	5%	1%	1%
25-29	3%	3%	2%	2%
30-34	3%	3%	2%	2%
35-39	4%	4%	2%	2%
40-44	7%	7%	1%	1%
45-49	7%	7%	0%	0%
50-54	3%	3%	0%	0%
55-59	5%	5%	0%	0%
60-64	5%	5%	0%	0%

Sources: RPC.

Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 11.2**

**Immigration and Outmigration Rates of Workers and Their Families  
(Escambia County)**

Distribution of Immigrating Children

Immigrating

<u>Age</u>	<u>White</u>		<u>Non-White</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
0-4	0%	0%	8%	8%
5-9	0%	0%	8%	8%
10-14	9%	9%	9%	9%
15-19	8%	8%	8%	8%

Distribution of Immigrating Adults

<u>Age</u>	<u>White</u>		<u>Non-White</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
15-19	15%	15%	0%	0%
20-24	9%	9%	0%	0%
25-29	3%	3%	2%	2%
30-34	0%	0%	0%	0%
35-39	0%	0%	1%	1%
40-44	5%	5%	1%	1%
45-49	6%	6%	1%	1%
50-54	3%	3%	0%	0%
55-59	3%	3%	0%	0%
60-64	1%	1%	0%	0%

Sources: RPC.

Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 11.3**

**Immigration and Outmigration Rates of Workers and Their Families  
(Okaloosa County)**

Distribution of Immigrating Children

<u>Age</u>	<u>White</u>		<u>Non-White</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
0-4	7%	7%	5%	5%
5-9	10%	10%	5%	5%
10-14	10%	10%	3%	3%
15-19	7%	7%	3%	3%

Distribution of Immigrating Adults

<u>Age</u>	<u>White</u>		<u>Non-White</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20-24	10%	10%	2%	2%
25-29	6%	6%	2%	2%
30-34	6%	6%	1%	1%
35-39	4%	4%	1%	1%
40-44	6%	6%	2%	2%
45-49	4%	4%	0%	0%
50-54	2%	3%	0%	0%
55-59	2%	3%	0%	0%
60-64	1%	1%	0%	0%

Sources: RPC.

Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 11.4**

**Immigration and Outmigration Rates of Workers and Their Families  
(Santa Rosa County)**

Distribution of Immigrating Children

<u>Age</u>	<u>White</u>		<u>Non-White</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
0-4	13%	13%	3%	3%
5-9	12%	12%	3%	3%
10-14	7%	7%	3%	3%
15-19	7%	7%	2%	2%

Distribution of Immigrating Adults

<u>Age</u>	<u>White</u>		<u>Non-White</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20-24	0%	0%	1%	1%
25-29	14%	14%	1%	1%
30-34	5%	5%	1%	1%
35-39	4%	4%	1%	1%
40-44	7%	7%	1%	1%
45-49	4%	4%	1%	1%
50-54	4%	4%	0%	0%
55-59	3%	3%	0%	0%
60-64	3%	3%	0%	0%

Sources: RPC.

Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

**Table 11.5**

**Immigration and Outmigration Rates of Workers and Their Families  
(Walton County)**

Distribution of Inmigrating Children

<u>Age</u>	<u>White</u>		<u>Non-White</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
0-4	10%	10%	0%	0%
5-9	10%	10%	0%	0%
10-14	10%	10%	0%	0%
15-19	20%	20%	0%	0%

Distribution of Inmigrating Adults

<u>Age</u>	<u>White</u>		<u>Non-White</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20-24	0%	0%	0%	0%
25-29	0%	0%	0%	0%
30-34	10%	10%	0%	0%
35-39	0%	0%	0%	0%
40-44	0%	0%	0%	0%
45-49	10%	10%	0%	0%
50-54	10%	10%	0%	0%
55-59	10%	10%	0%	0%
60-64	10%	10%	0%	0%

Sources: RPC.

Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

## Baseline Projections

The MMS Florida Panhandle Model baseline projections (1995 - 2045) are the levels of economic activity and population that would likely occur with a continuation of present activity and trends in the area's basic industries prior to any impacts of an onshore support base located in the Port of Panama City or the Port of Pensacola that would support OCS activity in the Eastern Gulf of Mexico.

Working from a target population projection, RPC calibrated the model's employment, population, and final demand projections to be consistent with federal and state employment and population projections as well as IMPLAN's output per employee ratios. RPC took the following steps to calibrate the baselines for the three metropolitan areas:

### *Created a Baseline Population Consistent with BEBR / BEA Population Projections*

In preparing the model's baseline projections, the RPC team gathered historical and projected baselines from two sources: Bureau of Economic and Business Research at the University of Florida at Gainesville (BEBR) and the U.S. Bureau of Economic Analysis (BEA). The two baselines used two different approaches and two projection periods - the BEBR projections went to 2020, while the BEA projections went to 2045. (See Appendices A and B)

BEBR uses a cohort-component model to project population without the direct interaction with an economic module.<sup>7</sup> Migration for working-age people and their children are based on historical immigration and outmigration rates, rather than projected economic conditions such as output and labor demand and supply.

In 1995, the BEA published projections of employment and earnings from 1995 to 2045. This set of projections is commonly known as the "OBERS" projections, which have been used by the Army Corps of Engineers and other agencies and firms working on long-term water development projects. In these projections, the BEA started with U.S. Census population projections on a national level and used long-term shares in employment by industry group to allocate employment and population among states and MSAs across the United States.

Because local and state government officials use BEBR and BEA figures in making long-term planning decisions, RPC calibrated its model so that the population baselines of the model were consistent with the population projections of these sources. The BEA and BEBR numbers for the Panama City and Fort Walton Beach areas were consistent, after adjusting for more recent U.S. Census projections (Table 12). After consulting with Dr. June Nogle, a demographer at BEBR, RPC adjusted the BEA's Pensacola MSA population projections to make them consistent with the BEBR's projections. Table 13 shows the baseline population projections of the model.

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<sup>7</sup> BEBR (1997), pp. 1-4 describes BEBR's methodology in detail.



**Table 12**

**Comparison of Census Bureau U.S. Population Projections  
(millions of people)**

<u>Year</u>	<u>Projections</u>		<u>Difference</u>	
	<u>Published in 1996</u>	<u>Published in 1993</u>	<u>People</u>	<u>%</u>
2000	274.63	276.24	-1.61	-0.58%
2005	285.98	288.29	-2.31	-0.80%
2010	297.72	300.43	-2.71	-0.90%
2015	310.13	313.12	-2.98	-0.95%
2025	335.05	338.34	-3.29	-0.97%
2045	381.71	381.78	-0.07	-0.02%

Source: U.S. Bureau of the Census, *Population of the United States by Age, Sex and Hispanic Origin*, P25-1104 (November 1993) and P25-1130 (February 1996).

**Table 13**  
**Population in the Florida Panhandle**  
**Baseline Scenario**

Area	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
Fort Walton Beach	196,122	216,005	235,159	254,195	274,218	292,374	311,399	329,090	343,428	355,713	367,255
Okaloosa County	162,707	178,803	194,199	209,523	225,720	240,693	256,235	270,726	282,836	293,458	303,489
Walton County	33,415	37,202	40,959	44,672	48,498	51,681	55,165	58,364	60,592	62,255	63,766
Panama City	139,173	150,277	162,188	174,575	187,536	198,341	210,054	218,838	227,033	234,538	241,999
Bay County	139,173	150,277	162,188	174,575	187,536	198,341	210,054	218,838	227,033	234,538	241,999
Pensacola	377,822	410,086	441,204	469,488	502,482	526,239	547,200	567,029	584,973	601,966	618,202
Escambia County	281,162	296,578	316,849	334,339	352,894	366,819	379,386	390,820	400,920	410,113	418,437
Santa Rosa County	96,660	113,508	124,354	135,149	149,589	159,420	167,814	176,209	184,053	191,853	199,765
Total	713,117	776,368	838,550	898,258	964,236	1,016,954	1,068,653	1,114,957	1,155,434	1,192,217	1,227,456

Sources: RPC.  
 Florida Bureau of Business and Economic Research, personal communication, June Nogle, 1996-1999.

*Adjusted BEA Employment Projections to be Consistent with 1994 IMPLAN Employment Data*

To create a baseline for the time frame involved with development and production of oil and gas from Lease Sale 181, RPC combined the sectoral detail of a single year that IMPLAN provides with the 50-year time frame of the less-detailed OBERS projections from 1995 to 2045. Tables 14.1-14.3 show the 1994 employment and output figures IMPLAN generated for the three study areas under this sectoring scheme, and Tables 15.1-15.3 show the reconciliation of IMPLAN and BEA employment by subsector in 1994. After reconciling the sectors and subsectors, RPC used adjustment factors that reconciled the different classification of employment that IMPLAN and the BEA used. IMPLAN used number of jobs, and the BEA figures projected the number of workers, assuming that a number of people held more than one job and that the number of jobs per worker changed over time (Table 16). The MMS Florida Panhandle model measures employment as the number of people employed. RPC projected subsectors as a constant percentage of a sector over time.

**Table 14.1**

**Output and Employment per \$1 Million of Output by Sector in 1994  
(Fort Walton Beach Area)**

Description	Output (\$ Millions)	Employment	Employees per \$1 Million
Agriculture	61.95	1,512	24.408
Commercial Fishing	3.80	172	45.257
Mining	5.94	53	8.927
Construction	496.95	7,469	15.030
Maintenance and Repair Oil & Gas Wells	0.22	22	98.576
Non-Durable Manufacturing	184.84	2,090	11.307
Durable Manufacturing	435.26	3,397	7.805
TCPU	315.56	2,297	7.279
Water Transportation	16.74	95	5.675
Air Transportation	28.42	209	7.354
Wholesale Trade	208.09	2,689	12.922
Trade	420.70	13,429	31.921
Eating & Drinking	272.02	7,997	29.398
FIRE Excluding Rentals	549.54	2,307	4.198
Hotels, Lodging, & Rentals	821.41	6,469	7.875
Services	999.17	22,746	22.765
Equipment Rental and Leasing	16.01	240	14.987
Amusement and Recreation Services	32.27	810	25.097
Engineering, Architectural Services	54.24	881	16.242
Accounting, Auditing and Bookkeeping	18.60	382	20.543
Research, Development & Testing Services	71.38	1,085	15.200
Government	583.45	18,019	30.884
Federal Government - Military	479.58	15,808	32.962
Total	6,076.16	110,178	18.133

Sources: RPC.

Minnesota IMPLAN Group, Inc. 1997.

IMPLAN professional version 1.1 Software, User's Guide, Analysis Guide, and Data Guide. Stillwater, MN.

**Table 14.2**

**Output and Employment per \$1 Million of Output by Sector in 1994  
(Panama City Area)**

<u>Description</u>	<u>Output (\$ Millions)</u>	<u>Employment</u>	<u>Employees per \$1 Million</u>
Agriculture	12.28	532	43.332
Commercial Fishing	0.67	34	51.004
Mining	2.56	21	8.214
Construction	468.37	6,061	12.941
Maintenance and Repair Oil & Gas Wells	0.12	12	100.231
Non-Durable Manufacturing	246.20	1,390	5.646
Durable Manufacturing	239.14	1,658	6.933
TCPU	322.10	2,183	6.778
Water Transportation	66.42	358	5.390
Air Transportation	21.27	177	8.323
Wholesale Trade	234.93	2,764	11.765
Trade	351.64	10,977	31.216
Eating & Drinking	241.59	7,034	29.116
FIRE Excluding Rentals	448.68	2,048	4.565
Hotels, Lodging, & Rentals	584.61	5,695	9.742
Services	664.98	14,552	21.883
Equipment Rental and Leasing	14.88	182	12.230
Amusement and Recreation Services	48.57	1,192	24.544
Engineering, Architectural Services	40.50	679	16.764
Accounting, Auditing and Bookkeeping	22.90	412	17.989
Research, Development & Testing Services	25.66	522	20.342
Government	457.13	13,334	29.169
Federal Government - Military	169.03	5,802	34.325
<b>Total</b>	<b>4,684.21</b>	<b>77,619</b>	<b>16.570</b>

Sources: RPC.

Minnesota IMPLAN Group, Inc. 1997.

MPLAN professional version 1.1 Software, User's Guide, Analysis Guide, and Data Guide. Stillwater, MN.

**Table 14.3****Output and Employment per \$1 Million of Output by Sector in 1994  
(Pensacola Area)**

Description	Output (\$ Millions)	Employment	Employees per \$1 Million
Agriculture	128.85	2,552	19.806
Commercial Fishing	2.42	129	53.388
Mining	18.19	376	20.670
Construction	1,162.96	15,786	13.574
Maintenance and Repair Oil & Gas Wells	0.27	46	169.142
Non-Durable Manufacturing	1,529.74	7,766	5.077
Durable Manufacturing	499.45	4,318	8.646
TCPU	904.97	5,392	5.958
Water Transportation	84.90	468	5.512
Air Transportation	142.10	1,071	7.537
Wholesale Trade	623.40	7,358	11.803
Trade	730.41	22,212	30.410
Eating & Drinking	369.04	10,988	29.775
FIRE Excluding Rentals	1,065.00	4,971	4.668
Hotels, Lodging, & Rentals	643.50	4,723	7.340
Services	2,181.26	50,180	23.005
Equipment Rental and Leasing	44.61	536	12.016
Amusement and Recreation Services	25.14	735	29.231
Engineering, Architectural Services	119.21	2,003	16.802
Accounting, Auditing and Bookkeeping	50.36	995	19.756
Research, Development & Testing Services	19.95	508	25.470
Government	1,189.59	31,142	26.179
Federal Government - Military	336.43	10,127	30.101
Total	11,871.76	184,382	15.531

Sources: RPC.

Minnesota IMPLAN Group, Inc. 1997.

IMPLAN professional version 1.1 Software, User's Guide, Analysis Guide, and Data Guide. Stillwater, MN.

**Table 15.1**

**Comparison of IMPLAN and BEA Employment by Sector in 1994  
(Fort Walton Beach Area)  
(in thousands)**

<u>Sector</u>	<u>IMPLAN</u>	<u>BEA</u>
All-Industry Total Jobs	110.178	101.368
Farm, Ag Services, Forestry	1.684	1.943
Mining	0.053	0.114
Construction	7.491	5.581
Manufacturing	5.487	5.449
Durables	3.397	3.373
Nondurables	2.090	2.076
Transportation, Communications, and Utilities	2.601	2.599
Wholesale Trade	2.689	1.557
Retail Trade	21.426	20.048
Finance, Insurance and Real Estate	2.307	6.126
Services	32.613	26.650
Government	33.827	31.301
Military	15.808	16.087
Other Government	18.019	15.214

Sources: Minnesota IMPLAN Group, Inc. 1997. IMPLAN professional version 1.1 Software, User's Guide, Analysis Guide, and Data Guide. Stillwater, MN. RPC.

U.S. Bureau of Economic Analysis 1998. Regional economic information system 1969-1996. U.S. Department of Commerce. Washington, DC.

**Table 15.2**

**Comparison of IMPLAN and BEA Employment by Sector in 1994  
(Panama City Area)  
(in thousands)**

<u>Sector</u>	<u>IMPLAN</u>	<u>BEA</u>
All-Industry Total Jobs	77.619	77.619
Farm, Ag Services, Forestry	0.566	1.068
Mining	0.021	0.043
Construction	6.073	5.269
Manufacturing	3.048	3.111
Durables	1.658	1.692
Nondurables	1.390	1.419
Transportation, Communications, and Utilities	2.718	2.605
Wholesale Trade	2.764	2.573
Retail Trade	18.011	18.762
Finance, Insurance and Real Estate	2.048	5.354
Services	23.234	21.213
Government	19.136	17.623
Military	5.802	5.831
Other Government	13.334	11.792

Sources: Minnesota IMPLAN Group, Inc. 1997. IMPLAN professional version 1.1 Software, User's Guide, Analysis Guide, and Data Guide. Stillwater, MN.  
RPC.

U.S. Bureau of Economic Analysis 1998. Regional economic information system 1969-1996.  
U.S. Department of Commerce. Washington, DC.



**Table 15.3**

**Comparison of IMPLAN and BEA Employment by Sector in 1994  
(Pensacola Area) (in thousands)**

<u>Sector</u>	<u>IMPLAN</u>	<u>BEA</u>
All-Industry Total Jobs	184.382	179.826
Farm, Ag Services, Forestry	2.681	3.161
Mining	0.376	0.600
Construction	15.832	12.475
Manufacturing	12.084	11.961
Durables	4.318	4.274
Nondurables	7.766	7.687
Transportation, Communications, and Utilities	6.931	7.940
Wholesale Trade	7.358	6.308
Retail Trade	33.200	33.398
Finance, Insurance and Real Estate	4.971	9.962
Services	59.680	55.492
Government	41.269	38.529
Military	10.127	10.794
Other Government	31.142	27.735

Sources: Minnesota IMPLAN Group, Inc. 1997. IMPLAN professional version 1.1 Software, User's Guide, Analysis Guide, and Data Guide. Stillwater, MN.  
RPC.  
U.S. Bureau of Economic Analysis 1998. Regional economic information system 1969-1996. U.S. Department of Commerce. Washington, DC.

**Table 16**  
**Adjustment Factor - Jobs per Worker**  
**(1995-2045)**

<u>Year</u>	<u>Adjustment Factor</u>
1995	1.1580
2000	1.1598
2005	1.1616
2010	1.1634
2015	1.1652
2020	1.1670
2025	1.1688
2030	1.1706
2035	1.1724
2040	1.1742
2045	1.1760

Source: Bureau of Economic and Business Research 1995.  
OBERS Projections, Population Estimates and Projections. University  
Press of Florida, FL.

*Using the Model to Calibrate Employment, Modifying to the Adjusted BEA Employment Projections to bring the Model's Baseline Population Figures Close to BEBR / BEA Population Projections*

RPC made a final adjustment to make the model's baseline populations within a few percent of the BEBR / BEA population baseline in each year of the projection period. The Fort Walton Beach and Panama City baselines needed a simple 3.5 to 4.0 percent decrease from the adjusted BEA numbers. The Pensacola baseline required a much larger adjustment that varied over time (15 percent around 2000 rising to 19-20 percent by 2030).

*Divide RPC Baseline Employment Projections Among 23 Sectors*

After RPC calibrated employment so that the model's baseline population would approximate BEBR / BEA population projections, RPC subdivided employment among sectors based on the reconciliation of IMPLAN and BEA employment by subsector in 1994 (Tables 17.1-17.3). Having established baseline employment by sector, RPC used output by worker by sector (Tables 14.1-14.3), to convert baseline employment into baseline output (Tables 18.1-18.3).

**Table 17.1**  
**Baseline Employment by Major Non-Farm Industry for the Florida Panhandle**  
**(Fort Walton Beach) (in thousands of workers)**

<u>Sector</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>2045</u>
Agriculture	1.265	1.394	1.574	1.634	1.752	1.748	1.743	1.804	1.867	1.931	1.998
Commercial Fishing	0.144	0.159	0.179	0.186	0.199	0.199	0.198	0.205	0.212	0.220	0.227
Mining	0.035	0.027	0.027	0.027	0.026	0.026	0.026	0.026	0.026	0.026	0.026
Construction	6.619	7.327	8.149	8.784	9.285	9.582	9.885	10.227	10.578	10.941	11.314
Maintenance and Repair Oil & Gas Wells	0.015	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
Non-Durable Manufacturing	1.686	2.052	2.201	2.279	2.349	2.424	2.499	2.560	2.622	2.685	2.749
Durable Manufacturing	2.740	2.708	2.690	2.685	2.674	2.585	2.499	2.541	2.583	2.626	2.668
TCPU	1.941	2.233	2.433	2.571	2.702	2.766	2.831	2.918	3.007	3.099	3.193
Water Transportation	0.080	0.092	0.101	0.106	0.112	0.114	0.117	0.121	0.124	0.128	0.132
Air Transportation	0.177	0.203	0.221	0.234	0.246	0.252	0.258	0.265	0.274	0.282	0.291
Wholesale Trade	2.260	2.674	3.216	3.349	3.474	3.602	3.733	3.868	4.007	4.151	4.299
Retail Trade	11.510	13.318	14.696	15.914	16.759	17.225	17.698	18.301	18.922	19.563	20.222
Eating & Drinking	6.855	7.931	8.752	9.477	9.980	10.258	10.539	10.899	11.268	11.650	12.042
FIRE Excluding Real Estate Rentals	2.038	2.401	2.730	3.023	3.249	3.394	3.545	3.687	3.833	3.985	4.142
Hotels, Lodging Places, and Rentals	5.716	6.734	7.654	8.476	9.109	9.518	9.942	10.338	10.748	11.174	11.614
Services	20.097	23.676	26.914	29.803	32.029	33.465	34.957	36.348	37.790	39.288	40.838
Equipment Rental and Leasing	0.212	0.250	0.284	0.314	0.338	0.353	0.369	0.384	0.399	0.415	0.431
Amusement and Recreation Services, N.E.C.	0.716	0.843	0.958	1.061	1.141	1.192	1.245	1.294	1.346	1.399	1.454
Engineering, Architectural Services	0.778	0.917	1.042	1.154	1.241	1.296	1.354	1.408	1.464	1.522	1.582
Accounting, Auditing and Bookkeeping	0.338	0.398	0.452	0.501	0.538	0.562	0.587	0.610	0.635	0.660	0.686
Research, Development & Testing Services	0.959	1.129	1.284	1.422	1.528	1.596	1.667	1.734	1.803	1.874	1.948
Government	14.630	16.697	17.548	18.377	18.962	19.203	19.441	19.938	20.445	20.964	21.492
Federal Government - Military	13.039	13.130	13.045	13.021	12.963	12.934	12.901	12.913	12.922	12.931	12.937
Total	93.848	106.305	116.162	124.410	130.667	134.305	138.048	142.400	146.886	151.524	156.295

Source: RPC

**Table 17.2**

**Baseline Employment by Major Non-Farm Industry for the Florida Panhandle  
(Panama City)  
(in thousands of workers)**

<u>Sector</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>2045</u>
Agriculture	0.50	0.48	0.52	0.56	0.60	0.61	0.63	0.64	0.66	0.68	0.70
Commercial Fishing	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Mining	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Construction	5.56	4.94	5.29	5.57	5.83	5.87	5.96	6.03	6.21	6.40	6.60
Maintenance and Repair Oil & Gas Wells	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Non-Durable Manufacturing	1.28	1.35	1.42	1.42	1.42	1.40	1.40	1.40	1.42	1.44	1.46
Durable Manufacturing	1.52	1.19	1.11	1.03	1.02	0.97	0.94	0.92	0.92	0.92	0.92
TCPU	1.91	2.17	2.36	2.50	2.56	2.57	2.60	2.62	2.69	2.76	2.83
Water Transportation	0.31	0.36	0.39	0.41	0.42	0.42	0.43	0.43	0.44	0.45	0.46
Air Transportation	0.15	0.18	0.19	0.20	0.21	0.21	0.21	0.21	0.22	0.22	0.23
Wholesale Trade	2.49	2.78	3.03	3.29	3.45	3.55	3.67	3.71	3.82	3.93	4.05
Retail Trade	9.67	9.65	10.56	11.41	11.94	12.15	12.46	12.62	13.03	13.44	13.86
Eating & Drinking	6.20	6.19	6.77	7.31	7.65	7.79	7.99	8.09	8.35	8.61	8.88
FIRE Excluding Real Estate Rentals	1.85	1.98	2.24	2.46	2.64	2.72	2.83	2.89	3.00	3.12	3.24
Hotels, Lodging Places, and Rentals	5.14	5.52	6.24	6.85	7.33	7.57	7.87	8.03	8.34	8.66	9.00
Services	13.14	14.10	15.95	17.51	18.74	19.33	20.11	20.51	21.31	22.14	22.99
Equipment Rental and Leasing	0.16	0.18	0.20	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29
Amusement and Recreation Services, N.E.C.	1.08	1.15	1.31	1.43	1.53	1.58	1.65	1.68	1.75	1.81	1.88
Engineering, Architectural Services	0.61	0.66	0.74	0.82	0.87	0.90	0.94	0.96	0.99	1.03	1.07
Accounting, Auditing and Bookkeeping	0.37	0.40	0.45	0.50	0.53	0.55	0.57	0.58	0.60	0.63	0.65
Research, Development & Testing Services	0.47	0.51	0.57	0.63	0.67	0.69	0.72	0.74	0.76	0.79	0.82
Government	11.60	12.16	12.94	13.58	13.99	13.99	14.11	14.21	14.58	14.96	15.34
Federal Government - Military	5.00	4.83	4.81	4.81	4.80	4.75	4.75	4.67	4.67	4.68	4.68
<b>Total</b>	<b>69.06</b>	<b>70.81</b>	<b>77.15</b>	<b>82.58</b>	<b>86.51</b>	<b>87.93</b>	<b>90.15</b>	<b>91.25</b>	<b>94.09</b>	<b>97.01</b>	<b>100.03</b>

Source: RPC

**Table 17.3**  
**Baseline Employment by Major Non-Farm Industry for the Florida Panhandle**  
**( Pensacola )**  
**(in thousands of workers)**

<u>Sector</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>2045</u>
Agriculture	2.661	3.145	3.377	3.547	3.691	3.774	3.858	3.948	4.040	4.134	4.229
Commercial Fishing	0.135	0.159	0.171	0.179	0.187	0.191	0.195	0.200	0.204	0.209	0.214
Mining	0.322	0.310	0.307	0.306	0.311	0.310	0.309	0.310	0.310	0.310	0.310
Construction	17.462	19.211	20.539	21.886	23.069	23.522	23.979	24.709	25.458	26.228	27.019
Maintenance and Repair Oil and Gas Wells	0.039	0.038	0.038	0.037	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Non-Durable Manufacturing	7.802	8.208	7.674	7.323	7.097	6.740	6.400	6.348	6.297	6.245	6.193
Durable Manufacturing	4.338	4.948	5.005	4.994	5.070	5.062	5.053	5.112	5.172	5.232	5.293
TCPU	5.869	5.821	5.982	6.192	6.362	6.353	6.341	6.439	6.538	6.637	6.738
Water Transportation	0.509	0.505	0.519	0.537	0.552	0.551	0.550	0.559	0.567	0.576	0.585
Air Transportation	1.166	1.156	1.188	1.230	1.264	1.262	1.260	1.279	1.299	1.318	1.338
Wholesale Trade	7.626	9.483	10.022	10.640	11.193	11.305	11.415	11.706	12.004	12.308	12.619
Retail Trade	23.426	26.650	27.897	29.149	30.409	30.656	30.899	31.587	32.289	33.003	33.730
Eating & Drinking	11.589	13.183	13.800	14.419	15.043	15.165	15.285	15.626	15.973	16.326	16.686
FIRE Excluding Real Estate Rentals	5.337	6.291	6.848	7.330	7.820	8.007	8.196	8.444	8.698	8.959	9.227
Hotels, Lodging Places, and Rentals	5.071	5.977	6.506	6.965	7.430	7.607	7.787	8.022	8.264	8.512	8.767
Services	53.877	63.501	69.128	73.995	78.937	80.822	82.737	85.234	87.800	90.435	93.141
Equipment Rental and Leasing	0.575	0.678	0.738	0.790	0.843	0.863	0.884	0.910	0.938	0.966	0.995
Amusement and Recreation Services, N.E.C.	0.789	0.930	1.013	1.084	1.156	1.184	1.212	1.248	1.286	1.325	1.364
Engineering, Architectural Services	2.151	2.535	2.759	2.954	3.151	3.226	3.303	3.402	3.505	3.610	3.718
Accounting, Auditing and Bookkeeping	1.068	1.259	1.371	1.467	1.565	1.603	1.641	1.690	1.741	1.793	1.847
Research, Development & Testing Services	0.545	0.643	0.700	0.749	0.799	0.818	0.838	0.863	0.889	0.916	0.943
Government	30.804	37.745	38.570	39.223	40.196	40.008	39.813	40.426	41.047	41.673	42.305
Federal Government - Military	10.010	10.966	10.846	10.822	10.987	10.969	10.950	10.959	10.967	10.975	10.981
<b>Total</b>	<b>193.173</b>	<b>223.342</b>	<b>234.998</b>	<b>245.820</b>	<b>257.169</b>	<b>260.036</b>	<b>262.943</b>	<b>269.060</b>	<b>275.322</b>	<b>281.728</b>	<b>288.279</b>

Source: RPC

**Table 18.1**

**Baseline Output by Major Non-Farm Industry for the Florida Panhandle  
(Fort Walton Beach)  
(in millions of 1994 dollars)**

<u>Sector</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>2045</u>
Agriculture	60.02	66.24	74.90	77.87	83.62	83.56	83.47	86.52	89.66	92.91	96.26
Commercial Fishing	3.68	4.06	4.60	4.78	5.13	5.13	5.12	5.31	5.50	5.70	5.91
Mining	4.57	3.48	3.46	3.46	3.45	3.45	3.44	3.45	3.46	3.47	3.48
Construction	510.00	565.41	629.80	679.97	719.85	744.01	768.75	796.51	825.15	854.76	885.25
Maintenance and Repair Oil and Gas Wells	0.17	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Non-Durable Manufacturing	172.64	210.43	226.14	234.45	242.12	250.15	258.37	265.05	271.86	278.83	285.92
Durable Manufacturing	406.52	402.42	400.44	400.31	399.15	386.60	374.32	381.14	388.03	395.01	402.04
TCPU	308.76	355.72	388.22	410.93	432.50	443.42	454.48	469.20	484.33	499.91	515.88
Water Transportation	16.38	18.87	20.60	21.80	22.95	23.52	24.11	24.89	25.69	26.52	27.37
Air Transportation	27.81	32.04	34.97	37.01	38.95	39.94	40.94	42.26	43.62	45.03	46.46
Wholesale Trade	202.51	239.99	289.08	301.56	313.21	325.27	337.69	350.41	363.55	377.16	391.20
Retail Trade	417.57	483.91	534.80	580.01	611.77	629.74	648.03	671.15	694.99	719.63	744.99
Eating & Drinking	270.00	312.90	345.80	375.04	395.57	407.19	419.02	433.97	449.38	465.31	481.71
FIRE Excluding Real Estate Rentals	562.25	663.43	755.32	837.69	901.66	943.54	987.12	1,027.99	1,070.41	1,114.55	1,160.28
Hotels, Lodging Places, and Rentals	840.41	991.64	1,129.00	1,252.12	1,347.73	1,410.33	1,475.47	1,536.57	1,599.97	1,665.94	1,734.31
Services	1,022.29	1,206.24	1,373.32	1,523.09	1,639.39	1,715.54	1,794.77	1,869.09	1,946.22	2,026.46	2,109.62
Equipment Rental and Leasing	16.38	19.33	22.01	24.41	26.28	27.50	28.77	29.96	31.19	32.48	33.81
Amusement and Recreation Services, N.E.C.	33.02	38.96	44.36	49.20	52.95	55.41	57.97	60.37	62.87	65.46	68.14
Engineering, Architectural Services	55.50	65.48	74.56	82.69	89.00	93.13	97.44	101.47	105.66	110.01	114.53
Accounting, Auditing and Bookkeeping	19.03	22.45	25.56	28.35	30.51	31.93	33.40	34.78	36.22	37.71	39.26
Research, Development & Testing Services	73.03	86.17	98.11	108.81	117.12	122.56	128.22	133.53	139.04	144.77	150.71
Government	548.55	627.05	660.02	692.27	715.43	725.62	735.74	755.73	776.14	797.07	818.38
Federal Government - Military	458.07	462.00	459.72	459.58	458.25	457.92	457.46	458.58	459.62	460.64	461.57
Total	6,029.15	6,878.38	7,594.91	8,185.52	8,646.71	8,925.60	9,214.25	9,538.07	9,872.68	10,219.46	10,577.20

Source: RPC

**Table 18.2**  
**Baseline Output by Major Non-Farm Industry for the Florida Panhandle**  
**(Panama City)**  
**(in millions of 1994 dollars)**

<u>Sector</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>2045</u>
Agriculture	13.29	12.95	13.99	15.10	16.15	16.55	17.10	17.34	17.91	18.49	19.10
Commercial Fishing	0.72	0.70	0.76	0.82	0.88	0.90	0.93	0.94	0.97	1.00	1.04
Mining	1.61	1.52	1.52	1.52	1.52	1.51	1.51	1.49	1.49	1.49	1.49
Construction	497.84	442.75	475.13	501.08	525.36	529.40	537.91	545.18	562.88	581.00	599.72
Maintenance and Repair Oil and Gas Wells	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Non-Durable Manufacturing	261.63	276.90	292.55	293.10	292.67	290.35	290.44	289.84	294.65	299.45	304.35
Durable Manufacturing	254.12	198.96	185.29	172.38	172.12	164.06	157.67	155.24	155.69	156.11	156.53
TCPU	326.32	371.15	405.07	429.02	439.96	442.18	448.10	452.08	464.60	477.36	490.47
Water Transportation	67.29	76.54	83.53	88.47	90.73	91.18	92.40	93.22	95.81	98.44	101.14
Air Transportation	21.54	24.50	26.74	28.32	29.05	29.19	29.58	29.85	30.67	31.52	32.38
Wholesale Trade	245.03	274.12	299.17	325.42	342.04	351.83	364.90	369.27	380.68	392.34	404.37
Retail Trade	358.66	358.61	392.91	425.28	445.71	454.20	466.70	473.41	489.19	505.36	522.08
Eating & Drinking	246.41	246.37	269.94	292.18	306.21	312.05	320.63	325.24	336.08	347.19	358.68
FIRE Excluding Real Estate Rentals	469.05	504.15	571.28	628.07	673.17	695.64	724.85	740.40	770.41	801.44	833.75
Hotels, Lodging Places, and Rentals	611.16	656.88	744.35	818.34	877.12	906.38	944.45	964.71	1,003.81	1,044.24	1,086.34
Services	695.18	747.19	846.69	930.85	997.71	1,031.00	1,074.30	1,097.35	1,141.82	1,187.81	1,235.70
Equipment Rental and Leasing	15.56	16.72	18.95	20.83	22.33	23.07	24.04	24.56	25.55	26.58	27.65
Amusement and Recreation Services, N.E.C.	50.77	54.57	61.84	67.98	72.87	75.30	78.46	80.14	83.39	86.75	90.25
Engineering, Architectural Services	42.34	45.51	51.57	56.70	60.77	62.80	65.43	66.84	69.55	72.35	75.26
Accounting, Auditing and Bookkeeping	23.94	25.73	29.16	32.06	34.36	35.51	37.00	37.79	39.33	40.91	42.56
Research, Development & Testing Services	26.83	28.83	32.67	35.92	38.50	39.78	41.46	42.34	44.06	45.84	47.68
Government	460.39	483.61	515.21	541.62	558.97	559.91	565.52	570.45	586.17	602.17	618.62
Federal Government - Military	168.70	163.14	162.78	163.09	162.85	161.56	161.61	159.11	159.57	160.00	160.43
Total	4,858.46	5,011.47	5,481.19	5,868.23	6,161.12	6,274.41	6,445.07	6,536.87	6,754.34	6,977.92	7,209.65

Source: RPC

**Table 18.3**  
**Baseline Output by Major Non-Farm Industry for the Florida Panhandle**  
**(Pensacola)**  
**(in millions of 1994 dollars)**

<u>Sector</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>2045</u>
Agriculture	155.60	184.16	198.07	208.34	217.14	222.37	227.68	233.35	239.15	245.06	251.11
Commercial Fishing	2.92	3.45	3.71	3.91	4.07	4.17	4.27	4.38	4.48	4.60	4.71
Mining	18.05	17.39	17.23	17.22	17.50	17.50	17.50	17.54	17.58	17.62	17.66
Construction	1,489.70	1,641.45	1,757.60	1,875.82	1,980.24	2,022.28	2,064.77	2,130.82	2,198.83	2,268.81	2,340.79
Maintenance&Repair Oil & Gas Wells	0.27	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Non-Durable Manufacturing	1,779.63	1,875.19	1,755.84	1,678.29	1,628.93	1,549.39	1,473.43	1,463.80	1,454.12	1,444.39	1,434.58
Durable Manufacturing	581.09	663.75	672.48	671.99	683.29	683.28	683.12	692.23	701.40	710.64	719.93
TCPU	1,140.68	1,133.13	1,166.25	1,209.12	1,244.25	1,244.23	1,243.94	1,265.05	1,286.42	1,308.04	1,329.90
Water Transportation	107.02	106.31	109.42	113.44	116.74	116.73	116.71	118.69	120.69	122.72	124.77
Air Transportation	179.11	177.93	183.13	189.86	195.38	195.38	195.33	198.64	202.00	205.40	208.83
Wholesale Trade	748.19	931.83	986.33	1,048.80	1,104.98	1,117.73	1,130.39	1,161.00	1,192.35	1,224.43	1,257.26
Retail Trade	892.06	1,016.38	1,065.59	1,115.13	1,165.14	1,176.42	1,187.57	1,215.90	1,244.82	1,274.31	1,304.37
Eating & Drinking	450.71	513.52	538.39	563.42	588.68	594.39	600.02	614.33	628.94	643.84	659.03
FIRE Excluding Real Estate Rentals	1,324.12	1,563.09	1,704.24	1,827.06	1,952.09	2,001.81	2,052.40	2,117.58	2,184.68	2,253.72	2,324.72
Hotels, Lodging Places, & Rentals	800.07	944.46	1,029.74	1,103.95	1,179.50	1,209.54	1,240.11	1,279.50	1,320.04	1,361.75	1,404.65
Services	2,711.97	3,201.41	3,490.50	3,742.05	3,998.13	4,099.95	4,203.57	4,337.08	4,474.50	4,615.90	4,761.32
Equipment Rental and Leasing	55.46	65.47	71.38	76.52	81.76	83.84	85.96	88.69	91.50	94.39	97.37
Amusement&Recreation Srvc, N.E.C.	31.26	36.90	40.24	43.14	46.09	47.26	48.46	49.99	51.58	53.21	54.89
Engineering, Architectural Services	148.22	174.97	190.77	204.52	218.51	224.08	229.74	237.04	244.55	252.28	260.22
Accounting, Auditing & Bookkeeping	62.62	73.92	80.59	86.40	92.32	94.67	97.06	100.14	103.31	106.58	109.94
Research,Development&Testing Srvc	24.80	29.27	31.92	34.22	36.56	37.49	38.44	39.66	40.91	42.21	43.54
Government	1,362.61	1,672.24	1,711.43	1,743.09	1,789.12	1,783.50	1,777.52	1,807.70	1,838.26	1,869.17	1,900.41
Federal Government - Military	385.08	422.51	418.56	418.25	425.29	425.28	425.18	426.19	427.17	428.11	429.02
Total	14,451.24	16,449.00	17,223.67	17,974.80	18,765.98	18,951.55	19,143.43	19,599.57	20,067.56	20,547.44	21,039.27



*Adjusted distribution of migrants within a metropolitan area to make the model's baseline population projections consistent with BEBR / BEA at the county level.*

To calibrate the MMS Florida Panhandle model, RPC ran iterations of the model to recreate BEBR's and BEA's baseline population projections by area and by counties within an area. RPC found that the allocation percentages in Table 19 produced a close approximation of these baseline population projections. The model uses these allocations in all of its scenarios.

**Table 19**

**Allocation of Economic Migration Between Counties in a Metropolitan Area  
(in percent of total)**

<u>Area and Counties</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015 - 2045</u>
Fort Walton Beach Area	100%	100%	100%	100%	100%
Okaloosa County	83%	70%	70%	70%	70%
Walton County	18%	30%	30%	30%	30%
Pensacola Area	100%	100%	100%	100%	100%
Escambia County	60%	65%	55%	45%	40%
Santa Rosa County	40%	35%	45%	55%	60%
Panama City Area	100%	100%	100%	100%	100%
Bay County	100%	100%	100%	100%	100%

The MMS Florida Panhandle model confirms that all three areas experience economic migration in the baseline from 1995 to 2045 (Table 20).

**Table 20**

**Annual Migration in the Florida Panhandle  
Baseline Scenario**

<u>Area</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>
Fort Walton Beach	0	1,677	1,741	1,842	1,914	1,710	1,881	1,938
Okaloosa County	NA	1,174	1,219	1,290	1,340	1,197	1,317	1,356
Walton County	NA	503	522	553	574	513	564	581
Panama City	0	638	1,075	1,233	1,250	944	1,142	825
Bay County	NA	638	1,075	1,233	1,250	944	1,142	825
Pensacola	0	0	2,760	2,461	3,311	2,033	1,761	2,077
Escambia County	NA	NA	1,518	1,108	1,324	813	704	831
Santa Rosa	NA	NA	1,242	1,354	1,987	1,220	1,056	1,246
Total	0	2,316	5,576	5,536	6,475	4,688	4,784	4,840

Source: RPC.

### *Created a Baseline for Tourism Sector*

Using information derived from the literature review of the tourism industry in the Florida Panhandle, RPC used an approach based on a paper to estimate tourist expenditures in the Pensacola area to approximate a tourism baseline for the MMS Florida Panhandle model.<sup>8</sup> This approach identifies a range of local services and retail trade by visitors from outside the Florida Panhandle as the model's baseline tourism expenditures. Using survey information on the distribution of tourism expenditures for various counties in the Florida Panhandle gathered by the Florida Department of Commerce in 1995 along with published figures on taxable sales on rental facilities, RPC estimated tourism expenditures in a way that highlights the expenditures of those visitors from out of state who would stay at hotels or other transient rentals, because those would be the people most at risk for choosing alternative vacation spots outside the Florida Panhandle, as opposed to residents of nearby counties who would visit on day trips.

In dividing the MMS Florida Panhandle model into 23 sectors, RPC combined hotels and motels (SIC 65) with real estate (SIC 70) in order to capture the range of rental expenditures subject to tourist development taxes. According to Section 125.0104 of the Florida Statutes:

It is the intent of the Legislature that every person who rents, leases, or lets for consideration any living quarters or accommodations in any hotel, apartment hotel, motel, resort motel, apartment motel, rooming house, mobile home park, recreational vehicle park, or condominium for a term of six months or less is exercising a taxable privilege.<sup>9</sup>

A comparison of taxable sales for rental facilities in the Florida Panhandle with preliminary estimates of IMPLAN's hotel and motel sector confirmed that taxable sales of rental facilities were larger than the expenditures on hotels and motels in some locations.

Using tax on transient rental facilities, Tables 21.1 - 21.3 convert the sales subject to the tax on transient rental facilities and the distribution in other sectors. Tables 22.1 - 22.3 show RPC's projections of tourist expenditures (final demand) from 1995 to 2045.

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<sup>8</sup> Florida Department of Commerce, 1995; Huth and Stewart, 1995; Florida Legislative Committee on Intergovernmental Relations, *Local Government Financial Information Handbook*, September 1998.

<sup>9</sup> Florida Legislative Committee on Intergovernmental Relations, *Local Government Financial Information Handbook*, September 1998, page 384.

**Table 21.1**

**Distribution of Expenditures by Tourists in the Fort Walton Beach Area  
(in millions of 1995 dollars)**

<u>Item</u>	<u>IV</u>	<u>III</u>	<u>II</u>	<u>I</u>	<u>Average</u>	Percent of Expenditure <u>Total</u>	<u>(\$ million)</u>
Transportation	5.48	5.50	10.99	32.72	13.67	1.90%	9.16
Gasoline	38.14	31.95	46.21	55.36	42.92	5.98%	28.74
Food (Grocery)	59.94	84.52	61.09	70.38	68.98	9.60%	46.20
Food (Restaurant)	110.65	133.90	159.98	148.19	138.18	19.24%	92.55
Lodging	83.19	425.28	383.21	255.61	286.82	39.94%	192.10
Entertainment	22.02	66.35	87.05	53.43	57.21	7.97%	38.32
Gifts	57.17	49.56	50.32	69.50	56.64	7.89%	37.93
Other	58.95	69.79	54.95	31.48	53.79	7.49%	36.03
Total	430.06	861.35	842.81	683.95	718.22	100.00%	481.03

Sources: RPC.

Florida Department of Commerce, 1995.

Huth and Stewart, 1995.

Florida Legislative Committee on Intergovernmental Relations, *Local Government Financial Information Handbook*, September 1998.

**Table 21.2****Distribution of Expenditures by Tourists in the Panama City Area  
(in millions of 1995 dollars)**

<u>Item</u>	<u>IV</u>	<u>III</u>	<u>II</u>	<u>I</u>	<u>Average</u>	Percent of Expenditure <u>Total</u>	<u>(\$ Million)</u>
Transportation	8.74	4.37	2.98	5.47	5.39	0.79%	3.22
Gasoline	55.60	46.85	55.44	57.46	53.84	7.89%	32.19
Food (Grocery)	79.73	55.91	62.49	76.78	68.73	10.07%	41.09
Food (Restaurant)	128.35	145.11	135.94	129.12	134.63	19.73%	80.49
Lodging	191.98	246.70	346.80	296.51	270.50	39.64%	161.73
Entertainment	67.82	85.62	54.19	63.25	67.72	9.92%	40.49
Gifts	64.69	40.34	50.44	41.90	49.34	7.23%	29.50
Other	43.63	29.77	14.75	40.73	32.22	4.72%	19.26
Total	631.80	650.30	720.05	705.75	682.37	100.00%	407.97

Sources: RPC.

Florida Department of Commerce, 1995.

Huth and Stewart, 1995.

Florida Legislative Committee on Intergovernmental Relations, *Local Government Financial Information Handbook*, September 1998.

**Table 21.3**

**Distribution of Expenditures by Tourists in the Pensacola Area  
(in millions of 1995 dollars)**

<u>Item</u>	<u>IV</u>	<u>III</u>	<u>II</u>	<u>I</u>	<u>Average</u>	Percent of Expenditure	
						<u>Total</u>	<u>(\$ Million)</u>
Transportation	15.38	8.74	3.59	51.77	19.87	3.39%	8.41
Gasoline	42.60	40.88	32.66	53.33	42.37	7.23%	17.93
Food (Grocery)	35.55	51.45	31.16	78.77	49.23	8.40%	20.84
Food (Restaurant)	99.64	102.26	151.69	148.70	125.57	21.43%	53.15
Lodging	113.82	154.52	274.88	279.87	205.77	35.11%	87.10
Entertainment	47.98	72.62	70.75	48.00	59.84	10.21%	25.33
Gifts	44.13	34.67	54.25	10.32	35.84	6.12%	15.17
Other	47.27	44.36	64.33	34.35	47.58	8.12%	20.14
Total	430.99	500.76	679.72	653.34	586.07	100.00%	248.07

Sources: RPC.

Florida Department of Commerce, 1995.

Huth and Stewart, 1995.

Florida Legislative Committee on Intergovernmental Relations, *Local Government Financial Information Handbook*, September 1998.

**Table 22.1**  
**Projected Expenditures by Tourists in the Fort Walton Beach Area**  
**(in millions of 1995 dollars)**

<u>Sector</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>2045</u>
Transportation , Communication, Utilities	9.2	10.8	12.3	13.6	14.6	15.2	15.9	16.6	17.2	17.9	18.6
Retail Trade Other than Eating & Drinking	148.9	175.4	199.4	220.8	237.3	248.0	259.0	269.3	280.0	291.1	302.6
Eating & Drinking	92.5	109.0	123.9	137.2	147.5	154.1	161.0	167.4	174.0	180.9	188.1
Hotels & Lodging Places	192.1	226.3	257.3	284.9	306.2	319.9	334.1	347.4	361.2	375.5	390.4
Amusement and Recreation Services, N.E.C.	38.3	45.1	51.3	56.8	61.1	63.8	66.7	69.3	72.1	74.9	77.9
<b>Total</b>	<b>481.0</b>	<b>566.7</b>	<b>644.2</b>	<b>713.3</b>	<b>766.6</b>	<b>801.0</b>	<b>836.7</b>	<b>870.0</b>	<b>904.5</b>	<b>940.4</b>	<b>977.5</b>

Source: RPC.

**Table 22.2**  
**Projected Expenditures by Tourists in the Panama City Area**  
**(in millions of 1995 dollars)**

<u>Sector</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>2045</u>
Transportation , Communication, Utilities	3.2	3.5	3.9	4.3	4.6	4.7	4.9	5.0	5.2	5.4	5.6
Retail Trade Other than Eating & Drinking	122.0	131.0	148.2	162.7	174.1	179.6	186.9	190.6	198.0	205.7	213.6
Eating & Drinking	80.5	86.4	97.7	107.3	114.8	118.5	123.2	125.7	130.6	135.6	140.9
Hotels & Lodging Places	161.7	173.6	196.4	215.5	230.7	238.0	247.6	252.5	262.4	272.5	283.1
Amusement and Recreation Services, N.E.C.	40.5	43.4	49.2	54.0	57.7	59.6	62.0	63.2	65.7	68.2	70.9
<b>Total</b>	<b>408.0</b>	<b>437.8</b>	<b>495.3</b>	<b>543.7</b>	<b>581.9</b>	<b>600.4</b>	<b>624.6</b>	<b>637.1</b>	<b>661.9</b>	<b>687.5</b>	<b>714.1</b>

Source: RPC.

**Table 22.3**

**Projected Expenditures by Tourists in the Pensacola Area  
(in millions of 1995 dollars)**

<u>Sector</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>2045</u>
Transportation , Communication, Utilities	8.4	9.9	10.8	11.6	12.3	12.6	12.9	13.3	13.7	14.1	14.5
Retail Trade Other than Eating & Drinking	74.1	87.3	95.1	101.7	108.5	111.1	113.8	117.2	120.7	124.4	128.1
Eating & Drinking	53.2	62.6	68.2	73.0	77.9	79.7	81.6	84.1	86.6	89.2	91.9
Hotels & Lodging Places	87.1	102.7	111.8	119.6	127.6	130.7	133.8	137.8	141.9	146.2	150.6
Amusement and Recreation Services, N.E.C.	25.3	29.9	32.5	34.8	37.1	38.0	38.9	40.1	41.3	42.5	43.8
Total	248.1	292.4	318.3	340.7	363.5	372.1	381.0	392.5	404.3	416.4	428.9

Source: RPC.



## **Public Services and Fiscal Impact Module**

*Impact Triggers: Population (total, school age), Households (property valuations), Non-government Output (property valuation)*

The module presents a set of representative impacts on local governments. This module converts a scenario's impacts on output and population generated in the economic-demographic interface into impacts on local public finance and services. The module uses the change in the number of households in some of the tax revenue impacts. The models estimates the change in households by taking the net impact of the population and dividing by 2.5, which is the average number of people per household in the Florida Panhandle (Bureau of Economic Business Research, Florida Statistical Abstract 1996).

### *Government Bodies*

The module estimates impacts on county and municipal governments. RPC decided to measure the impacts on municipalities based on totals of all residents and property within municipalities in a given county rather than create a more elaborate model that would require a gravity model to specify where economic migrants would locate within a county. The impacts on special districts within the counties were deemed to be outside the scope of this project.

### *Fiscal Balance*

RPC used data on fiscal year 1996-1997 from the Florida Department of Banking and Finance (1998). Tables 23.1 - 23.5 present a detailed breakdown of revenues and expenditures for each of the five counties of the Florida Panhandle. Table 23.6 shows the total expenditures per county. Tables 24.1 to 24.5 present the breakdown of all municipal expenditures and revenues in each of the five counties. Table 24.6 shows the combined municipal expenditures per county. Table 25 presents the percentage of each county's population that live in unincorporated areas. RPC assumed that this percentage stayed constant over time.

**Table 23.1**

**County Government Revenues of Bay County  
(FY 1996-1997)**

<u>Revenue Source</u>	<u>Dollars</u>	<u>Percentage</u>
Ad Valorem taxes	24,774,514	19.80%
Other taxes, fees, and licenses	17,324,516	13.84%
Federal grants	514,368	0.41%
State and other govt sources	15,244,857	12.18%
Charges for services	29,003,403	23.18%
Fines and forfeits	1,477,214	1.18%
Special assessment and impact fees	149,506	0.12%
Other miscellaneous revenues	9,038,192	7.22%
Other sources / Interfund transfers	27,608,135	22.06%
Total	125,134,705	100.00%

Source: Florida Department of Banking and Finance, personal communication, November 1998.

**Table 23.2**

**County Government Revenues of Escambia County  
(FY 1996-1997)**

<u>Revenue Source</u>	<u>Dollars</u>	<u>Percentage</u>
Ad Valorem taxes	50,841,280	23.19%
Other taxes, fees, and licenses	46,642,998	21.28%
Federal grants	8,430,148	3.85%
State and other govt sources	35,518,949	16.20%
Charges for services	40,156,659	18.32%
Fines and forfeits	2,402,829	1.10%
Special assessment and impact fees	5,462,213	2.49%
Other miscellaneous revenues	13,733,772	6.26%
Other sources / Interfund transfers	16,039,504	7.32%
Total	219,228,352	100.00%

Source: Florida Department of Banking and Finance, personal communication, November 1998.

**Table 23.3****County Government Revenues of Okaloosa County  
(FY 1996-1997)**

<u>Revenue Type</u>	<u>Dollars</u>	<u>Percentage</u>
Ad Valorem taxes	21,471,797	14.78%
Other taxes, fees, and licenses	7,057,170	4.86%
Federal grants	4,048,773	2.79%
State and other govt sources	17,632,392	12.14%
Charges for services	40,900,772	28.16%
Fines and forfeits	116,272	0.08%
Special assessment and impact fees	82,200	0.06%
Other miscellaneous revenues	16,826,100	11.58%
Other sources / Interfund transfers	37,108,784	25.55%
Total	145,244,260	100.00%

Source: Florida Department of Banking and Finance, personal communication, November 1998.

**Table 23.4****County Government Revenues of Santa Rosa County  
(FY 1996-1997)**

<u>Revenue Type</u>	<u>Dollars</u>	<u>Percentage</u>
Ad Valorem taxes	20,143,797	25.85%
Other taxes, fees, and licenses	12,332,627	15.83%
Federal grants	485,989	0.62%
State and other govt sources	10,720,043	13.76%
Charges for services	22,695,672	29.12%
Fines and forfeits	1,057,731	1.36%
Special assessment and impact fees	840,304	1.08%
Other miscellaneous revenues	4,122,335	5.29%
Other sources / Interfund transfers	5,527,789	7.09%
Total	77,926,287	100.00%

Source: Florida Department of Banking and Finance, personal communication, November 1998.

**Table 23.5**

**County Government Revenues of Walton County  
(FY 1996-1997)**

<u>Revenue Type</u>	<u>Dollars</u>	<u>Percentage</u>
Ad Valorem taxes	14,959,773	33.57%
Other taxes, fees, and licenses	7,589,193	17.03%
Federal grants	3,237,898	7.27%
State and other govt sources	6,668,814	14.96%
Charges for services	5,272,988	11.83%
Fines and forfeits	708,020	1.59%
Special assessment and impact fees	365,313	0.82%
Other miscellaneous revenues	2,256,359	5.06%
Other sources / Interfund transfers	3,506,117	7.87%
Total	44,564,475	100.00%

Source: Florida Department of Banking and Finance, personal communication, November 1998.

**Table 23.6**

**County Government Expenditures  
(FY 1996-1997)**

<u>County</u>	<u>Dollars</u>
Bay	115,386,094
Escambia	207,906,150
Okaloosa	142,661,764
Santa Rosa	76,521,782
Walton	38,144,204

Source: Florida Department of Banking and Finance, personal communication, November 1998.

**Table 24.1**

**Combined Municipal Government Revenues of Bay County  
(FY 1996-1997)**

<u>Revenue Name</u>	<u>Revenue Amount</u>
Ad Valorem taxes	5,458,046
Other taxes, fees and licenses	20,694,195
Federal grants	4,500,556
State and other government sources	9,564,415
Charges for services	42,938,793
Fines and forfeits	1,108,136
Special Assessments and impact fees	400,922
Other Miscellaneous Revenues	13,166,022
Other Sources/Interfund transfers in	12,352,121
Total	110,183,206

Source: Florida Department of Banking and Finance, personal communication, November 1998.

**Table 24.2**

**Combined Municipal Government Revenues of Escambia County  
(FY 1996-1997)**

<u>Revenue Name</u>	<u>Revenue Amount</u>
Ad Valorem taxes	8,158,937
Other taxes, fees and licenses	20,053,432
Federal grants	7,351,718
State and other government sources	8,176,547
Charges for services	55,711,991
Fines and forfeits	637,268
Special Assessments and impact fees	90,166
Other Miscellaneous Revenues	49,027,353
Other Sources/Interfund transfers in	51,265,337
Total	200,472,749

Source: Florida Department of Banking and Finance, personal communication, November 1998.

**Table 24.3**

**Combined Municipal Government Revenues of Okaloosa County  
(FY 1996-1997)**

<u>Revenue Name</u>	<u>Revenue Amount</u>
Ad Valorem taxes	12,170,540
Other taxes, fees and licenses	18,931,351
Federal grants	2,774,656
State and other government sources	11,513,295
Charges for services	36,930,130
Fines and forfeits	940,874
Special Assessments and impact fees	147,720
Other Miscellaneous Revenues	19,606,591
Other Sources/Interfund transfers in	9,418,708
Total	112,433,865

Source: Florida Department of Banking and Finance, personal communication, November 1998.

**Table 24.4**

**Combined Municipal Government Revenues of Santa Rosa County  
(FY 1996-1997)**

<u>Revenue Name</u>	<u>Revenue Amount</u>
Ad Valorem taxes	1,050,604
Other taxes, fees and licenses	1,411,136
Federal grants	130,002
State and other government sources	1,654,614
Charges for services	12,844,891
Fines and forfeits	320,584
Special Assessments and impact fees	20,300
Other Miscellaneous Revenues	4,274,459
Other Sources/Interfund transfers in	3,867,712
Total	25,574,302

Source: Florida Department of Banking and Finance, personal communication, November 1998.

**Table 24.5**

**Combined Municipal Government Revenues of Walton County  
(FY 1996-1997)**

<u>Revenue Name</u>	<u>Revenue Amount</u>
Ad Valorem taxes	489,106
Other taxes, fees and licenses	1,823,892
Federal grants	1,014,119
State and other government sources	1,100,140
Charges for services	4,210,478
Fines and forfeits	159,043
Special Assessments and impact fees	0
Other Miscellaneous Revenues	333,830
Other Sources/Interfund transfers in	1,544,581
Total	10,675,189

Source: Florida Department of Banking and Finance, personal communication, November 1998.

**Table 24.6**

**Combined Municipal Government Expenditures  
(FY 1996-1997)**

<u>County</u>	<u>Amount</u>
Bay	93,953,905
Escambia	169,567,112
Okaloosa	94,794,446
Santa Rosa	25,582,052
Walton	10,360,776

Source: Florida Department of Banking and Finance, personal communication, November 1998.

**Table 25**

**Population of Florida Panhandle Living in Unincorporated Areas in 1996**

<u>County</u>	<u>Unincorporated</u>	<u>Total</u>	<u>Unincorporated as % of Total</u>
Bay	57,439	142,159	40.40%
Escambia	223,603	286,301	78.10%
Okaloosa	96,665	165,319	58.47%
Santa Rosa	84,315	98,491	85.61%
Walton	27,112	34,328	78.98%
Total	489,134	726,598	67.32%

Expenditures: The module uses *per capita* expenditures to measure the impacts on local government expenditures. Table 26 contains *per capita* expenditures for county governments, as well as the average *per capita* expenditures for municipalities.

**Table 26**

***Per Capita* Expenditures for County Governments and for Municipal Governments  
in the Florida Panhandle**

<u>County</u>	<u>County Government</u>	<u>Average of All Municipal Governments</u>
Bay	798.06	1,096.84
Escambia	714.12	2,710.52
Okaloosa	834.09	888.18
Santa Rosa	747.74	1,785.96
Walton	1,056.80	1,439.20



Revenues: Review of local government revenues by type show that Florida counties receive direct and indirect revenues. Direct revenues are taxes that individuals, households, and businesses pay in the form of *ad valorem* (property) taxes, sales taxes, tourist development taxes, fees, and licenses. Indirect revenues are grants, intergovernmental transfers, and other funds that local governments receive from sources outside the county itself, such as the State of Florida and the U.S. Government.

The MMS model estimates the direct revenue impacts as *ad valorem* taxes and *per capita* taxes and fees based on changes in population and economic activity in a given scenario. Given that county and municipal government budgets are in balance in the long-run, the model also estimates the amount of revenue these governments need from indirect sources to balance the budget each year in a given scenario (i.e., direct revenues plus indirect revenues equals expenditures).

*Ad Valorem* (Property) Taxes: The MMS model estimates the impact on *ad valorem* taxes from both residential and business sources. The model estimates the change in commercial and industrial property valuation for county governments by multiplying the change in non-government output by the commercial and industrial valuation in each county per million dollars of expenditures in the area. The model estimates the change in residential property valuation by multiplying the change in households times the average value of residential property in the county. For the impact on municipal governments, the model multiplies the county valuation figures by the percent of the county's population that live in incorporated areas. The model then estimates ad valorem taxes by multiplying the change in property valuation by the millages (unit of taxation based on one tenth of a cent) of the county and municipal governments.

Table 27 contains the millage rates for county governments. Table 28 presents the taxation and average millage for municipalities in each of the five counties in the Florida Panhandle. Table 29 contains the average taxable value of residential property in 1997. Table 30 contains the value of taxable commercial and industrial property in 1997.

**Table 27**

**Millage Rates for County Governments and Selected Special Districts  
in the Florida Panhandle**

<u>County</u>	County Government <u>Operating</u>	County Government <u>Debt Service</u>	<u>Total</u>
Bay	5.632	0.000	5.682
Escambia	8.260	0.000	8.792
Okaloosa	4.528	0.000	4.578
Santa Rosa	6.972	0.000	7.022
Walton	6.740	0.000	6.790

Source: Florida Department of Revenue, *Florida Property Valuations and Tax Data*, December 1997.

**Table 28**

**Municipal Taxation in the Florida Panhandle in 1997  
(in millions of dollars)**

<u>County</u>	Taxable Value of All <u>Property</u>	Taxes <u>Levied</u>	Average <u>Millage</u>
Bay	2,509.6	6.1	2.4189
Escambia	1,663.5	8.3	5.0056
Okaloosa	3,079.8	9.1	2.9512
Santa Rosa	498.9	1.050	2.1058
Walton	124.8	0.5	4.2585

Source: Florida Department of Revenue, *Florida Property Valuations and Tax Data*, December 1997.

**Table 29**

**Average Taxable Value of Residential Property in 1997**

<u>County</u>	<u>Taxable Value</u>
Bay	47,513
Escambia	36,686
Okaloosa	62,065
Santa Rosa	37,869
Walton	48,689

Source: Florida Department of Revenue, *Florida Property Valuations and Tax Data*, December 1997.

**Table 30**

**Value of Taxable Commercial and Industrial Property in 1997  
(in millions of dollars)**

<u>County</u>	<u>Commercial</u>	<u>Industrial</u>	<u>Commercial and Industrial</u>
Bay	732.4	90.6	823.0
Escambia	959.2	250.9	1,210.1
Okaloosa	755.6	84.6	840.2
Santa Rosa	225.2	35.5	260.7
Walton	173.3	15.2	188.5

Source: Florida Department of Revenue, *Florida Property Valuations and Tax Data*, December 1997.

Other Taxes, Fees: The model generates other direct taxes, fees, and licenses on a *per capita* basis. As with *ad valorem* taxes, municipal revenues for a county take into account the percentage of people living in incorporated areas in a given county. Table 31 presents data on taxes, fees, and licenses.

**Table 31**

**Per Capita Revenues  
(direct taxes, fees, and licenses)**

County	County <u>Government</u>	Average of All Municipal <u>Governments</u>
Bay	330.64	755.80
Escambia	306.40	1,221.29
Okaloosa	281.07	808.34
Santa Rosa	352.62	1,017.64
Walton	375.97	860.32

Source: RPC model.

*Schools*

In the Florida Panhandle, each county has one school district.

Expenditures: The model estimates school district expenditures by multiplying the change in school-age population in the chosen scenario by a *per capita* expenditure per full-time equivalent (FTE) for each school district (Table 32).

**Table 32**

**School District Expenditures per Full-Time Equivalent (FTE) Student  
(in 1997 dollars)**

<u>County</u>	<u>Expenditures per FTE</u>
Bay	4,952
Escambia	5,069
Okaloosa	4,643
Santa Rosa	4,657
Walton	5,130

Source: Florida Department of Education,  
*Profiles of Florida School Districts 1996-1997 Financial Data*,  
June 1998.

Revenues: The module estimates two types of revenue impacts for school districts: *ad valorem* and *per capita* revenue from state and federal sources. *Ad valorem* taxes multiply the increased valuation of residential and business property by school district millage. Table 33 contains millage rates of each school district in the Florida Panhandle. State and federal revenues are the product of the number of school-age children that the scenario generated times the amount of funding per FTE from state and federal sources. Table 34 presents Federal and State revenues that each school district received in the 1996-97 school year per full-time equivalent.

**Table 33**

**Millage Rates for School Districts in the Florida Panhandle**

<u>County</u>	<u>Operating Budget</u>	<u>Debt Service</u>	<u>Total</u>
Bay	7.3270	2.0000	9.3270
Escambia	9.5650	0.0000	9.5650
Okaloosa	8.5720	0.0000	8.5720
Santa Rosa	8.8460	0.0000	8.8460
Walton	9.3540	0.0000	9.3540

Source: Florida Department of Revenue, *Florida Property Valuations and Tax Data*, December 1997.

**Table 34**

**School District Revenues per Full-Time Equivalent (FTE) by Source  
(in 1997 dollars)**

<u>County</u>	<u>Federal</u>	<u>State</u>	<u>County</u>	<u>Total</u>
Bay	415	3,375	1,747	5,599
Escambia	591	3,594	1,423	5,608
Okaloosa	431	3,224	2,247	5,902
Santa Rosa	399	3,430	1,549	5,378
Walton	516	1,960	3,642	6,118

Source: Florida Department of Education, *Profiles of Florida School Districts 1996-1997 Financial Data*, June 1998.

Public Services

Changes in local population change the demand on public services such as water usage, roads and highways to be maintained, and police and fire protection. The MMS model used community service multipliers for the five counties based on information from the Florida Bureau of Economic and Business Research and the *1992 Census of Governments* to project impacts (Table 35). The model projects these impacts on a *per capita* basis.

**Table 35**

**Baseline Community Service Multipliers for Counties in the Florida Panhandle**

<u>Item</u>	<u>Units</u>	<u>Bay</u>	<u>Escambia</u>	<u>Okaloosa</u>	<u>Santa Rosa</u>	<u>Walton</u>
Residential Water	Gallons per Person per Day	88.46	83.64	81.90	91.45	85.51
Residential Wastewater	Gallons per Person per Day	270.02	71.39	106.33	30.11	71.60
Solid Waste	Tons per Person per Year	1.78	1.60	1.41	0.74	0.70
Road & Highway	Miles per Thousand People	5.68	3.74	4.54	7.09	20.17
Police	Staff per Thousand People	2.70	2.43	1.95	2.04	2.22
Crimes	Number per Thousand People	66.76	61.97	30.60	36.56	29.60
Fire	Staff per Thousand People	1.08	0.47	1.04	0.27	0.70
Public Welfare	Staff per Thousand People	0.04	0.56	0.03	0.22	0.17
Physicians	Number per Thousand People	1.74	2.51	1.70	1.27	0.44

Sources: Bureau of Business and Economic Research, 1997 Florida Statistical Abstract; U.S. Bureau of the Census, Compendium of Public Employment, Volume 3, Number 2, 1992.

## REFERENCES

- Bureau of Economic and Business Research (BEBR). 1997. *1997 Florida Statistical Abstract*.
- Chevron U.S.A. Production Company. 1997. Destin Dome 56 unit development and production plan volume I executive summary and project description. Filed with the Minerals Management Service, New Orleans, LA.
- Chevron U.S.A. Production Company. 1997. Destin dome 56 unit development and production plan volume IV.B economic, fiscal and infrastructure impacts- 1994 data update and model re-estimation. Filed with the Minerals Management Service, New Orleans, LA.
- Florida Bureau of Economic and Business Research, personal communication, June Nogle, 1996-1999.
- Florida Department of Banking and Finance, Government expenditures and revenues for counties and municipalities, Jeanne Dowdrick, personal communication, November 1998.
- Florida Department of Commerce, Visitor Profile Reports, 1995.
- Florida Department of Education, *Profiles in Florida School Districts 1996-1997 Financial Data*, December 1998.
- Florida Department of Labor and Employment Security, personal communication.
- Florida Department of Revenue, *Florida Property Valuations and Tax Data*, December 1997.
- Florida Legislative Committee on Intergovernmental Relations, *Local Government Financial Information Handbook*, September 1998, page 384.
- Gramling R. and S. Brabant. 1986. Boom towns and offshore energy impact assessment: The development of a comprehensive model. *Sociological Perspectives* 29:177-201.
- Hoover, E.M. and F. Giarrantani. 1984. *An Introduction to Regional Economics*, Third edition. Alfred A. Knopf, Inc. New York, NY.
- Huth, W.L. and R. Stewart. 1995. Report on Escambia county tourism economic impact. University of West Florida. Pensacola, FL.
- Leistriz, F.L. and S.H. Murdock. 1981. *The Socioeconomic Impact of Resource Development: Methods for Assessment*. Westview Press, Inc. Boulder, CO. 286 pp.
- Leistriz, F.L., S.H. Murdock, and R.C. Coon. 1990. Developing economic-demographic assessment models for substate areas. *Impact Assessment Bulletin* 8(4): 49-65.

- Leontief, W. 1953. *Studies in the Structure of the American Economy*. Oxford University Press. New York, NY.
- Miller, RE. and P.D. Blair. 1985. *Input-Output Analysis: Foundations and extensions*. Prentice-Hall, Inc. Englewood Cliffs, NJ.
- Minnesota IMPLAN Group, Inc. (MIG). 1997. *IMPLAN professional version 1.1 Software, User's Guide, Analysis Guide, and Data Guide*. Stillwater, MN.
- Murdock, S. and F.L. Leistritz. 1979. *Energy Development in the Western United States: Impact on Rural Areas*. New York: Praeger Publishers
- U.S. Bureau of the Census. 1992. *Compendium of Public Employment*, Volume 3, Number 2.
- U.S. Bureau of the Census, *Population of the United States by Age, Sex and Hispanic Origin*, P25-1104 (November 1993) and P25-1130 (February 1996)
- U.S. Bureau of Economic Analysis (BEA). 1998. *Regional economic information system 1969-1996*. U.S. Department of Commerce. Washington, DC.
- U.S. Bureau of Labor Statistics website, <http://www.bls.gov/emplab1.htm>





### The Department of the Interior Mission

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.



### The Minerals Management Service Mission

As a bureau of the Department of the Interior, the Minerals Management Service's (MMS) primary responsibilities are to manage the mineral resources located on the Nation's Outer Continental Shelf (OCS), collect revenue from the Federal OCS and onshore Federal and Indian lands, and distribute those revenues.

Moreover, in working to meet its responsibilities, the **Offshore Minerals Management Program** administers the OCS competitive leasing program and oversees the safe and environmentally sound exploration and production of our Nation's offshore natural gas, oil and other mineral resources. The MMS **Minerals Revenue Management** meets its responsibilities by ensuring the efficient, timely and accurate collection and disbursement of revenue from mineral leasing and production due to Indian tribes and allottees, States and the U.S. Treasury.

The MMS strives to fulfill its responsibilities through the general guiding principles of: (1) being responsive to the public's concerns and interests by maintaining a dialogue with all potentially affected parties and (2) carrying out its programs with an emphasis on working to enhance the quality of life for all Americans by lending MMS assistance and expertise to economic development and environmental protection.