

MAINE STATE LEGISLATURE

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A DEFENSE ADJUSTMENT ACTION PLAN FOR MAINE:

**REPORT OF THE TASK FORCE ON DEFENSE REALIGNMENT
AND THE MAINE ECONOMY**

Maine State Planning Office
Stephen Adams, Director
March, 1993

This Economic Adjustment Strategy was accomplished by the staff of the Task Force on Defense Realignment and the Maine Economy and the State Planning Office through Economic Development Administration Adjustment Strategy Grant No. 01-09-03155. The statements, findings, conclusions, recommendations, and other data in this report are solely those of the grantee and do not necessarily reflect the views of the Economic Development Administration.

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I. INTRODUCTION

The purpose of this report is to present Maine's action plan for a comprehensive statewide economic adjustment program to address actual and threatened defense-related economic dislocations.

Defense adjustment planning began formally in Maine in July of 1990, when Governor John McKernan issued an Executive Order establishing the Task Force on Defense and the Maine Economy. Since that time planning efforts have raced to keep up with the pace of events. As new base closings and contract cutbacks were first rumored, then announced, Maine's state-wide Task Force and regional committees in northern, southern, and central Maine have worked against the clock to analyze the impacts of defense spending, assess resources, and plan for the future. This report describes where we stand today and recommends action steps by local, state and federal governments to minimize the impact of defense cutbacks and strengthen the Maine economy.

Although great progress has been made, this report is by no means the final word. Important pieces of the puzzle remain to be filled in. The Loring Readjustment Committee, after having conducted thorough surveys and inventories, is now putting together its formal strategy. The KEYS Coalition in southern York County is also now in the midst of its strategic planning as a follow-up to an economic defense dependency analysis. The communities of Bath, Brunswick and Topsham have forged an economic alliance to develop a regional defense adjustment strategy. Likewise, the Androscoggin Valley area has prepared broad impact assessments and strategies. Finally, the Greater Portland area is just beginning to explore its defense dependency.

The analysis presented in this report reflects the energies and ingenuity of many people and organizations around Maine. The assistance of the staffs of the Southern Maine Regional Planning Commission, the Capital Coastal Council of Governments, the Androscoggin Council of Governments, the Northern Maine Regional Planning Commission, and the Greater Portland Council of Governments has been invaluable in guiding our analysis and coordinating the work of Maine's regional defense dependency initiatives. The many State agencies that are members of the Task Force have provided an array of expertise and insight. However, the commitment of time and resources by the Maine Department of Labor deserves special note and appreciation.

Finally, this Statewide effort and the more significant partnerships and initiatives that it has fostered would not have been possible without the assistance and guidance of Maine's Economic Development Representative, Sanford Blitz, and the Philadelphia regional office of the Economic Development Administration.

Much remains to be done. The structure of Maine's defense dependency and condition of the Maine economy is in constant flux. This action plan seeks to offer a starting point to the development of a flexible and effective approach to economic diversification that will allow Maine's defense dependent communities, industries and workers to adjust to the economic restructuring that is accompanying the downsizing of the nation's defense complex.

II. MAINE'S ECONOMIC DEFENSE DEPENDENCY

1. The Maine Economy Today

The Maine economy has been through a difficult period, but there are indications that the decline has halted. As shown in Figure 1, Maine reached a plateau of employment in 1989, which was sustained through mid-1990, and then began a steady decline until September 1991. Over the past year, employment growth has been quite erratic, increasing in some months and decreasing in others. Although the decline in the Maine economy has been significant, it does appear that Maine has not been as dramatically affected by the recession as the rest of the New England economy, where employment began declining earlier, and has declined more steeply and consistently than Maine.

The Governor's Consensus Economic Forecasting Commission projects a slow weak recovery

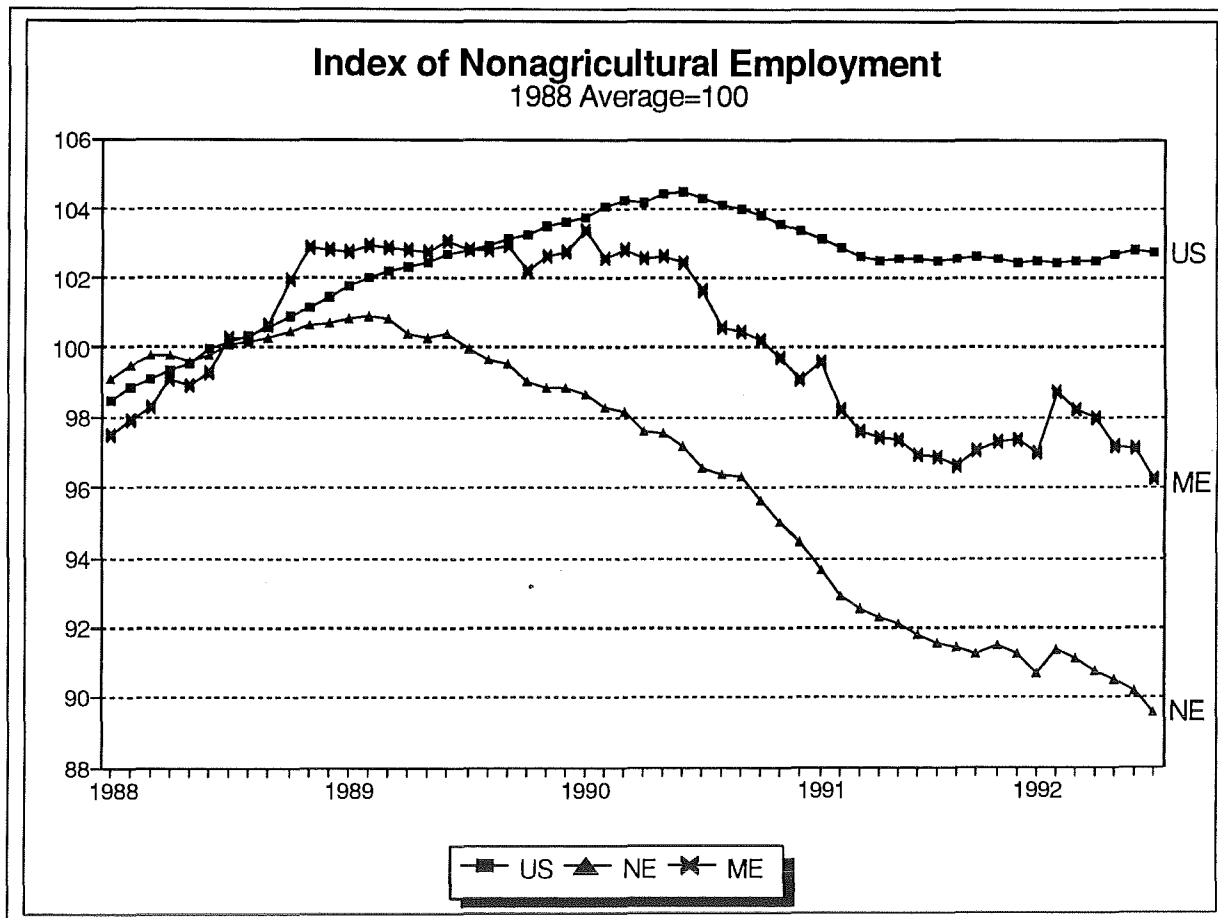


Figure 1 Nonagricultural Employment Growth; January 1988 through July 1992

for Maine, with total employment in Maine remaining well below 1989 levels through at least 1995.

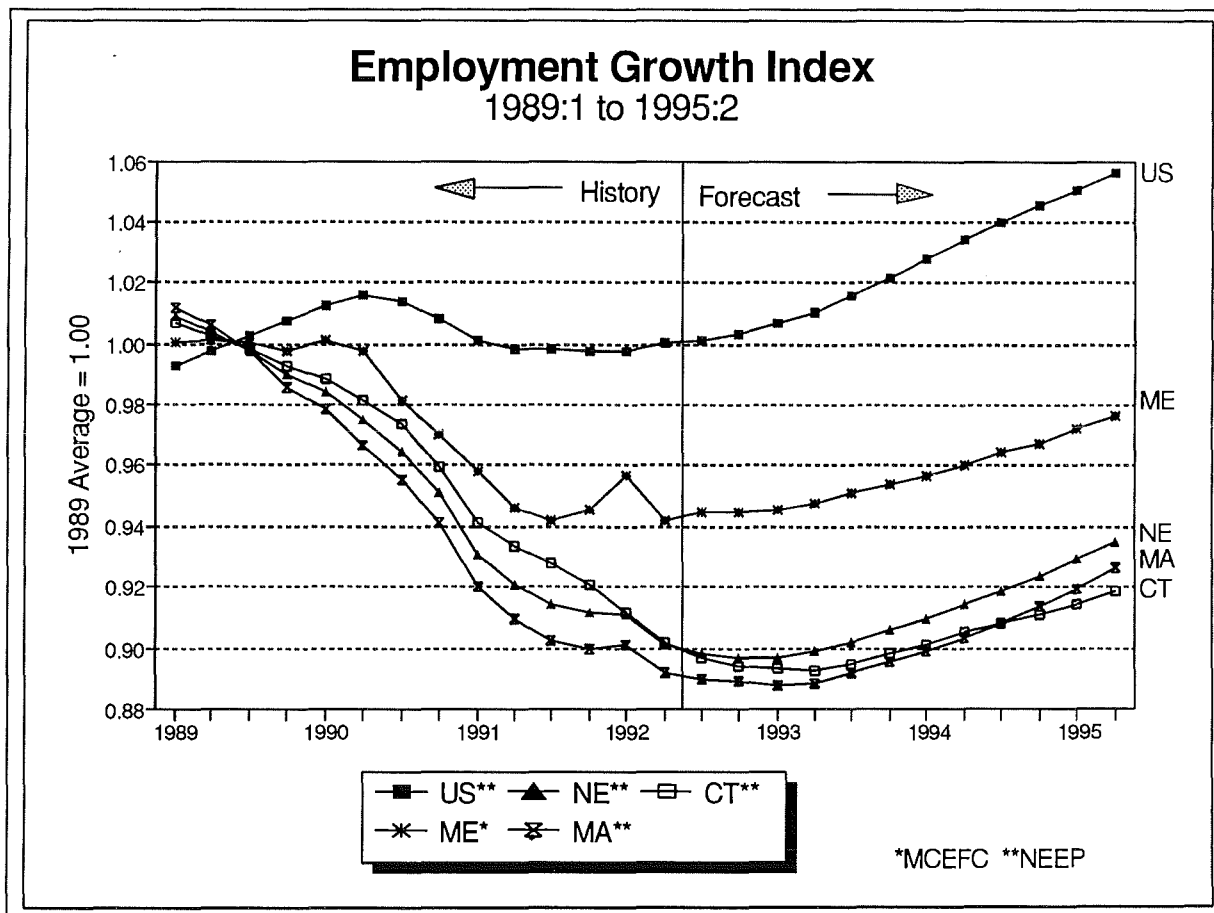


Figure 2 Employment change in Maine and New England

A number of factors will contribute to Maine's weak performance. The greatest unknown is future defense spending. As summarized in the box below, the Forecasting Commission's projections take into account downsizing at Maine's largest private defense contractor, Bath Iron Works, and the closing of Loring Air Force Base in Aroostook County. However any additional unanticipated cutbacks would materially worsen Maine's economic outlook.

Table 1
Adjustments to Maine State Government Winter 1992-93 Forecast

B.I.W. downsizing:

reduced employment in Transportation Equipment Mfg. by 125 jobs each quarter beginning 1992:4, ending 1995:4 (total of 1,125 over 9 quarters).

State & Local Government Sector:

reduced State & Local Government employment at 3% annual rate over four quarters; 1993:3 through 1994:2 (total 2,390 jobs).

Loring A.F.B. Shutdown:

Job losses associated with Loring personnel:

	<u>'93:3</u>	<u>'93:4</u>	<u>'94:1</u>	<u>'94:2</u>	<u>'94:3</u>	<u>'94:4</u>	
Fed. Civilian	-33	-33	-34	-250	-150	0	(tot. -500)
Fed. Military	-324	-592	-794	-907	-199	0	(tot. -2,816)

Job losses due to curtailed local base expenditures:

	<u>'93:3</u>	<u>'93:4</u>	<u>'94:1</u>	<u>'94:2</u>	<u>'94:3</u>	<u>'94:4</u>	
Tran, Comm, Util.	0	0	-5	-5	-5	0	(tot. -15)
Wholesale Trade	0	0	-42	-42	-42	-42	(tot. -168)
Services	0	0	-45	-45	-45	-45	(tot. -180)

Gains from subcontractors hired to maintain base after closure:

Services	0	0	0	0	0	+150	(tot.+150)
Loring Totals:	-357	-625	-920	-1,249	-441	+63	(tot. -3,529)

(Loring data are from draft estimates of Loring Base Closure Office dated 10/26/92)

2. Maine's Defense Dependency

During the 1970's and 1980's, the flow of federal defense-related dollars became an increasingly important component of the Maine economy. In fact, direct Defense Department spending in Maine (procurement and DOD salaries) rose from less than 2% of gross state product in the early 1970's to nearly 9% by 1992 as shown in Figure 3. Nationally, defense spending accounted for only 5% of GDP in 1992. When all Portsmouth Naval Shipyard expenditures, including all salaries and wages, are included in the Maine total, defense expenditures in 1992 totaled almost \$1.8 billion.

Virtually all of the growth in defense spending during the 1970's and 1980's is attributable to defense procurement, of which Bath Iron Works has accounted for over 90%. Federal defense wages and salaries, reflecting the number of federal civilian and military personnel, have experienced much slower growth, as shown in Figure 4.

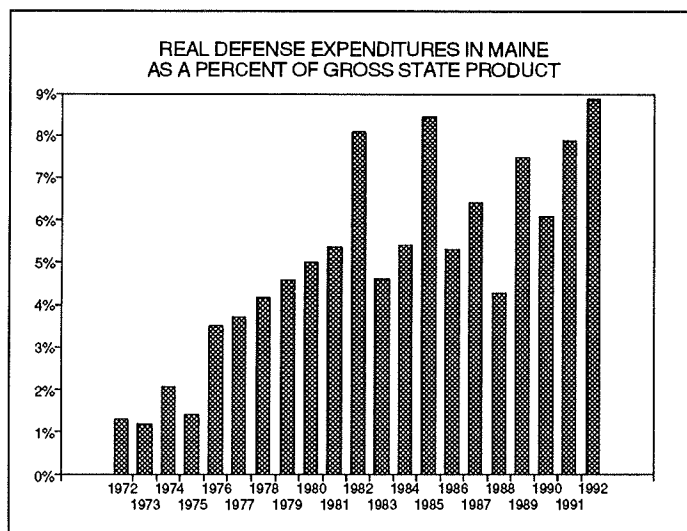


Figure 3

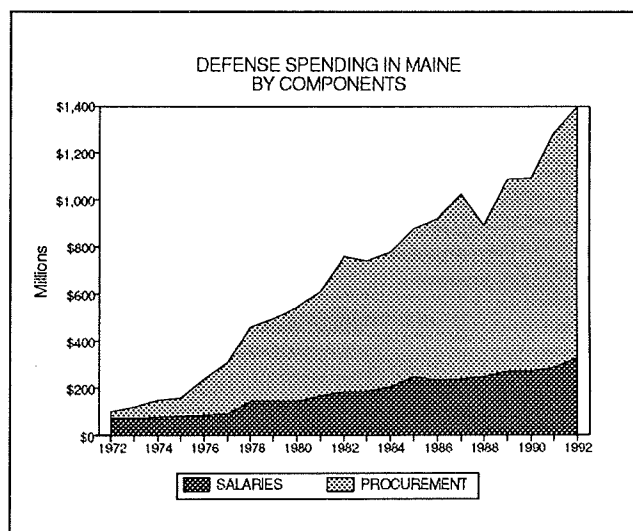


Figure 4

Gauging the contribution of defense spending to the Maine economy is a complex task. A traditional input/output approach to economic impact analysis (estimating the direct and indirect jobs needed to fulfill a given level of defense demand) suggests that 62,885 jobs and \$1.4 billion in earnings in Maine were directly or indirectly supported by defense-related activities in 1989. By this measure nearly 9% of all Maine jobs and almost 11% of total earnings were dependent, either directly or indirectly, upon meeting the defense needs of the United States. The larger share attributable to defense-related earnings in Maine reflects the relatively high wages earned by many defense-dependent workers in the State. Table 2 offers an estimate of the employment and earnings contributions of defense spending in Maine in 1989 at a time when defense-related employment was at a peak.

In fact, these estimates under-represent the level of economic activity in Maine supported by defense spending. Each of the major defense facilities are the predominant actor in Maine's relatively small and fragile rural economies. Consequently, their loss would not only eliminate the majority of well-paying jobs in their regions, but would undermine the critical mass of the regional economies they support. The closure of Loring AFB, for example, threatens to raise the costs of utilities and government services to remaining businesses, diminish property values and the viability of the Presque Isle Airport. Similar effects could be expected with the loss of any of Maine's major defense facilities.

TABLE 2
ECONOMIC IMPACT OF DEFENSE SPENDING IN MAINE: 1989
 (Source: Maine State Planning Office)

<u>FACILITY</u>	<u>DIRECT EMPLOYMENT</u>		<u>INDIRECT</u>	<u>TOTAL</u>	<u>EARNINGS(MIL)</u>
	<u>CIVILIAN</u>	<u>MILITARY</u>	<u>EMPLOYMENT</u>		
BRUNSWICK NAS	900	3,000	1,700	5,600	\$160
LORING AFB	900	3,300	3,600	7,800	\$168
PORTSMOUTH NSY	8,000	**	3,300	11,300	\$206
NATIONAL GUARD*	525	3,900	885	5,310	\$86
OTHER DoD	300	4,800	1,610	6,710	\$138
BIW	11,400	**	7,700	19,100	\$524
<u>OTHER PRIV FIRMS</u>	<u>3,800</u>	<u>0</u>	<u>3,265</u>	<u>7,065</u>	<u>\$166</u>
TOTAL	25,825	15,000	22,060	62,885	\$1,448
Percent of Maine Total				8.8 %	10.9%

4,500 Maine residents. Earnings exclude those of non-Maine workers.

* 300 full-time, 3,600 part-time.

** Military included under Other DoD.

A. Employment Impacts of Recent and Impending Defense Cutbacks in Maine

Over the last three years the Maine economy has suffered the impact of defense cutbacks. Reductions have caused lay-offs at private defense contractors like Bath Iron Works, National Semiconductor and Mid-State Machine. Federal installations in Maine have also experienced reductions in force.

Between 1989 and 1992 Maine lost a total of nearly 7400 defense-related jobs. The number of defense jobs that were lost was greater than 1% of Maine's total full and part-time employment during these years. Even after losing so many defense jobs, the Maine economy

remains extremely dependent upon defense spending. As 1993 begins, 8.2% of Maine workers remain in defense dependent employment. Table 3 presents 1992 defense employment and earnings estimates.

TABLE 3
ECONOMIC IMPACT OF DEFENSE SPENDING IN MAINE: 1992
 (Source: Maine State Planning Office)

	<u>DIRECT EMPLOYMENT</u>		<u>INDIRECT</u>	<u>TOTAL</u>	<u>EARNINGS(MIL)</u>
	<u>CIVILIAN</u>	<u>MILITARY</u>	<u>EMPLOYMENT</u>		
BRUNSWICK NAS	826	2,797	1,580	5,203	\$168
LORING AFB	956	2,538	2,995	6,489	\$158
PORTSMOUTH NSY	6,873	**	2,835	9,708	\$200
NATIONAL GUARD*	481	4,566	1,275	6,322	\$113
OTHER DOD	300	4,643	1,560	6,503	\$151
BIW	9,817	**	6,630	16,447	\$509
<u>OTHER PRIV FIRMS</u>	<u>2,600</u>	<u>0</u>	<u>2,230</u>	<u>4,830</u>	<u>\$127</u>
TOTAL	21,853	14,544	19,105	55,502	\$1,426
Percent of Maine Total		.		8.2%	10.0%

#3,621 Maine residents. Earnings exclude those of non-Maine workers.

*283 full-time, 4,283 part-time.

**Military included under OTHER DOD.

Unfortunately, even more significant defense impacts lie ahead. Maine will lose more defense jobs over the next 2 years (1993-1994) than occurred during the past 3 years. Job losses at Loring AFB alone will total nearly 6500. Additional losses at Portsmouth Naval Shipyard, the Maine National Guard and other military facilities will likely exceed 1000 jobs. In the private sector, losses at BIW and other defense contractors could be double this figure. Consequently, over the next two years defense job losses will again exceed 1% of Maine's resident employment base.

B. The Character of Defense-Dependent Employment in Maine

Essentially, defense spending supports three layers of employment in Maine: direct, intermediate and induced defense-dependent jobs. *Direct employment* comprises military and civilian personnel at Maine-based military installations, and employees of prime contractors providing goods or services directly to a unit of the Defense Department. Maine's military installations directly employed approximately 7,200 Maine civilians and 15,000 military personnel in 1989, as shown in Table 2. Among the federal civilian jobs in Maine in 1989 were 8,000 employees of Portsmouth Naval Shipyard (about 4,500 were Maine residents), with approximately

2,900 employed at Loring Air Force Base, Brunswick Naval Air Station and a number of smaller facilities.

Prime contractors provide the second component of direct defense-dependent employment. Bath Iron Works dominates this category, accounting for 90% of procurement spending in Maine. It is joined by Saco Defense, Fiber Materials, Inc., Crowe Rope and an array of metals, electronics and other firms. Other Maine businesses that rely, to varying degrees, on military procurement include construction firms, business services, fuel dealers, and maintenance and laundry services that serve Maine's military bases. Direct defense-dependent employment in Maine in 1989 is estimated at over 39,825 as shown in column A of Table 4, and accounted for 63% of Maine's defense-dependent employment. There are over 2000 firms in Maine that do business either as prime contractors awarded procurement contracts or who provide goods and services to military bases located in the State.

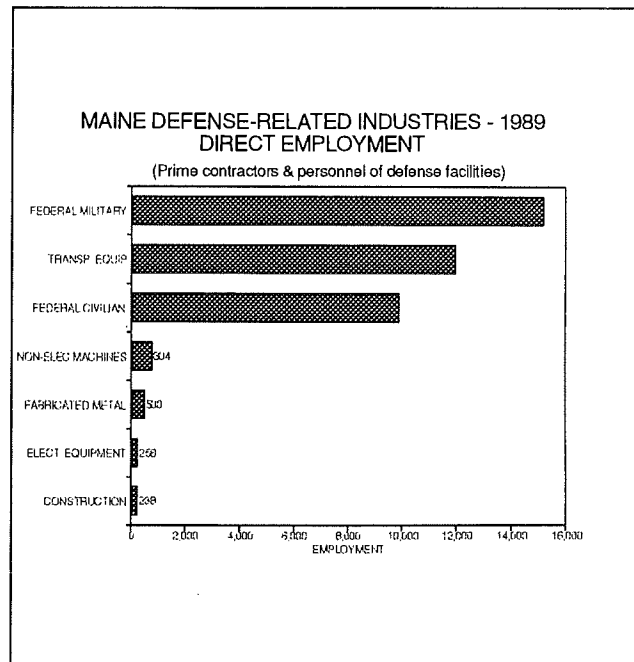


Figure 5

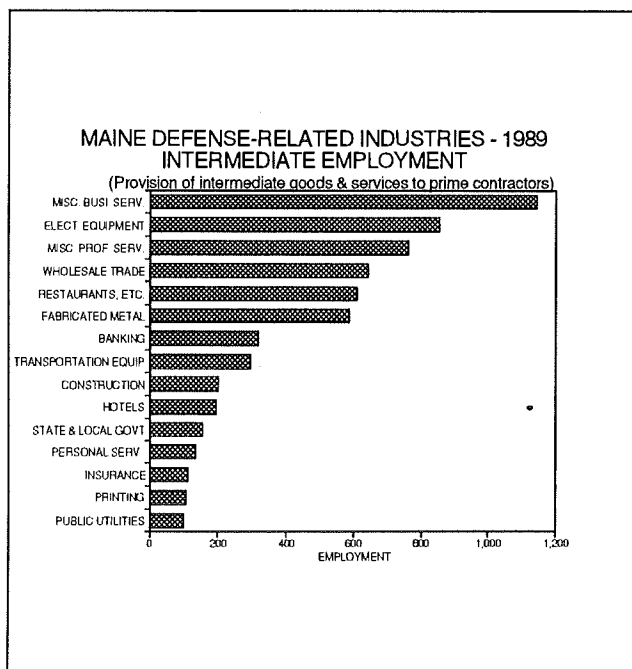


Figure 6

Intermediate employment is provided by firms producing inputs to prime contractors who use them in providing final defense products. Comprising 14% of defense-dependent jobs, this group includes the many businesses that provide an array of goods and services, from metal products to repair services, to Bath Iron Works and other prime contractors in and outside the State. Among Maine employers which have provided intermediate defense goods or services are Pratt & Whitney, National Semiconductor, metal products firms, business services, construction companies, wholesalers, and other service firms. About 8,800 workers in Maine fall into the intermediate defense-dependent category, as shown in column B in Table 4.

TABLE 4
DISTRIBUTION OF DEFENSE-DEPENDENT EMPLOYMENT IN MAINE, 1989

INDUSTRY	TOTAL	(A)	(B)	(C)	% OF DEFENSE	% OF INDUSTRY
		DIRECT	INTRMD INPUTS	LOCAL CONSUMP		
FEDERAL MILITARY	15,000	15,000	0	0	28%	100%
TRANSPORTATION EQUIP	12,276	11,946	330	0	21%	84%
FEDERAL CIVILIAN	10,900	10,900	0	0	13%	68%
RETAIL (NON-REST.)	3,183	58	95	3,393	6%	3%
MEDICAL SERVICES	2,294	23	81	2,420	4%	5%
STATE & LOCAL GOVT	2,126	0	173	2,150	4%	3%
EATING & DRINKING PLACES	1,776	0	737	1,220	4%	5%
MISC. BUSI. SERV.	1,302	0	1,381	45	2%	4%
ELECT. EQUIPMENT	1,209	258	1,032	12	2%	13%
FABRICATED METAL	1,150	500	645	4	2%	37%
WHOLESALE TRADE	1,110	0	777	450	2%	4%
MISC. PROF. SERV.	1,040	0	922	225	2%	6%
CONSTRUCTION	894	238	224	432	2%	2%
NON-ELEC MACHINES	845	804	25	15	2%	16%
NON-PROFIT ORG.	741	9	53	741	1%	4%
BANKING	631	0	389	277	1%	7%
PER. SERV. & MISC. REPAIR	561	30	151	420	1%	3%
REAL ESTATE	383	0	90	325	1%	2%
PRIVATE HOUSEHOLD	335	0	0	370	1%	4%
INSURANCE	335	0	125	210	1%	3%
HOTELS	326	0	236	111	1%	2%
EDUCATION	302	0	21	281	1%	3%
AMUSE.&RECREATION	273	0	35	237	1%	3%
AUTO REPAIR/SERVICE	254	0	96	158	0.4%	3%
PUBLIC UTILITIES	185	4	109	73	0.4%	3%
FOOD PROCESSING	168	0	32	136	0.3%	2%
PRINTING	150	0	119	31	0.3%	2%
INSTRUMENTS	135	50	81	3	0.2%	0%
TRUCKING	134	0	92	42	0.2%	1%
CREDIT&FINANCE	124	0	42	82	0.2%	3%
COMMUNICATION	119	0	64	55	0.2%	2%
LUMBER	93	0	82	11	0.2%	1%
STONE,CLAY & GLASS	52	0	47	4	0.1%	2%
LOCAL/INTERURBAN TRANSP.	49	0	29	21	0.1%	2%
APPAREL	48	0	10	38	0.1%	1%
LEATHER	40	0	5	35	0.1%	3%
AIR TRANSP.	35	0	22	13	0.1%	3%
PAPER	33	0	24	9	0.1%	2%
RUBBER	32	0	27	4	0.1%	1%
FURNITURE	26	0	8	19	0.1%	2%
MOTION PICTURES	26	0	11	15	0.1%	3%
MISC. MANUF.	21	0	6	15	0.1%	1%
AGRI/FOR/FISH SERV.	20	0	11	9	0.1%	1%
OTHER TRANSP.	14	5	5	4	0.1%	5%
TEXTILES	14	0	7	7	0.1%	2%
PRIMARY METALS	14	0	14	0	0.1%	2%
RAILROAD	8	0	6	2	0.1%	1%
CHEMICALS	3	0	2	1	0.1%	1%
TOTAL	62,885	39,825	8,776	14,284	100%	8%

Reading this table: *Direct* refers to workers employed by prime contractors or defense facilities. *Intrmd inputs* refers to jobs associated with providing goods or services to prime contractors or facilities. *Local Consmp* refers to jobs supporting the local consumption of direct and intermediate workers.

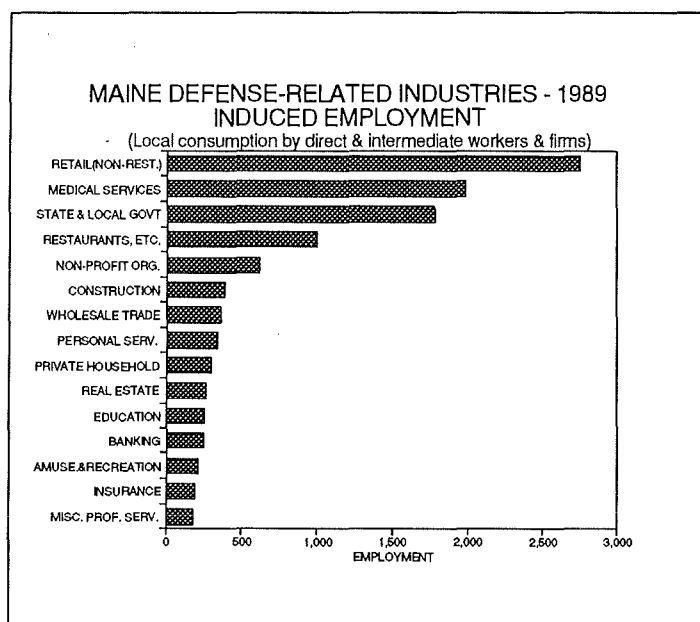


Figure 7

Finally, *induced employment* refers to those jobs supported by the purchase of goods and services by people employed in the direct and intermediate levels. This group consists largely of wholesale and retail trade, restaurants, health services, State and local government and other consumer industries as seen in Figure 7. Defense-related induced employment in Maine is estimated to number 14,284, as seen in column C in Table 4. Representing 23% of all defense-dependent jobs, the large number of induced jobs reflects the spending of both civilian defense-dependent workers and military personnel.

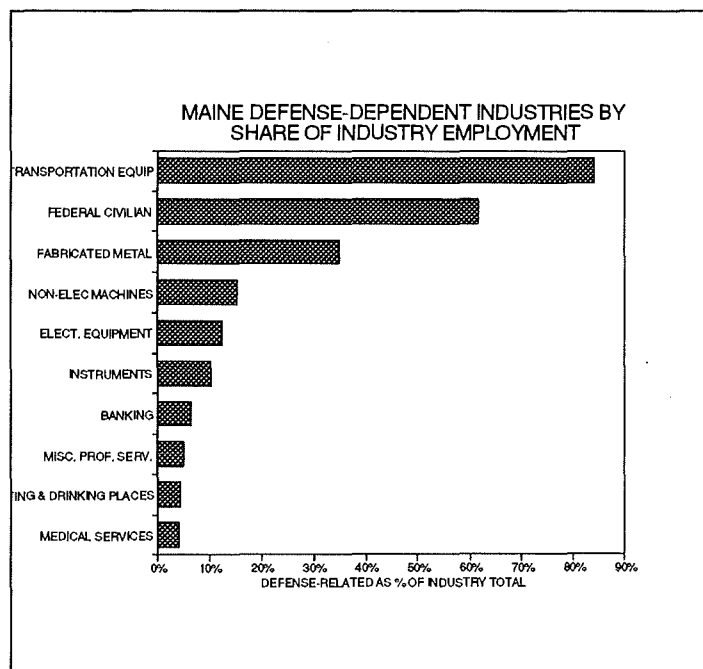


Figure 8

Defense spending touches each of Maine's industries to varying degrees. Among the Maine industries with the largest **proportion** of defense-dependent jobs, transportation equipment, federal government, metal products, machinery and electronic equipment top the list, as shown in Figure 8. In addition, business service industries are also among Maine's most defense-dependent, reflecting the many intermediate and induced jobs supported by direct defense activities.

Many of these same industries also employ the largest **number** of defense-dependent workers as do retail trade, medical services and state and local government, as seen in Figure 9. This mix reflects both the relatively high

level of consumption supported by the high-paying defense jobs and the labor intensity of the trade and service sectors.

C. Maine's Principal Defense Facilities and Industries

Maine's long tradition of participating in this nation's defense has been based largely upon its coastal location and its reputation for shipbuilding. Bath Iron Works, Portsmouth Naval Shipyard, Brunswick Naval Air Station and Loring Air Force Base account for 26,000 defense jobs, representing over 64% of all the direct defense employment in Maine. In addition, Maine is home to a substantial air and army guard, and several naval communications facilities.

(For a detailed analysis of prime contract awards to Maine Firms and expenditures by Defense installations in Maine, see Appendices 1, 2 and 3 Background Papers #1, #2 and #3.)

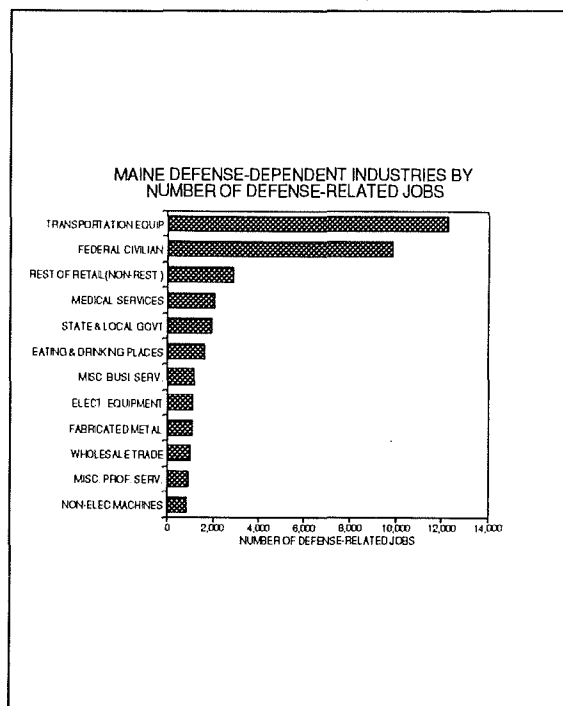


Figure 9

TABLE 5
PRINCIPAL MILITARY INSTALLATIONS IN MAINE

FACILITY	LOCATION	ANNUAL SPENDING, FY92 (in Millions)	
		PURCHASES	SALARIES
Portsmouth Naval Shipyard	Kittery	\$3.4*	\$154.0*
Loring Air Force Base	Limestone	\$24.8	\$85.9
Brunswick Naval Air Station	Brunswick	\$20.4	\$165.8
Maine Air National Guard	Bangor	\$18.7	\$19.5
Maine Army National Guard	Augusta	\$12.1	\$26.0

* Estimate of amount spent in Maine. Total purchases in 1992 was \$50.5 million. Salaries totaled \$291.1 million, of which \$154 m was paid to Maine residents.

Though dominated by ship building, Maine's major defense contractors cover a wide array of industries. The top ten firms, according to value of contracts awarded by the DOD over a three and one-half year period include construction firms, textile and apparel manufacturers, makers of equipment and parts and electronic devices, as shown in Table 6. Maine has also become home to a small but growing number of largely high-technology defense-related firms.

TABLE 6
TOP TEN DEFENSE PRIME CONTRACTORS IN MAINE, FY 89-MAY 1992

<u>COMPANY</u>	<u>LOCATION</u>	<u>CONTRACT AWARDS, FY89-MAY92</u>
Bath Iron Works	Bath	\$2,193 million
Saco Defense	Saco	\$105.8 million
H.E. Sargent	Old Town	\$12.1 million
ABB Environmental Svcs	Portland	\$11.9 million
Fiber Materials Inc	Biddeford	\$8.5 million
Dielectric Communications	Raymond	\$7.0 million
Andrew Crowe & Sons	Warren	\$5.3 million
Creative Apparel Assoc.	Belfast	\$3.1 million
A.E. Flewelling & Sons	Washburn	\$2.3 million
Mid Maine Contractors	Litchfield	\$2.2 million
Industrial Welding & Mach.	Portland	\$2.1 million

Firms doing business with the DOD and with various installations in Maine are located throughout the state. They are most heavily concentrated in southern and coastal regions. Figure 10 displays the location of military facilities and major defense contractors in Maine.

**SELECTED DEFENSE-RELATED
FACILITIES IN MAINE 1990**
(estimated civilian employment)

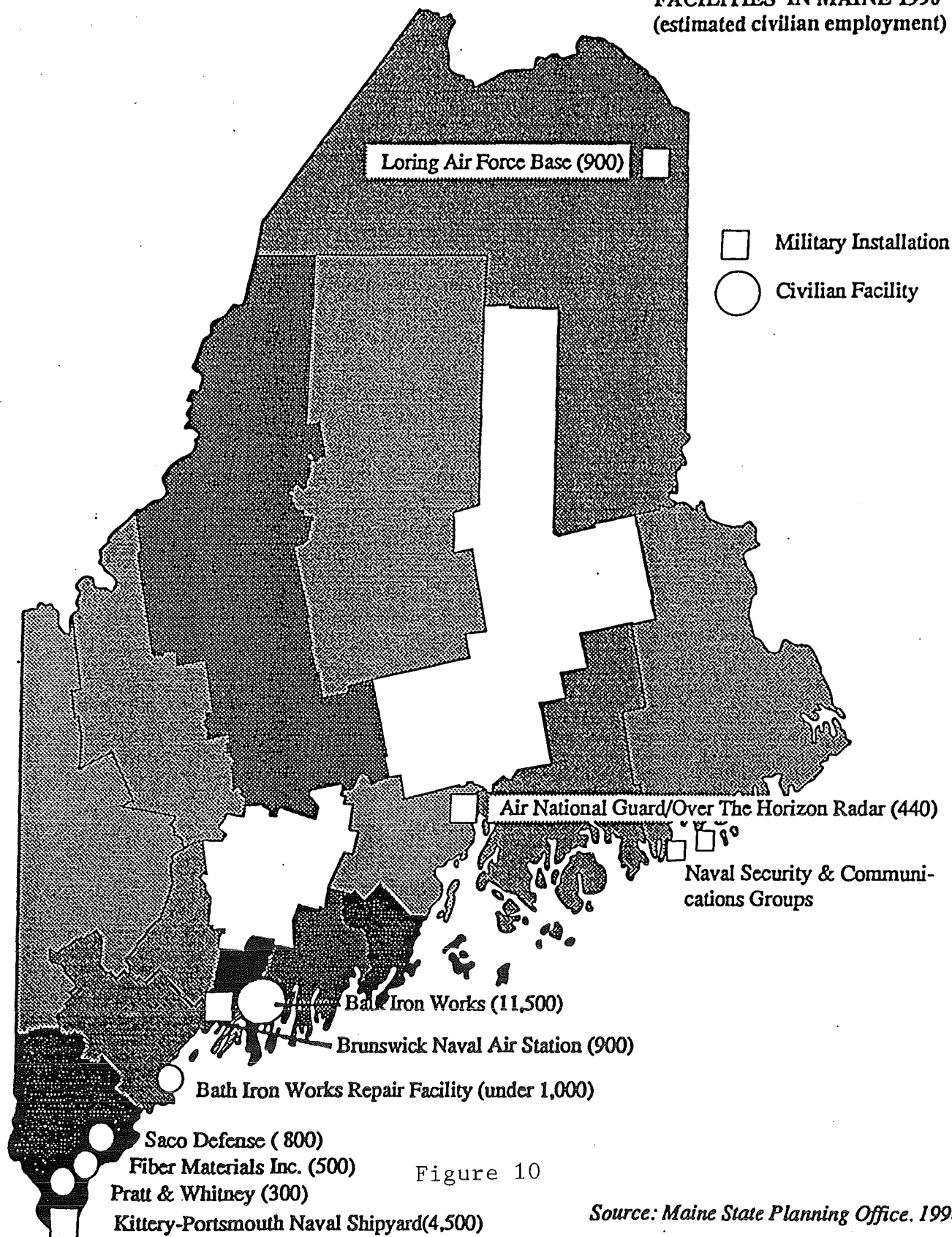


Figure 10

Source: Maine State Planning Office. 1990.

D. Major Defense Installations in Maine:

LORING AIR FORCE BASE

Loring Air Force Base, located in Limestone, Aroostook County, will be closed by September 1994 pursuant to the recommendation of the 1991 Base Closure and Realignment Commission. This decision will have devastating social and economic impacts on the communities of Aroostook County that will reverberate across the State. A Loring Readjustment Committee has been assembled by local and State officials and has begun the enormous task of planning for Loring's closure and eventual reuse and is developing a regional economic adjustment strategy.

Loring AFB has been home to the 42nd Bombardment Wing of the U.S. Strategic Air Command. It is the single largest employer in Aroostook County, providing 4019 jobs (including 3496 military). Base military and civilian personnel combined represent 10% of total employment in the County. Moreover, wage levels at Loring are well above the county average. Consequently, the base payroll accounts for 19% of Aroostook County wage & salary income.

Loring has played a critical role in supporting the Northern Maine economy. Total base expenditures in fiscal year 1989 were \$129 million. This included payroll, construction, services, materials, equipment and supplies. These expenditures included \$89.6 million in military and civilian payroll, \$16 million in construction projects, \$14 million for services, and an additional \$9.3 million for materials, equipment and supplies. The annual operation of Loring Air Force Base, including direct military and civilian jobs, payroll, and other base expenditures, supports a total of 7828 jobs in Maine, generates \$168.3 million in personal income, and \$286.3 million in business receipts. Of these, 6200 jobs, \$129.5 million in personal income and \$169.4 million in business sales are located in Aroostook County. In addition, the Base plays a large role in the provision of education, health care and fire fighting services to surrounding communities.

The citizens of central Aroostook County and Maine State government have joined together to prepare for the final closure of Loring AFB in September 1994. A 14-member committee has been appointed to marshal the State, federal and local resources available to minimize the impact of base closure, to find suitable alternative uses for the facilities and to develop a economic adjustment strategy for the region. The process now underway in Aroostook County will be a multi-year effort that will determine how Maine will ultimately be affected by the loss of this major economic actor.

PORTSMOUTH NAVAL SHIPYARD

Portsmouth Naval Shipyard in Kittery Maine employed approximately 6,900 civilian workers in 1992, just over half of whom were Maine residents. In addition to the \$145 million Maine payroll, the shipyard purchased approximately \$3 million in goods and service from Maine firms. It is estimated that in addition to more than 3,600 direct jobs, Portsmouth Naval Shipyard supports an additional 2,800 jobs in Maine, producing a total of \$200 million in earnings. Like any large employer, the shipyard is a crucial component of its regional economy, providing the

critical mass needed to support the current level of cost-effective and quality public services to residents throughout southern York County.

Like the other seven public shipyards operated by the Navy, Portsmouth has been facing the pressures of declining workloads as maintenance budgets are reduced and systems are mothballed. In fact, the Portsmouth shipyard has begun the process of downsizing by reducing its work-force by approximately 1,200 jobs between 1989 and 1992.

The longer term outlook for Portsmouth Naval Shipyard, like all Maine defense facilities, remains uncertain. Portsmouth was not named for closure by the Base Closure Commission in the most recent round but faces the same process again in 1995.

BRUNSWICK NAVAL AIR STATION

Brunswick Naval Air Station (NAS Brunswick), located in Brunswick, Sagadahoc County, Maine is home of Patrol Wing FIVE, one of two Patrol Wings on the Atlantic Coast. Re-activated in 1951 in response to a growing Soviet submarine threat, Brunswick's principle task is anti-submarine warfare. They have also been called upon to perform anti-submarine surveillance, mine warfare, search and rescue and other missions.

NAS Brunswick employs 2,800 military and nearly 900 civilian personnel. In 1992 NAS Brunswick funneled over \$186 million into the local economy. This included \$136 million in payroll, roughly \$30 million to retirees and \$20 million spent on local purchases of goods and services and construction projects. Through its activities it supports an additional 1,600 jobs in the Bath-Brunswick area. In addition, the activities and personnel associated with NAS Brunswick are a integral part of the quality of life of the surrounding communities.

NAS Brunswick faces one more round of base closure and realignment assessments, in 1995. NAS Brunswick is expected to gain an additional squadron in 1993 as a result of the closure of a west coast Naval Air Station. However, the shape and pace of change in superpower relationships remain nebulous, as do America's evolving national security priorities. Consequently, it is difficult to assess how BNAS Brunswick will fare in this process in the coming years. Efforts are underway by businesses and communities surrounding the Base to examine the economic importance of BNAS Brunswick to the local economy, explore joint use options and to prepare for future base closure proceedings.

E. Other Federal Military Activities

Pease Air Force Base: Pease Air Force Base in southeastern New Hampshire on the Maine/New Hampshire border, was the first base to be closed pursuant to the Base Closure and Realignment

EMPLOYMENT OF PORTSMOUTH NAVAL SHIPYARD
BY TOWN IN YORK COUNTY: 1990

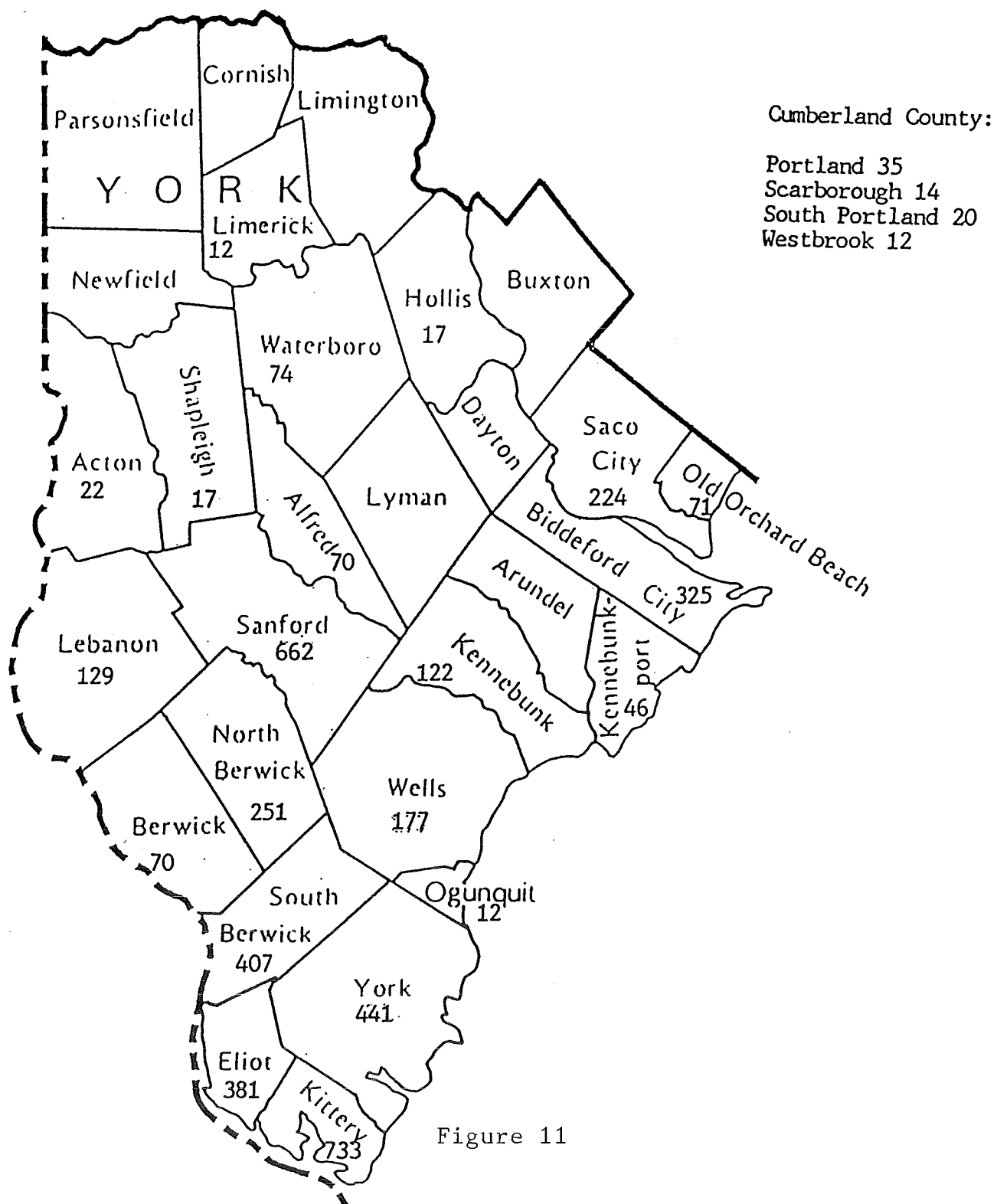


Figure 11

Act of 1988. By the beginning of 1991, operations had essentially ceased, eliminating over 1,000 civilian jobs, 3,460 military jobs and a payroll of \$109 million. Including dependents, total base-related population numbered about 10,700. In addition, the base added another \$35 million in the purchase of goods, services and construction contracts.

The initial impact of this closing, coming in the midst of a regional downturn and national recession, was to further exacerbate economic difficulties on both sides of the border. The economic impact, in addition to the continuing uncertainty about the re-use of the facility, has generated concerns about the quality of future economic growth in neighboring Maine communities.

Maine National Guard: The Maine Army and Air National Guard maintain a considerable presence in the State. These units include more than 280 active duty military and 480 full time civilian personnel and over 4,200 traditional Guard personnel (part-time). Combined these activities bring over \$45 million in annual earnings to the Maine economy. The direct and indirect impact of the activities of the Maine National Guard support an additional 600 jobs across the State.

The single largest on-going operation of the Maine National Guard has been the Air National Guard (ANG) 101st Air Refueling Wing headquartered at Bangor International Airport. The 101st Air Refueling Wing includes 111 full-time military and 235 federal civilian personnel in addition to 800 traditional Guard members (part-time), generating over \$20 million in earnings each year. Of this, the traditional Guard accounts for nearly \$7 million annually. The recent addition of the Over-The-Horizon Backscatter Radar facility (OTH-B) added 329 full-time military and over 200 civilian personnel to the ANG operation in Bangor.

Activities at Bangor have begun to feel the effects of changing defense priorities. Projected downsizing of the military, and redistribution of available resources has caused the Air Force to significantly reduce the scope of operation at the OTH-B radar facility. As many as 200 direct civilian jobs associated with the facility have been eliminated.

Maine's Army National Guard is also facing significant reductions in force in 1993 totalling 758 positions, including about 50 full-time positions. This will represent a reduction of 26% in the Army National Guard in Maine and is part of a nationwide downsizing of the U.S. armed forces.

The future role of the National Guard in U.S. defense plans remains unclear. A growing emphasis on National Guard and Reserve roles in the Air Force should ensure relative stability or modest growth for the Maine Air National Guard. However, further restructuring of U.S. Army forces could result in additional reductions in Army National Guard units and personnel in Maine.

Navy Security and Communications Facilities: The U.S. Navy operates two facilities in East coastal Maine. The Naval Security Group in Winter Harbor and the Naval Communications Unit in Cutler, while small, are important components of their small local economies. Employing over 700 military and civilian personnel, these activities are among the area's largest and highest

paying employers. While employment losses to date have been small, these facilities remain at risk of further reduction, or even closure.

F. Major Direct Defense-Related Businesses

BATH IRON WORKS

Bath Iron Works (BIW) is Maine's single largest defense activity, and its largest private employer. BIW's 10,000 workers earn wages close to the national industry average and more than the State average wage. Currently the lead shipyard in the Navy's AEGIS destroyer program, BIW has seen extraordinary growth since the late 1970's, adding over 7000 jobs in Maine during the 1980's.

A major component of the State and regional economy, BIW provides an annual payroll of over \$300 million to workers largely from communities in Sagadahoc, Androscoggin, Cumberland, Lincoln and Kennebec Counties, as shown in Figure 12. In addition, BIW purchases approximately \$60 million worth of goods and services annually from Maine firms. As a result, the defense work at BIW supports an additional 6,600 jobs across the State and generates \$509 million in personal income.

While significant, these estimates underestimate the role that BIW plays in supporting the economic and public infrastructure of mid-coast Maine. As a large purchaser of electricity from Central Maine Power, for example, its absence from the customer base would dramatically increase the cost of electricity to all other users. Similarly, the availability and cost of health, education and other public services to residents of the mid-coast region are directly affected, as well, by the presence of BIW in the Bath-Brunswick area.

BIW reached a peace time employment peak of 11,950 in 1990, driven by the U.S. naval build-up and a confluence of contract work during the last years of the 1980's. The outlook, however, is for a much lower level of defense work over the coming decade. Original procurement plans for five ships per year have been revised downward. BIW has already reduced its work-force by over 2,000 between 1990 and 1992, and expects to layoff another 1,500 workers by 1994. The future of BIW as a defense contractor depends upon decisions by the Department of Defense regarding the character of the U.S. national security posture and the size and composition of America's naval fleet needed to accommodate it.

Officials at BIW have concluded that they must build at least two ships per year to remain commercially viable. BIW's recent \$724 million award to build 3 AEGIS destroyers is good news for the shipbuilder in the short term. However, longer-term prospects are contingent upon either the continuation of the commitment to a class of warship built by BIW, or the success of the firm in diversifying into commercial markets. Strong international competition in commercial vessel production and foreign subsidies present serious challenges to U.S. commercial shipbuilding. However, a strengthening in future demand for commercial vessels and expansion into alternative products offers prospects for long term viability of Bath Iron Works.

Bath Iron Works Corp.
Employment
by County

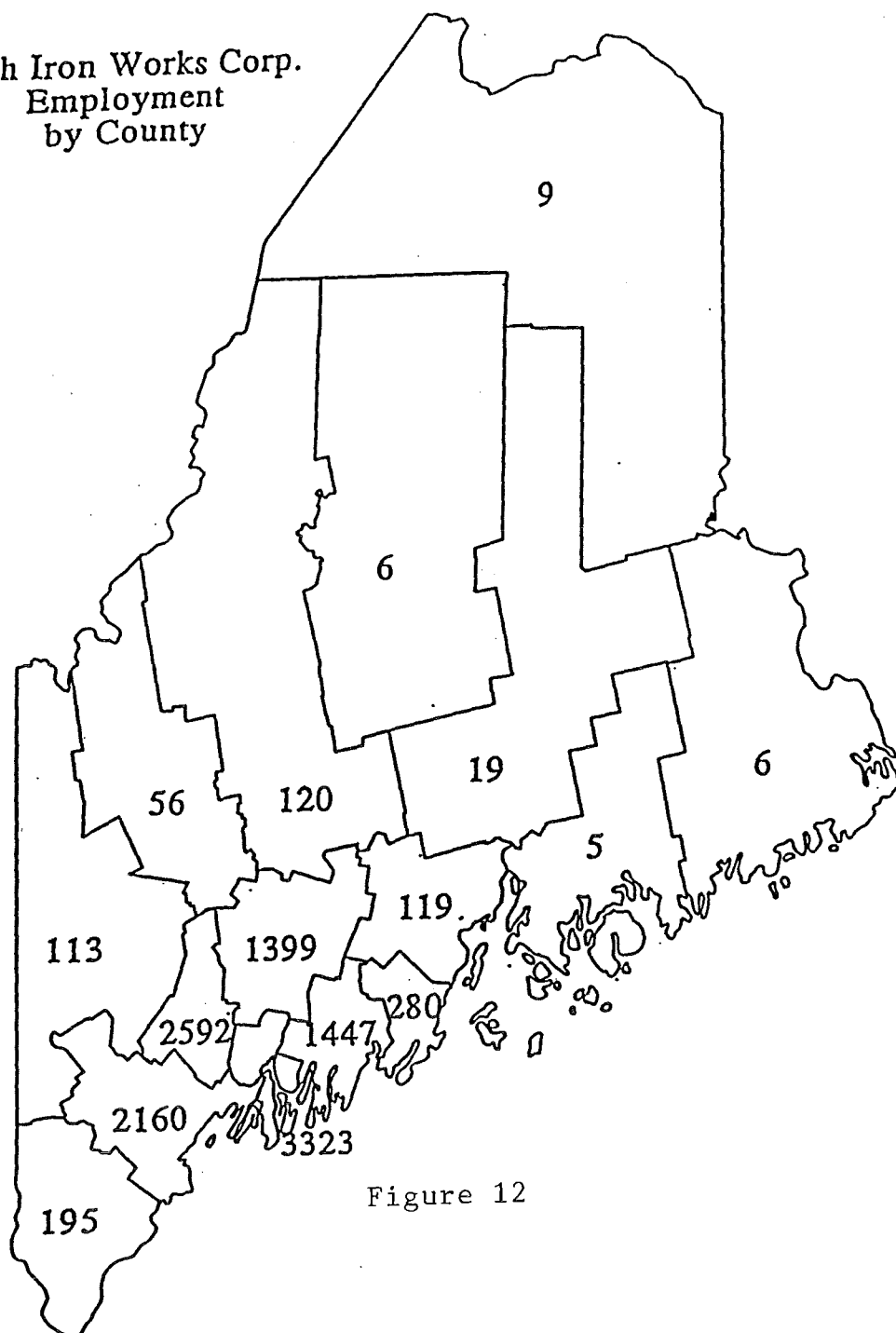


Figure 12

Source: Bath Iron Works Corp.

G. Other Defense-related Firms

A number of Maine businesses conduct a significant amount of business with the Department of Defense either in weapons and supplies procurement or through Maine's military installations. Saco Defense, Fiber Materials, Inc., Keyes Fiber Company, Andrew Crowe & Sons, Fibre Materials, Inc., Howell Laboratories and other prime contractors produce components or complete weapons systems and other supplies and services for the U.S. Department of Defense. Combined, the defense-related employment of these firms is estimated at nearly 2,600 in 1992.

Also notable are a number of Maine subcontractors working for out-of-State defense contractors. This group includes producers of metal products, machinery and electronic components. National Semiconductor in South Portland and Mid-State Machine in Winslow are among Maine businesses that have recently relied, in part, upon work with defense-related projects. Less than 20% of the jet engine work conducted by Pratt & Whitney Aircraft Division in North Berwick is related to defense contracts of its parent, United Technologies in Connecticut. Other Maine businesses provide equipment, supplies, construction and other services to Maine's military installations. Among this category are Portland Valve, Brunswick Coal & Lumber, Cyr Construction and numerous other small and medium-sized firms around the State.

The outlook for Maine's subcontractor segment is mixed. Many of these firms have already suffered job losses related to defense cutbacks. Approximately 1,000 jobs have been lost at these other defense-dependent firms around the State between 1989 and 1992. As they cover the gamut of U.S. defense activity, this segment of Maine's defense-dependent economy is likely to experience some level of continuing decline in demand. The fate of individual firms depends upon the continuation of the weapon systems or installations upon which they rely and the success of their efforts to reduce their dependency upon defense-related contracts.

H. Conclusions

By varying degrees, Maine's economic defense dependency cuts across all Maine industries. However, the State's direct dependency is concentrated in a small number of facilities and firms, and three regions of the State. Nearly 70% of all direct defense-related civilian jobs are with BIW, Loring AFB, NAS Brunswick and Portsmouth Naval Shipyard. However, these represent only 27% of all defense-dependent jobs. The majority of Maine's defense-dependent jobs are spread among a large number of businesses that serve both civilian and military-related markets.

Not surprisingly, the geographic concentration of Maine's defense-dependency is in the three regions of the State that host large defense establishments. Aroostook County, the home of Loring Air Force Base, relies on the base to support one of every six jobs, and 12% of total

income generated in the County. It is the County's largest single employer and accounts for 19% of its wages and salaries. The Bath-Brunswick Region is host to both Bath Iron Works and Brunswick Naval Air Station. These two facilities alone support over \$1 billion in earnings, fully 8% of the State total. In fact significant economic impacts of BIW extend west into Androscoggin County and south into Cumberland County. Finally, York County is the location of Portsmouth Naval Shipyard, Saco Defense, Fiber Materials Inc. and other private defense sub-contractors. Moreover, its proximity to Pease Air Force Base in New Hampshire has already led to deleterious economic impacts within its borders.

The local and regional impact of defense spending reductions will be very substantial. In a state dominated by small and medium-sized businesses, defense-related activities become the principal economic actor in each of the regions in which they are located. Moreover, the diversity of Maine's defense-dependency suggests that some, if not all, segments of its defense economy is likely to be affected by the restructuring of national spending priorities for several years.

The economic impact of defense spending and cutbacks on Maine's most defense-dependent regions has been analyzed in detail by the KEYS Coalition in southern York County, the Bath/Brunswick/Topsham Economic Development Council, the Androscoggin Valley Council of Governments and the Loring Readjustment Committee. Descriptions and assessments of the regional impacts of defense spending and reductions in defense investments in Maine can be found in Appendices 4,5, and 6.

III. THE CAPACITY OF THE MAINE ECONOMY TO ABSORB REDUCTIONS IN DEFENSE SPENDING

1. The Maine Economy in the 1990's

While Maine has long hosted significant defense activity, the defense build-up of the 1980's added additional jobs to the Maine economy. Direct and indirect jobs associated with the military build up totaled 18,000 by 1989. Most were associated with the naval build up supported by Bath Iron Works. This largest of Maine employers added 7,400 jobs during the 1980's. Additional jobs were created at prime and secondary defense contractors, largely in southern Maine.

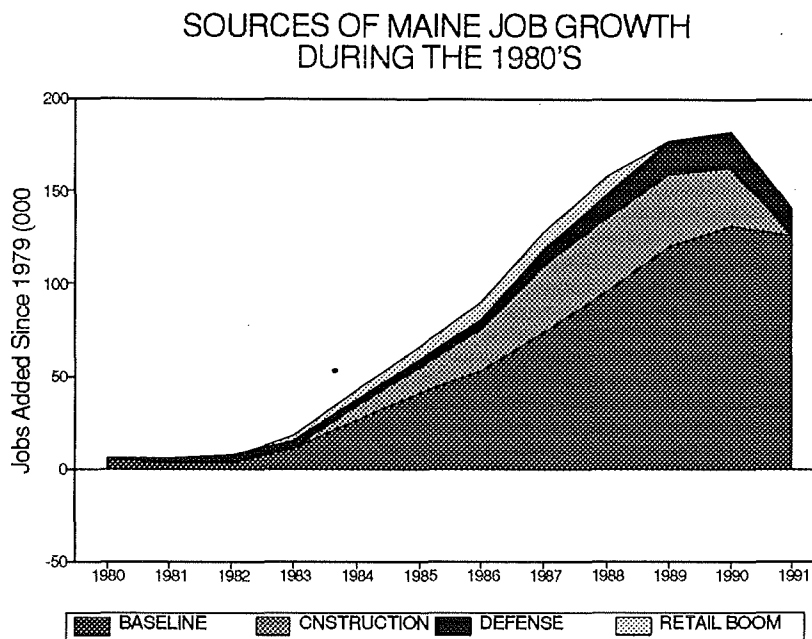


Figure 13

Between 1989 and 1992, Maine had lost 7,400 jobs added by the defense build up. This is accounted for by the loss of 2,000 jobs at BIW since 1990 and losses at other defense contractors. In addition to the losses associated with the build-up, Maine has lost another 5,400 direct and indirect defense jobs associated with downsizing of military facilities. By 1994, with the closure of Loring AFB, Maine will have lost almost 24% of its peak defense-dependent employment of 63,000 in 1989. Figure 13 shows the composition of Maine's economic growth and decline during the 1980's.

Unfortunately, defense cutbacks are not the only negative forces impinging upon the Maine economy today. The demographic surge that fueled rapid household formation, consumer

spending and strong job growth in the last decade has slowed and will continue to do so over the next ten years. The New England economic renaissance driven by the defense build-up and the computer and finance industries has dissolved into a quagmire of business declines and over-built real estate. Thus, in addition to the reversal of the defense build-up, Maine is experiencing the end of a construction and retail boom, as illustrated in Figure 13. A national recession has further exacerbated regional weakness, and recovery is expected to be exceptionally slow. Consequently, defense cuts are hitting Maine in the midst of its worse economic downturn since the early 1980's, a downturn that is unlikely to be followed by vibrant recovery.

It will be exceptionally difficult for the Maine economy to replace defense-dependent jobs. From 1990 to 1992 Maine employment declined by 6%. Most recent job losses have been in construction, manufacturing and retail trade. Defense cutbacks have also contributed to this weakening in Maine's employment levels. By early 1993, over 7,400 Maine defense-related jobs will have been lost to spending cuts.

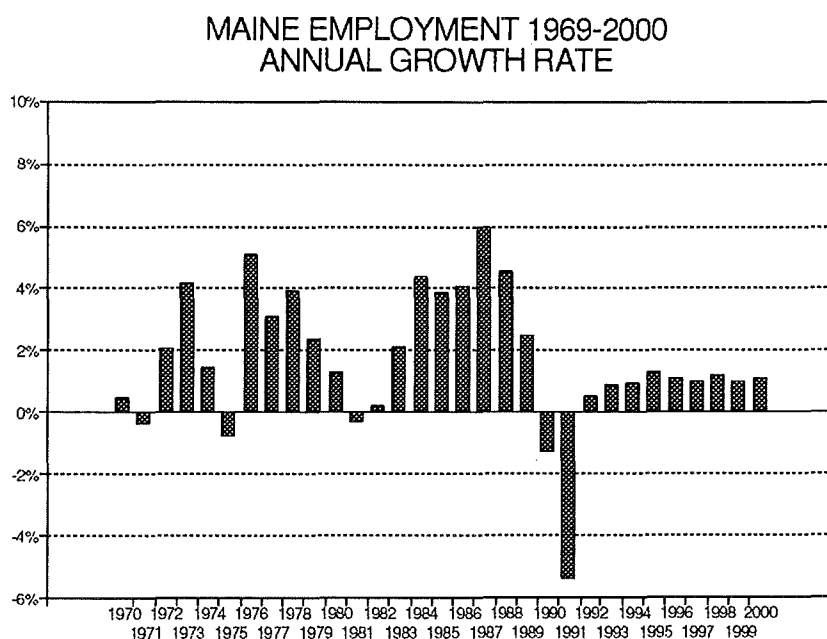


Figure 14

Despite current economic difficulties the Maine economy has experienced a qualitative improvement over the last 15 years. The economy that is carrying Maine into the 1990's is the culmination of a fundamental restructuring of the State's industrial base. This transformation has been characterized by the formation of new manufacturing industries as well as the revitalization of some of Maine's traditional industries. Maine's service sector, too, has gradually moved from a supplier of basic essentials to an array of activities servicing businesses and consumers in and outside the State.

Nonetheless, economic growth in Maine during the 1990's is expected to be more moderate than that experienced during the 1980's. The State Planning Office (SPO) predicts that job growth in Maine during the 1990's will slow to an average of about 1% per year, down from the 2.6% annual growth experienced during the 1980's. Significant additional defense cutbacks in Maine, such as the closure of another major facility, could dramatically alter even this modest growth forecast.

2. Other Economic Implications of Defense Reductions

Beyond their statewide effects, the impact of defense spending cuts on individual workers, firms and communities will be severe. Like past industrial restructurings, the shift away from defense will be painful. The nature of job growth in Maine over the next several years will not necessarily occur in the occupations or locations held by current defense-dependent workers. Communities dependent upon defense workers, firms and facilities will be hard pressed to replace the tax base and level of service presently supported by defense spending. Firms that have long relied on the steady flow of defense dollars will find themselves seeking new customers in an increasingly competitive market place.

A number of other economic dynamics of defense reductions are not taken into account in the analysis above. The analysis above offers no indication of the effect of defense cutbacks on the level, quality and cost of State and local public services. As noted earlier, BIW is among Maine's largest consumers of electricity and along with its work-force, support a high level of local public and private services, including health care, and provide an important share of State and local tax revenues.

On the other hand, Defense force reductions, will increase the number of Maine citizens returning to the State from the military with both skills and G.I Bill benefits. The Advisory Council on Education and the Military in Maine estimates that current force reduction proposals will increase the number of returning Maine service persons from the current 1300 per year, to 1800 per year, a 38% increase. This influx of trained workers with resources for further education offers to reduce the skill shortage that currently threatens Maine's long-term economic growth. Alternatively, these new entrants could further exacerbate already high unemployment.

Finally, Loring Air Force Base is on the National Priority List for Superfund clean-up. It is estimated that environmental clean up at Loring will cost up to \$900 million. This major infusion of federal dollars offers an opportunity to strengthen Maine's environmental industries. In particular, this offers a chance to convert construction workers and firms, now suffering a severe recession, to an industry with strong growth potential.

3. Conclusions

During the last 20 years, Maine has advanced from a lethargic economy dominated by mature forest products, footwear, and textiles industries to a more diversified one. This economic restructuring, like the many throughout the State's economic history, was both painful and beneficial. Some regions of the State still bear the scars of the declining footwear and textiles industries. Paper mill towns still struggle with the realization that a high school diploma no longer guarantees a high paying local job, and rural Maine, the home of much of our industrial past, contends with the locational implications of an economy dominated by non-manufacturing.

At the same time, Maine moved from 42nd in per capita income in 1979 to 29th by 1990 as low-wage employment was replaced by new, higher wage jobs. For each job lost in Maine's footwear, textiles and food processing industries during the 1980's, Maine added two to three higher paying jobs in health care, wholesale trade, insurance, business and professional services, and to expansions in defense-related industries.

The economic restructuring associated with reduced defense spending presents important differences from past restructuring. In some respects Maine's economy is better prepared to absorb the impacts of defense spending cuts than in the past. Higher incomes, greater industrial diversity and a more sophisticated business population should buffer some of the impacts of cuts in defense spending.

In addition, unlike past economic upheavals we have the benefit of precognition. While specifics are unknowable, we can estimate the approximate timing and potential character of defense cuts. This offers the opportunity to develop strategies to mitigate the impacts of defense spending cuts. However, the key to surviving defense spending cuts may well be their timing. If relatively gradual, spending reductions will allow Maine to develop the capacity to respond to their effects.

Nonetheless, the Maine economy will be hard pressed to replace the jobs and income lost to continuing defense cutbacks, given the depth of the current recession and the magnitude of defense-related losses to date. In the absence of a concerted mitigation and response program by Maine State government, businesses, workers and communities further defense cuts have the potential for prolonging and deepening Maine's economic downturn.

IV. FINDINGS

The assessments of Maine's defense economy and the capacity of the State to absorb the impacts of defense cut backs has led to a number of conclusions regarding the challenges and opportunities facing the state. This section summarizes the findings of the Defense Task Force. For more detailed descriptions, see Appendices 1-6.

In recent years Maine has been nationally recognized as a leader for its innovative programs of labor training, education, economic development, and social services. But these programs are not of a scale, nor were they designed to address, the sudden impacts of major defense cutbacks.

This problem is exacerbated by state budget pressures -- caused by the poor economy, ironically aggravated by defense cuts. Maine is now cutting back its financial support for municipalities, vocational education, social services, and economic development. As the need is growing, Maine's capacity to respond is being weakened.

1. Defense Impacts Will Continue Across Maine

As noted above, Maine has yet to experience the bulk of its anticipated defense impacts. It is expected that during 1993 and 1994, direct and indirect jobs lost to defense cutbacks could total more than 8,000. These losses will come from the following impacts.

- Closure of Loring AFB in 1994 -- 3,000 military; 4,000 civilian;
- BIW downsizing -- up to 3,000 additional job losses are expected by 1997 as Navy procurement shrinks and Navy repair work diminishes;
- Portsmouth Naval Shipyard at Kittery -- growing competition for declining ship and sub repair work;
- Maine National Guard -- reductions of 758 part-time, 50 full-time during 1993;
- Cutler Naval Communications Facility -- 200 military/civilian at risk
- Brunswick Naval Air Station and Portsmouth Naval Shipyard at risk to base closure actions in 1995; and
- subcontractors at risk to continuing procurement cutbacks.

The Defense Task Force estimates that defense spending in Maine will decline by 20% between 1989 and 1994. This loss will represent about \$250 million per year of income for state residents. Maine's entire state labor, economic development, and technical education budgets

taken together do not approach such a figure. This is the first and most important problem. The scale of the need dwarfs available state and local resources.

2. Defense At-Risk Regions Lack Development Infrastructure

The budget crisis is also weakening the regional network needed to support regional planning and program implementation. For example, the Capitol Coastal Council of Governments, the regional agency which assembled Bath-Topsham-Brunswick officials to conduct the defense conversion impact analysis in the summer of 1992, is out of money and has closed its doors. Efforts to expand EDA designation to coastal and southern Maine -- which these communities are eligible to receive, and which would enable them to begin economic development planning and business assistance in earnest -- have been delayed by problems facing regional organizations.

As detailed in the regional analyses, Maine's defense regions lack significant economic development infrastructure necessary to support economic diversification. These shortcomings are a direct result of years of stable or growing defense-supported activity that negated the need for alternative economic supports. Economic development planning and implementation has been weak in some of these regions as a direct result of the strength of defense-supported economies. Economic development infrastructure weaknesses include:

- York County: worker training & development, industrial development, economic development planning;
- Bath/Brunswick/Topsham: worker training & development, industrial development; economic development planning;
- Androscoggin Valley region: worker training & development;
- Remote regions e.g. Culter, Schoodic Point, Aroostook County, Western Maine; transportation infrastructure, worker training & development; industrial development.

3. Existing State Assistance Programs are inadequate to the Task of Assisting Defense Workers, Businesses and Communities

Maine's array of public economic development programs have been pummeled in recent years. State government in Maine has faced the simultaneous assault of a severe regional recession and deep defense cuts. As a result, public programs have experienced both a dramatic rise in demand for public assistance and shrinking financial resources. Consequently, Maine's existing resources of economic support are far short of what will be needed to adequately address the impacts of continuing defense cutbacks. More specifically:

- Existing worker adjustment mechanisms are inadequate to the task of helping defense workers:
 - Job training and placement systems were developed during 1970's & '80's and not designed for high-skilled, educated workers that characterize many defense workers.
- Traditional business assistance programs are inadequate to the scale of defense impacts:
 - budget cutbacks and traditional structures prevent business assistance at a scale adequate to the needs of Maine's sophisticated defense contractors.
- Municipal planning and development resources are inadequate to support meaningful diversification planning and implementation.

4. Economic Opportunities Exist in the Wake of Defense Restructuring

Defense downsizing also offers some opportunities to Maine communities and workers. Turning the energy and ingenuity of defense workers and businesses to private sector pursuits should provide valuable resources to Maine's embattled economy. Specific opportunities presented by defense downsizing include:

- availability of a highly-skilled work force of civilian and military personnel with an impressive array of expertise;
- workers with the desire to start new businesses. With proper guidance, defense workers could create businesses to support themselves and fellow defense workers;
- reductions in size and composition of missions and lowering of tensions presents growing opportunities for the joint use of military facilities;
- the environmental clean-up of military installations presents an opportunity to transform Maine's construction, engineering and design firms to the growing business of environmental industries;
- growing numbers of discharged military personnel will mean the inflow of hundreds of skilled workers returning to Maine with G.I. Bill benefits in hand.

Base clean-up efforts will open the door to new environmental businesses in Maine. Available skilled labor and base facilities will be attractive to relocating companies. The GI Bill benefits of discharged Maine soldiers will be helpful in supporting re-training efforts. Economic

conversion assistance from the Economic Development Administration and the Office of Economic Adjustment will provide stability and continuity.

But overall, these opportunities can replace, in the short run, only a small percentage of the thousands of jobs which will be lost. This makes it all the more important that the available resources and opportunities are used wisely to promote long term growth.

V. A DEFENSE ADJUSTMENT ACTION PLAN FOR MAINE

1. Introduction

The Governor's Task Force on Defense Realignment and the Maine Economy has been exploring the economic implications in Maine of defense spending reductions, and developing a strategy for State government action to minimize the impacts of those cutbacks. What follows is an outline of an action plan that seeks to assist Maine communities, businesses and workers adjust to the economic changes precipitated by reductions in defense spending.

The breadth of defense impacts in Maine will far outpace the resources available to state government to affectively address with traditional approaches. Moreover, the shape of a successful response to defense dependency will depend greatly upon the unique characteristics of communities, businesses and workers. Consequently, a single statewide strategy would be inappropriate and ineffective. Instead, this action plan envisions state government as a catalyst supporting strategies devised and implemented by defense-dependent communities, businesses, and workers. It offers general rules of state involvement in defense-related initiatives and recommends specific actions to support on-going or anticipated activities of defense-dependent parties.

The action plan outlined here is organized around strategies related to communities, businesses, and workers. The final section outlines a strategy for implementing the action plan described here. Each section focuses on either communities, businesses or workers and is organized as follows:

- strategic principles setting broad parameters for action;
- desired outcomes of strategic action;
- potential strategies for affected parties; and
- Task Force action to facilitate desired outcomes and the status of such actions.

GENERAL STRATEGIC PRINCIPLES

Traditional approaches to economic dislocation will be ineffective given the magnitude of economic restructuring presented by defense cutbacks in Maine. Developing an innovative and constructive strategic response demands adherence to new principles of State involvement in economic development efforts. These new principles reflect the imperative to involve large proportions of affected parties and the imbalance between public resources and the magnitude of the challenge. These "new wave" strategic principles are summarized below:

1. Empower beneficiaries of initiatives. State government's role is to serve as a catalyst to action by affected parties. This is accomplished by:
 - providing incentives to stimulate action by affected parties on their own behalf; and
 - allowing customer needs to drive program design and implementation.
2. Achieve appropriate scale for success. Traditional State government programs seldom have the resources necessary to support a significant share of the target population. Increasing the scale of a defense initiative can be achieved by:
 - leveraging private and other financial resources;
 - providing incentives to stimulate action by private for-profit and non-profit sectors;
 - brokering participation by existing service providers (private and public); and
 - using market mechanisms to insure quality and relevance.
3. Encourage collective actions by affected parties, where appropriate.
4. Coordinate community, business and worker strategies when possible.

2. Strategies for Communities: Reducing Defense-Dependency of Communities

STRATEGIC PRINCIPLES

1. *Multi-community action.* The size of most Maine defense facilities is such that their activities cut cross several communities. Given the magnitude of the economic impacts of defense cutbacks, it is unlikely that any one community can effectively respond to defense cutbacks unilaterally.
2. *Pro-active approach to defense dependency.* A strategy to reduce defense dependency can be most effective when implemented before a major dislocation occurs.
3. *Community strategies connected to business and worker adjustment strategies.* Chances of success at each level (community, business, worker) will be improved by coordinating efforts.

OUTCOMES FOR DEFENSE-DEPENDENT COMMUNITIES

1. Community leaders in defense dependent regions will work together to create mechanisms to facilitate new economic development and strengthen the existing non-defense economic base and support network so that the regional economy can withstand the effects of defense cut backs.
2. Defense-dependent communities will reduce their reliance upon defense-related employers.

STRATEGIES FOR COMMUNITIES

- Establish multi-community action teams to:
 - gauge assets and liabilities of their regional economy;
 - determine actions necessary to reduce liabilities and capitalize on assets;
 - implement action plan to strengthen capacity to support economic diversification.
- Develop non-defense uses of defense-related facilities.
- Coordinate community diversification efforts with those of defense-dependent businesses and workers. e.g. marketing of region should include marketing skills of labor force; etc.

TASK FORCE ACTIONS AND RECOMMENDATIONS TO ACHIEVE OUTCOMES.

- **Loring Closure and Reuse Strategy.** Activities associated with Loring are being directed by a community-based committee, the Loring Readjustment Committee (LRC). It has been charged to develop a re-use plan for Loring Air Force Base.

The Loring Readjustment Committee (LRC) has been formed by the affected communities to develop a reuse plan for Loring Air Force Base. The LRC includes several Task Force members including the EDA representative, the Commissioner of Economic and Community Development and the State Economist.

Currently, the LRC is pursuing State legislation to establish a Loring Development Authority of Maine to oversee the conversion of LAFB, to accept property from the federal government, and to provide base services once the military leaves. This is one part of a two-pronged readjustment strategy being pursued by the LRC, which includes base redevelopment and economic adjustment activities beyond the boundaries of the base.

Related activities include:

Aroostook County Economic Assessment and Marketing Strategy. LRC-associated and EDA-supported project to establish marketing strategy for Aroostook County area to diversify economic base.

Fort Fairfield Infrastructure Project. EDA-supported infrastructure improvement project to support industrial diversification in Aroostook County.

- **Regional defense-dependency analysis and diversification strategies.** The Defense Task Force, with the support of EDA, has provided financial and technical assistance to communities in southern York County, the Bath-Brunswick-Topsham Region, the Lewiston-Auburn Region and Greater Portland region to work in multi-community coalitions to assess their economic defense dependency.

Southern York County -- the KEYS Coalition (Kittery, Eliot, York, South Berwick) has formed to develop a strategic plan to respond to closure and reuse of Pease and dependency on Portsmouth Naval Shipyard. Southern Maine Regional Planning Commission serving as administrator. Contracted with Mt. Auburn Associates.

\$50,000 of additional planning assistance from EDA has been brokered by the State Planning Office for the KEYS Coalition to support the development of a comprehensive economic diversification strategy. This is expected to result in proposals for immediate implementation actions including expansion of development infrastructure as well as longer-term initiatives.

Bath/Brunswick/Topsham region -- communities of Bath, Brunswick and Topsham, responding to dependency on Bath Iron Works and Brunswick Naval Air Station, have completed a defense dependency analysis.

In response to findings, these communities have established the Bath/Brunswick/Topsham Economic Development Council to develop a diversification strategy. They have gained OEA assistance to support the strategy effort. In addition, these communities are exploring the joint use potential of BNAS.

In an effort to strengthen the economic infrastructure of the BIW/BNAS region, the Town of Freeport is seeking support for an infrastructure development project that will permit the expansion of commercial and industrial facilities at two Freeport sites. This project offers a timely opportunity to broaden and diversify employment opportunities in the in Bath/Brunswick area.

Lewiston-Auburn region -- Working through Androscoggin Valley Council of Governments. Responding to dependency on Bath Iron Works, Brunswick Naval Air Station and local defense contractors.

- **Electronic Defense Facility Data Base.** An electronic data base of defense contractors and subcontractors has been developed and maintained by SPO to assist communities assess the extent of their defense. Data will be made accessible through an electronic bulletin board. Additional resources will be required to maintain and improve data base.

- **Incorporating Defense Adjustment Planning into Community Comprehensive Planning Process.** State comprehensive planning program in the Office of Comprehensive Planning (OCP) has been significantly reduced as a result of budget shortfalls. However, inclusion of defense-dependency component in at-risk regions should be explored.

3. Strategies for BUSINESSES: REDUCING DEFENSE-DEPENDENCY OF MAINE BUSINESSES

STRATEGIC PRINCIPLES

1. *Wide industry participation.* Success requires wide industry participation, including financial participation, rather than new public programs that few will use.
2. *Government role as catalyst.* State Government role is to create demand for diversification initiatives and to respond to industry needs as defined by industry.

OUTCOMES FOR DEFENSE-DEPENDENT BUSINESSES.

1. Defense-dependent firms will diversify their customer base by servicing new non-defense markets for their existing products or services.
2. Defense-dependent firms will develop new products or services that are compatible with their current strengths and will support employment levels comparable or above current levels.
3. Firms will form coalitions to strengthen industry competitiveness and access to resources needed to move to non-defense markets.

STRATEGIES FOR BUSINESSES.

- Undertake intensive strategic planning to determine steps required to achieve successful diversification.
- Identify new and emerging business opportunities, including international markets.
- Upgrade production processes and human capital to strengthen competitive position in non-defense markets.

TASK FORCE ACTIONS AND RECOMMENDATIONS TO FACILITATE OUTCOMES FOR BUSINESSES.

- **Environmental Industries Initiative.** Environmental clean-up of military installations (Loring, Portsmouth, Pease, others) and expected future private demand for clean-up and other environmental services and products offers an opportunity to establish an environmental clean-up industry in Maine. Such an initiative could create alternative markets for defense-dependent construction and engineering firms, and an array of defense-dependent workers.

The Department of Economic and Community Development has begun efforts to establish an industry association that can better position itself to compete for growing demand for environmental cleanup services, design services for environmental quality protection services and environmental clean-up related products.

- **Loring Clean-Up Initiative.** Facilitate Maine business participation in the cleanup of Loring AFB. Working with business representatives, and the Small Business Administration, SPO and DECD staff have identified major barriers to participation by Maine firms in clean-up of Loring AFB. These include:

- 1) Air Force tendency to structure contracts in a way that is disadvantageous to small and medium-sized firms;
- 2) bonding requirements are too great for small firms; and
- 3) firms and workers lack appropriate skills and certifications for environmental clean-up activities.

DECD and the SBA pursued discussions with the Air Force, Army Corp and other federal agencies to assure that contracts are structured in a way that will facilitate participation by small firms. Also pursuing avenues to redress problem of bonding requirement for contractors.

Pursuing additional discussions with clean-up firms and worker representatives to determine certification needs and role of MTCS and/or UMS to provide required training.

- **Support of strategic planning by Bath Iron Works.** BIW is undergoing a strategic planning process to identify new business opportunities. The Task Force is seeking EDA assistance for a market feasibility study component of the strategic plan. Also facilitating liaison with State agency expertise appropriate to assist BIW evaluate elements of strategic plan.

An application for EDA assistance for the market feasibility study by DECD and BIW has gained initial approval.

- **Sectoral Strategic Planning Initiative.** In-depth analysis of competitive elements of specific defense-dependent industry sectors and identification of opportunities for diversification. The State Planning Office will seek EDA assistance to support sectoral industrial analysis for strategic planning.
- **Defense Conversion Marketing Center.** DECD will seek EDA support to develop a Defense Conversion Marketing Center to provide marketing assistance that will build on existing programs to help Maine and other New England defense-dependent businesses broaden their markets beyond defense products.
- **Defense Industries Coalitions Challenge Grants.** DECD will seek EDA/DOD funds to establish challenge grants to encourage defense-dependent firms to form coalitions to develop industry-specific strategic plans.

Rather than create business assistance programs aimed at individual firms, encourage firms to access expertise and financing as a group. Result will be higher percentage of participation, creation of networks and a power base that can more effectively negotiate with financial markets and government. Coalitions can also create mechanism that allows businesses to determine their needs, design appropriate strategy and define government role in facilitating its implementation.

- **Technology Extension Delivery System.** The Maine Science and Technology Commission (MSTC) is providing \$70,000 to support an effort to develop a coordinated technology extension delivery system to assist defense-dependent firms gain access to production technology necessary to reduce defense dependency.
- **Maine EPSCOR.** MSTC is seeking DOD planning assistance to support academic research capacity that would assist Maine's high technology defense firms broaden their production to non-defense markets.
- **National Technology Reinvestment Program.** MSTC is encouraging and assisting eligible Maine firms to compete for ARPA, NIST and Nasa assistance in the areas of technology development, technology deployment and education and training.
- **Defense Diversification Revolving Loan Fund.** Conversion financing assistance to defense-dependent firms. Provide mechanism to aid in the financing of economic conversion initiatives including capital equipment upgrades and purchases, training for workers and managers, strategic planning and research and development.

4. Strategies for Workers: REDUCING DEFENSE-DEPENDENCY OF WORKERS

STRATEGIC PRINCIPLES

1. Worker adjustment strategies that are developed well in advance of lay-off.
2. Worker adjustment mechanisms that build upon the existing strengths of workers.
3. Customer-designed delivery systems.
4. Retraining and adjustment services accessible to all workers in transition.

OUTCOMES FOR DEFENSE-DEPENDENT WORKERS.

1. Workers will remain at their jobs as their employer diversifies to serve a broader customer base.
2. Workers will gain re-employment at comparable wages and benefits by building on existing skills, knowledge and experience.
3. Defense-dependent workers will create new businesses to employ themselves and other displaced workers.
4. Discharged military personnel returning to Maine will find gainful employment in existing, emerging and new businesses.

STRATEGIES FOR DEFENSE-DEPENDENT WORKERS.

- See strategies for defense-dependent businesses.
- Restructure Maine's worker adjustment assistance systems to provide better services to more workers at lower cost.
- Gain federal support for a civilian "G.I. Bill" to encourage defense-dependent workers to gain skills and knowledge while they are still employed.
- Maximize utilization of G.I. Bill benefits of discharged military personnel.
- Match returning military personnel with work force needs of Maine businesses.

TASK FORCE ACTIONS AND RECOMMENDATIONS TO FACILITATE OUTCOMES FOR WORKERS.

- **Defense Adjustment Career Centers** established in defense-dependent regions to provide one-stop service brokering for defense workers. Project has three components:

- 1) Product design -- worker/management design to insure that services meet the unique needs of defense-dependent customers.
- 2) Establish a new system to provide and broker worker adjustment services, probably through a combination of existing and new service centers.
- 3) Insure that services are available (MTCS, UMS, private institutions of higher education, other private providers) that are accessible, cost effective, and relevant to the needs of defense workers in the current and evolving economy.

SPO staff has worked with DOL planning group and others to design a pilot project proposal which has been submitted to U.S. DOL for funding.

- **Labor resources information bank.** Provide firms with information on expertise of available defense dependent workers from surveys of displaced and at-risk workers and returning military personnel.
- **Projects to maximize utilization of G.I. Bill benefits.** The Advisory Council on Education of the Military in Maine (ACEMM) is exploring initiatives.

5. Ensuring Success: Defense Adjustment STRATEGY IMPLEMENTATION

The Task Force has identified a number of action steps that can be implemented immediately to facilitate achievement of desired outcomes. The action steps are at various stages of development and, in their entirety, involve several State and federal agencies, private businesses, a number of communities and an array of associations.

Successful implementation will require a persistent effort to coordinate and track this array of initiatives. Moreover, the uncertainty that dominates the landscape of defense priorities and economic restructuring demand that Maine's strategic response be able to adjust to changing conditions.

STRATEGY IMPLEMENTATION OUTCOMES

1. Teams will be coalesced around action items that require further development.
2. Action items that are in progress will be continued, refined and completed.
3. Resources, especially federal defense assistance, will be secured to support implementation of action items.

4. Strategy effectiveness will be under constant review to allow for improvements and adjustment to changing conditions.

IMPLEMENTATION STRATEGY

- **Continue Task Force role of coordinating the State defense realignment initiative.**

Successful implementation of this strategy will require the coordinated and persistent efforts of an array of participants in the private sector, local governments and a variety of State and federal agencies. The Task Force, administered through the State Planning Office, should continue to serve as the coordinating body for the diversity of statewide defense-related initiatives and to ensure that strategy implementation is achieved.

Competition among states for limited Federal defense conversion resources will continue to be intense. The existence of the Task Force and the location of its chair and support staff in the Executive Department has facilitated the marshalling of Federal resources and the coordination of multi-agency involvement. As the Task Force has become recognized by federal agencies (DOD, EDA, others) as the coordinating arm of Maine's defense conversion efforts, it can provide leverage for seeking federal defense conversion aid.

TASK FORCE ACTIONS TO ACHIEVE OUTCOME.

- **SPO/EDA/OEA assistance to support ongoing Task Force roles.**

Current Task Force efforts have been supported by a one-year EDA planning grant, SPO General Fund resources and staff participation of DOL, DECD and other agency staff. SPO will seek continued EDA and/or OEA assistance to support Task Force strategy coordination and implementation efforts.

VI. RECOMMENDED CHANGES TO CURRENT FEDERAL PROGRAMS

1. General Issues Regarding Federal Programs

The Federal government is a key player in successful defense adjustment. The problem originates with the Federal government's decision to cut back on its investments. And the Federal government is the only player with resources adequate to effectively address the problem.

The post-Cold War economic conversion offers a unique historical challenge to the Federal Government. Compared to past conversion efforts, this one:

1. Was unexpected -- After 40 years of Cold War rigidity, the Russian empire collapsed virtually overnight. This had not been widely anticipated, nor had the eventuality been planned for.
2. Affects a wider variety of workers -- Because of the high-technology character of modern military production, for the first time many of those losing jobs are skilled engineers and professionals.
3. Must consider global competition in the conversion -- The world that businesses and workers face in 1993 is far different from that faced by defense industries after World War II, or even the Vietnam War. The U.S. is no longer the dominant manufacturing power. Manufacturing employment itself is not projected to grow in the United States. Defense companies in the midst of conversion must be competitive not just with other U.S. manufacturers -- who face their own problems - - but with the skills, technologies and marketing prowess of international competitors.
4. Occurs in the midst of a regional and global economic slowdown -- Markets are not growing. New England is still struggling to come out of a deep recession. Japan and Europe are just beginning to enter a recessionary phase. This is a particularly difficult environment for new companies to enter and compete within.
5. Occurs at a time when the Federal Government is in a weak position to help -- Although defense cutbacks free up money in the federal budget, much of the savings are needed to go towards reducing its large and ongoing deficit. The flexibility of the Federal Government to assemble resources and respond to defense conversion is more limited now than in the past.

Because of the pace of events and the shortage of funds, a new federal program has not been created to address the problem of defense conversion in a comprehensive manner. Instead, the Federal Government is relying primarily on its existing network of labor and economic development programs to provide conversion help.

However these programs, in their current structures, are limited. They were designed for different problems of different times.

For example, many labor and economic development programs were designed to address the problem of long-term, chronic unemployment in depressed regions. The planning for these programs is slow and methodical, entailing complicated and detailed analyses of historic data. Since there is little change in these regions, the slow pace of planning, application, approval, and service delivery is not a problem for this purpose. But it is a problem when the programs must be adapted to sudden and massive defense lay-offs.

Most labor programs focus on the training and retraining of individual low-skill and blue collar workers. They are not oriented towards networking, large region job searches, dealing with advanced professional training, dealing with large groups -- all of which will be necessary in the defense conversion task.

Traditional economic development programs are, by and large, designed to attract a new manufacturer to an area by demonstrating lower costs -- with a speculative building, industrial park, low-interest loan, or the like. In the new global economy, no region of the U.S. is likely to be competitive with Asia or Latin America as a low-cost job site -- so these traditional tools will be of limited value to a converting defense company. Instead a converting company will need help with marketing, with worker skills, with production technologies. The Federal Government is not at this point well-organized to provide such services.

In fact years of budget cutbacks and neglect have severely reduced the capacity of federal economic development and labor programs. Their resources and capabilities will have to be upgraded to meet the new challenge.

Maine and other states will need fully funded, flexible, and fast economic development and labor programs to succeed. The Office of Technology Assessment (OTA) of the U.S. Congress has provided an excellent start in identifying how to accomplish this (After the Cold War: Living with Lower Defense Spending, OTA-ITE-524, U.S. Government Printing Office, 1992). The following recommendations build upon the OTA report.

2. Helping Communities

Defense-dependent communities are helped by the DOD Office of Economic Adjustment (OEA), the EDA Sudden and Severe Economic Dislocation Program (Title IX), and potentially by other programs like the Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) program.

We recommend that:

- a) Once again -- community development programs receive full funding. Since the 1970's, CDBG funding has been flat, EDA has been cut severely, and even the OEA receives less money than it once did. Many of the available resources are out of scale with need. For example, the Town of Limestone will be losing an air base with an annual economic impact of over \$150 million a year; however, under the CDBG program, Limestone is eligible for a maximum grant of about \$1 million over two years. For Maine as a whole, CDBG funding is about \$10 million a year. Resources need to be made available to affected communities that are commensurate with the need created by conversion.
- b) Funding be advanced before bases close. Many community assistance programs are allocated according to unemployment rates -- which means that they only come available after a base or plant is closed. EDA Title IX funds are generally slow to be released. The pipeline for community aid needs to be faster than the pace of base closings and cutbacks.
- c) A wider range of community economic tools be provided. As was discussed earlier, most economic development programs still are oriented towards low-interest loans and industrial/office park development -- even though these are not the most critical needs of converting defense industries. Communities need a more flexible and varied toolkit -- which includes help in marketing, product development, and technology application.
- d) Implementation help be provided. OEA help now ends once the community has written a plan. Support should continue through the implementation phase -- a core of planning capacity is needed at the local level to pursue and adapt the strategies adopted.
- e) Base transfers be speeded up. Bases should be transferred below market value; in pieces, as soon as the environmental clean-up for each section is complete; with time limits on the option of non-profit groups to re-use the base.

4. Helping Businesses

Typical federal business assistance programs include Economic Development Administration (EDA) revolving loan funds; Small Business Administration (SBA) loans and counselling; and the National Institute of Standards (NIST) State Technology Extension Program (STEP).

We recommend that:

- a) These programs be fully funded. Federal funding for economic development declined by 60% to 90% in constant dollars between 1978 and 1991. Effective defense conversion activities cannot take place in Maine or any other state if the resources are not there to support the effort.
- b) Marketing, product development, and technology help be provided. Traditional economic development programs -- industrial/office parks, speculative buildings, roads and sewers, low-interest loans -- have their place, and remain important pieces of the development toolkit. But they are not adequate in themselves to meet the priority needs of defense companies attempting to convert to commercial activity in the modern global economy -- for such companies, access to markets, improved productivity, and new product development are the most crucial factors. New ideas, such as industrial extension agents, need to be implemented to deliver these new kinds of services.
- c) One-stop state business assistance centers be funded. The type of help described above is sophisticated and complex. A state like Maine can't afford to fund such capacity in every town or region. And a business seeking help can't be expected to look through every region's phone books to find out who can help. The Federal Government should take the initiative to combine the expertise of programs like EDA and SBA and STEP into a one-stop business assistance center.
- d) Tax credits for research and development, entrepreneur capitalization, be implemented. Risk capital is needed to translate entrepreneurial ideas into actual businesses and products. A great many of the efforts will fail -- that is part of what entrepreneurship and risk are all about, after all -- but for this reason government-guaranteed loans and grants are not appropriate. Tax credits can encourage others to make the investments, and share the risks.
- e) Department of Defense (DOD) loosen its restrictions on the re-use of defense-related technologies. DOD currently restricts technology transfers, and requires a payback to the Federal Government for the commercial application of DOD-supported research and development. Some regulation in this area will always be required for national security reasons. However defense companies seeking to convert need to take advantage of every possible resource. DOD should consider ways it can make it easier for such companies.

4. Helping Workers

The major federal tool for helping displaced workers is the Department of Labor (DOL) Economic Dislocation and Worker Adjustment Assistance Program (EDWAA). We recommend that this program:

- a) Be fully funded. At its peak, the EDWAA program in 1991 served 9% of eligible workers. The OTA recommends that it be funded at a level which could serve 20% to 25% of eligible workers. Continuing demands from the lingering recession threaten to drain all of the program's available resources, leaving nothing for displaced defense workers. Funding levels should be high enough to serve 20% to 25% of all displaced workers, defense workers included.
- b) Reduce application data requirements. This introduces delays and obstacles into both the application and approval process.
- c) Reimburse states which spend their own money up front to provide quicker service. DOL prohibits this practice at the present time, and it means laid-off workers are not served in a timely manner.
- d) Increase flexibility. The current law requires that at least 30 to 50% of EDWAA funds be spent on training, and that allocations be made many months before services can be delivered. Rigid regulations like these should be removed from the program.
- e) Provide technical assistance. DOL should have a clearinghouse to which states like Maine can turn to learn about what approaches are proving effective elsewhere in the country.

Overall, the DOL program needs to be made faster, simpler, and more flexible to be effective in meeting the needs presented by defense conversion.

5. Conclusion

Successful conversion activities will not occur according to a nation-wide formula. Each region and community, each business and worker, will have to find unique answers.

The Federal Government will help all of these participants with funding, planning, and training. But it makes a difference how this assistance is provided. If entrepreneurship, risk, creative thinking, on the part of communities and businesses is the goal -- then federal programs must be designed in a way which rewards this behavior.

Existing federal programs tend to be centralized, slow, top-down, rigid, and over-regulated. They do not encourage risk and experimentation. Instead they foster passivity and risk-avoidance.

Maine and its regions are preparing to implement an aggressive economic conversion strategy. To be successful, Maine needs an active partner in the Federal Government. And to be a true partner, rather than an overseer, existing federal programs need to be overhauled so that they provide flexible, responsive, appropriate assistance.

VII. CONCLUSION

The strategy presented here for Maine is provisional. Very important pieces of Maine's strategic solution are still being developed by the Loring Adjustment Committee in northern Maine, the Bath/Brunswick/Topsham Economic Development Council in coastal Maine the KEYS Coalition in southern York County and the Androscoggin Council of Governments in western Maine, by the Department of Economic and Community Development and the Maine Science and Technology Commission. Nonetheless the principles, the roles, the broad approaches suggested within remain valid and valuable guides to more specific action.

Defense adjustment activities must be consistent in principles, but entrepreneurial and flexible in action. While the overall strategy is roughly in place, the specific tactics and recommendations, will change over time. New base closures or contract cutbacks may shift the state's priorities. New opportunities will arise which require a shifting of emphasis or resources.

The Maine Task Force on Defense Realignment and the Economy will continue to monitor the process as it goes forward, to integrate the strategies of the various agencies and regions into a coherent state-wide approach, to identify for the federal government, needs and priorities for assistance and program modifications, and to pursue ways and opportunities to make economic adjustment a success in Maine.

In carrying out this mission, the Task Force must rely upon the Economic Development Administration and the Office of Economic Adjustment for continued financial support. The EDA and OEA funds are the glue that holds the entire strategic process together. Individual federal and state agencies will be asked to provide significant financial support to key aspects of Maine's strategic plan -- roads, business counselling, education -- but it is the EDA and OEA's funds which allow the plan to be prepared in the first place, and which must support ongoing monitoring and adjustments.

The partnership between EDA/OEA, the Task Force, and Maine's regional organizations will continue to be the three legs supporting Maine's defense adjustment planning and program implementation.

VII. APPENDICES

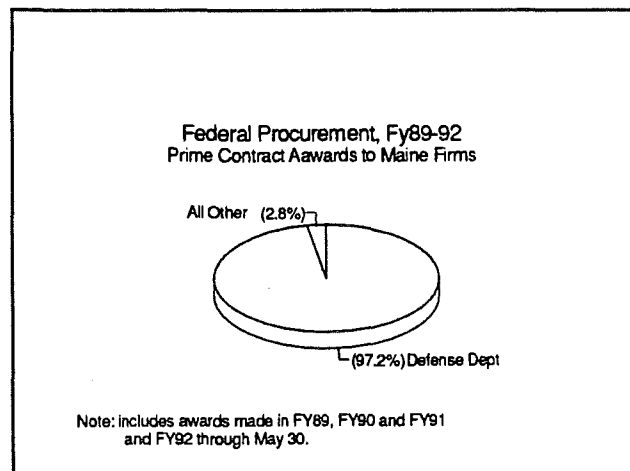
APPENDIX 1

PRIME CONTRACT AWARDS TO MAINE FIRMS

U.S. DEPARTMENT OF DEFENSE

Background:

Procurement activities of the federal government are customarily carried out by bid. Most segments of the federal government purchase supplies and services from the private sector, either through the GSA (General Services Administration) or directly. Maine firms do business with the GSA, the US Postal Service, Army Corps of Engineers, Park Service, and other federal entities. The Defense Department is the largest source of contract awards to Maine businesses, accounting for 97% of all awards made in the last three and a half fiscal years. During this period defense-related prime contracts amounted to \$2.4 billion. Non-defense related contracts amounted to \$69 million.



Prime Contract Awards to Maine Firms:

This report covers prime contract awards made to Maine firms by the Department of Defense over the period from FY89 through FY91 and during FY92

through May 30, 1992. Prime contract awards by all sectors of the federal government are announced daily.

Prime contracts account for a significant share of the defense-related business done with Maine firms, but they do not provide a complete picture. Maine is impacted by defense-related contracts which are awarded to large firms with plants in Maine whose headquarters are located in other states. Prime contract data as presented by the federal government does not allow the portion of contracts awarded to large corporations which actually comes to Maine to be identified. Pratt & Whitney and Digital are two examples.

Additionally, there are several Maine firms who subcontract with large corporations on defense procurement contracts. The number of branch plants and subcontract firms in Maine is believed to be small. However, the size of the contracts and the number of workers affected is significant.

Because of the difficulties of identifying sub-contractors and of determining the portion of defense-related contracts to large corporations assigned to Maine branch plants, this analysis is limited to federal awards made to Maine-based firms as published by Commerce Business Daily.

A separate background paper assesses the role of subcontracting. A third factor, the amount of direct purchases by military installations is also separately analyzed.

The Department of Defense seeks bids on most major purchases of supplies and for major construction and R&D projects. Maine firms are awarded bids to provide a wide variety of services to all branches of the military. In general, the products manufactured under supply procurement contracts are delivered to central supply units located around the U.S.. Construction projects on which Maine firms bid are usually for work to be done on installations located within the state, but Maine firms do work at other installations throughout the nation as well. Projects of an R&D nature are generally done in conjunction with various command headquarters throughout the country.

Analysis of Procurement Awards to Maine Firms

1. Value of Prime Contract Awards:

During the 3-year period covering Fy 89 - FY91, 340 contracts were awarded to Maine firms by the DOD totalling almost \$1.5 billion. During the first part of FY92 (Oct 1, 1991 through May 30, 1992) an additional \$919 million worth of contracts were awarded.

Table 1.
Prime Contract Awards to Maine Firms

Fiscal Year	Awards Made:	Value:
FY89	127	\$761,472,223
FY90	100	577,173,224
FY91	118	159,459,919
FY92 (thru May)	70	919,210,914
Total- 3-Yr	345	1,498,537,366
Total - incl FY92-part	415	\$2,417,748,280

Note: Total is slightly larger than table indicates. Some bids are made for unspecified amounts or a range of anticipated cost is indicated. This practice is common for repairs where the extent of needed repairs is uncertain.

2. Product Type

Prime contracts awarded to Maine firms are primarily for either the manufacture of a product (ships, guns, rope, etc.) or for major construction to be undertaken on a military base. In addition, the DOD has awarded contracts for work of an R&D nature, though few have been granted to Maine firms. Finally, specialized repairs, such as repairs to a ship docked elsewhere in the U.S. are occasionally contracted to a Maine firm.

A. Military Procurement:

Ship building is by far the largest share of military procurement from Maine firms. Over the 3 and 1/2 year period BIW received contracts amounting to at least \$2.2 billion and accounting for over 90% of all prime contracts awarded to Maine by the DOD. Additionally BIW received at least three awards for work of a repair or technical assistance nature for which no amount was specified.

During the same period the Defense Department awarded Maine firms a total of 134 contracts valued at \$156 million for supplies and materials (in addition to contracts with BIW) to be delivered to centralized supply centers located throughout the U.S.. The State's second largest military contractor is Saco Defense, a manufacturer of machine guns and components. Over the past three and a half years Saco Defense has received 28 contracts totalling nearly \$97 million.

Products from Maine firms include fabrics, rope, boots, and flight jackets, as well as ships, machine guns and components, bearings and valves and other parts for military machinery and equipment.

B. Installation Improvement Projects:

Maine firms were awarded \$70 million to perform work on Maine military installations during the period of this study. Most contracts are for major improvement and construction projects and are in addition to the direct purchases made by the installations themselves. Hazardous substance removal, including asbestos removal, medical waste disposal and underground tank removal/replacement account for a large portion of the contracts to Maine firms for work to be performed at military installations.

Most of the contracts to Maine firms involved jobs on installations located within Maine. In addition to military installations, Maine firms were awarded contracts to perform work at veteran's health facilities. Most contracts to Maine firms involved construction projects at Togus.

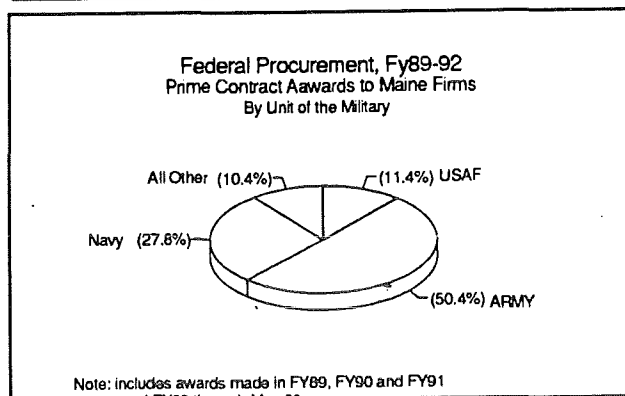
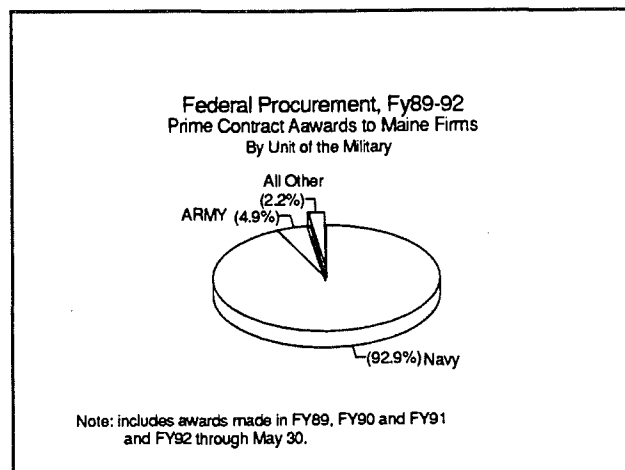
C. R&D and contracts of a technical nature:

Maine firms receive very few contracts of an R&D nature. Those that have been awarded to Maine firms include testing and engineering services that relate primarily to safety standards and material designs. Contracts have also been awarded for environmental research, primarily to determine environmental impact or impact on a certain species. Technical contracts generally involve design work or architectural services, development of mapping systems or other technical services of a similar nature. As with R&D type contracts, Maine firms receive only a few and most are small.

3. Military Unit

The Navy does the largest amount of business with Maine firms. While multi-million dollar contracts with BIW to produce ships accounts for most of the value of contracts awarded in Maine, they account for only 14 of the 202 contracts awarded to Maine firms by the Navy. Most of the remaining 188 Navy Department contracts are for work at either the Brunswick Naval Air Station or the Portsmouth-Kittery Naval Ship Yard. Likewise, most of the procurement contracts awarded by the Air Force are for work to be done at Loring AFB.

The Army is the second largest purchaser of supplies and services from Maine firms. Most of the contracts awarded by the Army involve supplies,



primarily guns and gun parts. Of the \$116m worth of purchases by the Army from Maine firms, almost \$97m were from Saco Defense, Inc. The Army also contracts for services and repairs to army reserve centers and other base facilities, most located in the northeast.

U.S. Army contracts account for less than 5% of all military contract spending in Maine. However, when contracts to BIW are excluded from the analysis, the Army accounts for half of the remainder.

Table 2.
Distribution of Prime Contract Awards by Military Unit

Military Unit	Number of Awards	Contract Value	Percent	Percent (Exc- BIW)
Air Force	6	\$26,913,423	1.1%	11.7%
Army	48	116,048,679	4.7%	49.2%
Coast Guard	9	1,566,587	0.1%	0.7%
Marine Corps	2	1,974,673	.01%	0.9%
Natnl Guard	8	2,453,167	.01%	1.1%
Navy	202	2,258,958,690 w/oBIW: 65,652,865	93.2%	28.6%
VA	19	3,661,010	0.2%	1.6%
PFO	1	52,720	0.0%	0.0%
DOD	54	14,183,271	0.6%	6.2%
unknown	2	399,188	0.0%	0.2%
TOTAL	392	\$2,409,847,188	100.0%	100.0%

4. Geographic Distribution

Maine firms that routinely receive contracts for defense-related work are concentrated primarily in Southern and Central Maine. After excluding BIW contracts, the remainder of military contracts are primarily to firms in Cumberland and York counties. Aroostook County received 5% of the value of the contracts awarded between FY89-92.

Table 3.

Prime Defense Contract Awards by County, FY89-92*

County	Number of Contracts	Value of Contracts	Percent of Value
Androscoggin	31	\$4,196,671	1.95
Aroostook	36	11,518,850	5.35
Cumberland	126	37,593,088	17.47
Franklin	4	2,350,279	1.09
Hancock	5	1,325,036	0.62
Kennebec	28	9,258,893	4.30
Knox	31	6,338,788	2.95
Lincoln	4	263,480	0.12
Oxford	0	0	0.00
Penobscot	16	17,864,355	8.30
Piscataquis	3	839,897	0.39
Sagadahoc	28	1,413,118	0.63
Somerset	7	1,813,277	0.84
Waldo	4	3,847,150	1.79
Washington	6	201,521	0.09
York	67	117,794,259,	54.74
State Total	392	\$215,195,544	100.0

* Excluding BIW.

The distribution of funds into the local economy from defense contracts is more apparent when the data is examined for each of the state's 36 extended communities. Two maps depicting the 36 community groupings and the towns included in each are located at the back of this paper.

A third of the extended communities had no firms with prime defense contracts during FY1989 through FY1991. The greatest volume of business occurs in southern and central Maine. Contracts to firms in more outlying regions tend to be fewer and smaller in size.

Table 4.

Firms awarded Prime Contracts for Defense Procurement by Location (Extended Community) During FY89-91*.

Region	Contracts	Value	Average Contract
I. Northern Me.	37	\$11,501,881	\$310,862
Ashland	0	0	
Fort Kent	3	744,254	
Madawaska	1	297,634	
Houlton	1	28,810	
Patten	0	0	
Presque Isle	32	10,431,183	
II. Inland Me.	9	3,774,001	419,333
Millinockett	0	0	
Lincoln	0	0	
Dover-Foxcroft	1	397,779	
Pittsfield	2	171,111	

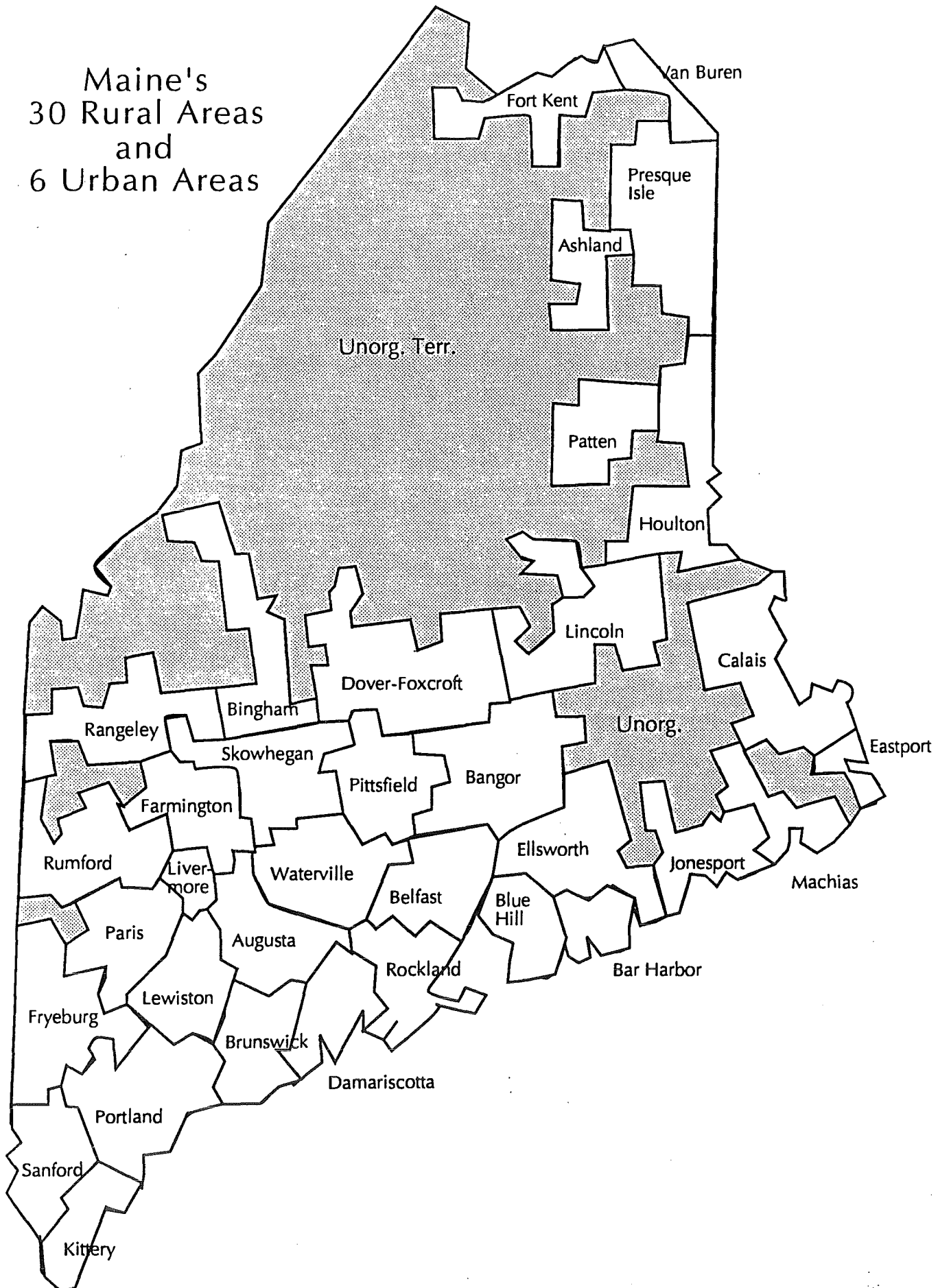
Region	Contracts	Value	Average Contract
I. Northern Me.	37	\$11,501,881	\$310,862
Region	Contracts	Value	Average Contract
Skowhegan	2	854,832	
Bingham	0	0	
Farmington	0	0	
Rangeley	1	190,800	
Rumford	0	0	
Livermore	3	2,159,479	
III. Eastern Me.	7	1,526,557	218,080
Calais	0	0	
Eastport	1	82,896	
Jonesport	0	0	
Machias	1	118,625	
Bar Harbor	0	0	
Ellsworth	5	1,325,036	
Blue Hill	0	0	
IV. Mid Coast	74	1,317,083,317	17,798,423
Belfast	4	3,847,150	
Rockland	33	6,453,808	
Damariscotta	1	98,960	
Brunswick	36	1,306,683,399	
V. I-95 Corridor	168	143,854,940	856,279

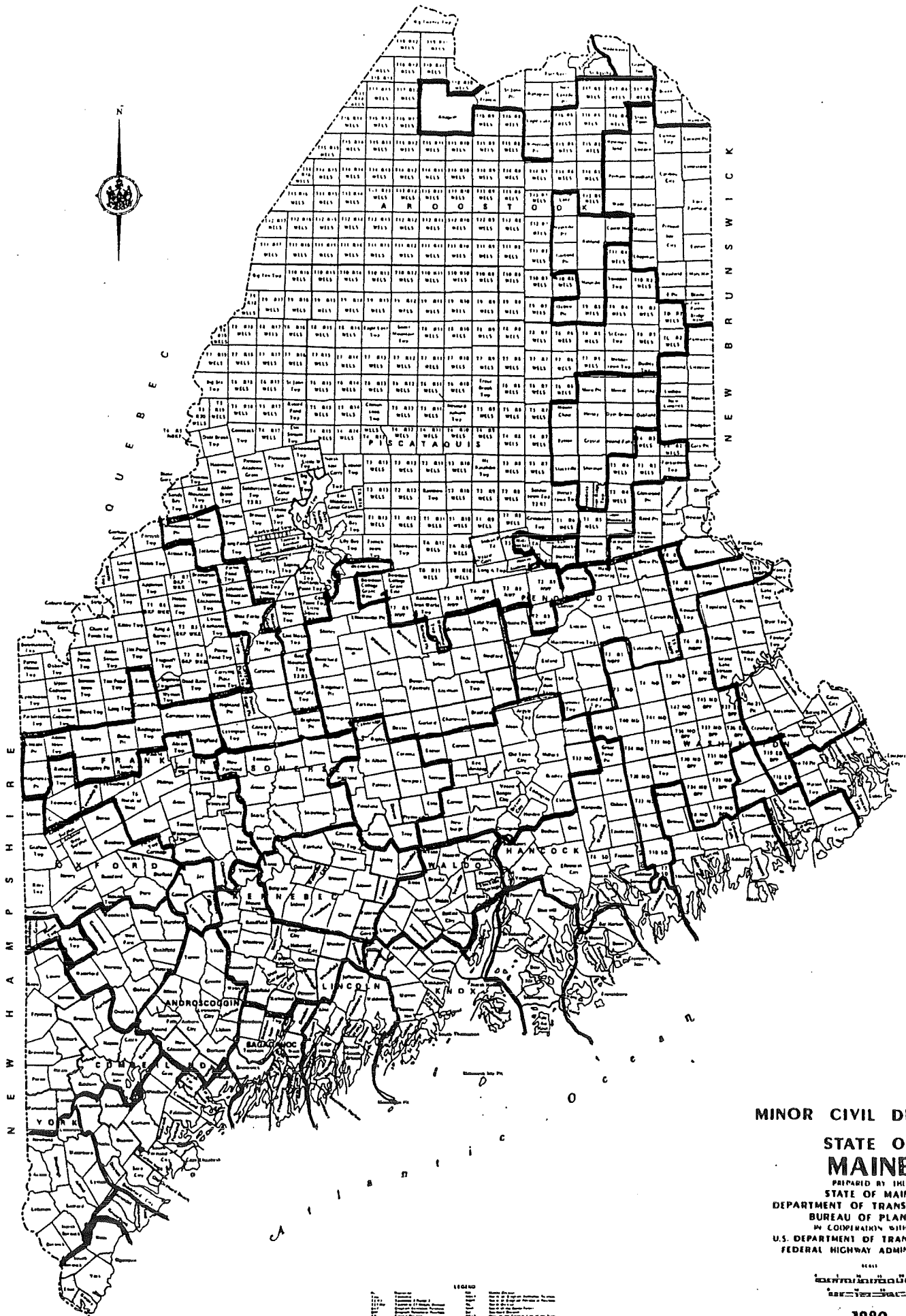
Region	Contracts	Value	Average Contract
I. Northern Me.	37	\$11,501,881	\$310,862
Region	Contracts	Value	Average Contract
Bangor	14	16,331,909	
Waterville	1	1,109,330	
Augusta	23	7,340,953	
Lewiston	26	3,550,770	
Portland	104	115,721,978	
VI: South/West	45	12,649,095	281,091
Fryeburg	27	9,725,020	
Paris	0	0	
Sanford	3	363,136	
Kittery	15	2,560,939	
Total	340	\$1,490,636,274	\$4,299,471

* Table does not include data for FY92.

Of the 53 defense-related contract awards made in the first 8 months of FY92 totalling \$919 million. BIW received almost \$890 million. \$23 million were awarded through 22 contracts to Cumberland County firms. The remaining \$6 million was distributed over 29 additional contracts to firms located in 10 of the 16 Maine counties.

Maine's 30 Rural Areas and 6 Urban Areas





MINOR CIVIL DIVISION

STATE OF
MAINE

PREPARED BY THE
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

MAINE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING

1980

APPENDIX 2

EXPENDITURES OF MILITARY INSTALLATIONS IN MAINE

Background:

The State Planning Office obtained data on direct expenditures from all major military installations and from several minor installations. The study sought to examine expenditures made by bases during the course of a 1-year period in terms of: (1) the amount of expenditures to Maine firms, (2) the geographic distribution of expenses by installations throughout the state, and (3) the general nature of base expenditures. From this it was hoped that SPO could identify the overall role of military expenditures in the State and local economy, the kinds of firms in Maine that rely on business from military installations, and the relative level of exposure or dependency of various firms and regions of the State on military expenditures.

General Observations:

The expenditures from nine installations over a 12-month period were examined in depth. Most of the data covered the period of FY90 or FY91 although exact beginning and ending points varied from one installation to another. The following general observations resulted:

1. Expenditure data (non-payroll related) for the nine installations in the sample identified \$29 million in expenditures. Not all bases included utilities. If utilities for all bases are included and the expenditures of bases not included in the in-depth study are added, it is estimated that military installations in Maine do approximately \$40 million a year in business with Maine firms, utility companies and in services purchased from municipalities (primarily water and sewer).

2. Although military installations do most of their business with firms

located in proximity to the base, firms doing business with military installations are widespread throughout the state.

3. Unlike procurement contracts, most of the purchases from Maine businesses made by military installations are non-manufacturing in nature. They include construction and repairs of base facilities, and for services and supplies used in the day to day operation of the base.

4. Utilities are a major component of base expenditures. Closings or major reductions at large and mid-sized installations will have a profound effect on public utility companies and on municipal services.

Military Installations in Maine:

There are three major military installations located in Maine: Loring Air Force Base, Brunswick Naval Air Station, and Kittery-Portsmouth Naval Ship Yard. National Guard installations at Bangor and Augusta also have multi-million dollar budgets. Naval communications facilities in Prospect Harbor and Winter Harbor are sizeable operations.

In addition there are numerous sites throughout the state associated with the major installations. For example, training facilities in the Aurora area and fuel facilities at Searsport are managed by Loring AFB. Loring AFB itself is made up of facilities spread from Ashland to Limestone, and throughout several of the surrounding municipalities.

Reserve Centers make up the third major category of military activity within the State. The Army and Navy both maintain reserve centers in Maine. The navy has reserve centers in Portland, Augusta, and Bangor as well as in Brunswick associated with BNAS. The Army has at least 8 centers spread from Sanford in York County to Aroostook County. These centers are small. Their expenditures generally are limited to operating and maintaining an armory (utilities, repairs, etc.), and supplies for training sessions, including food and lodging for personnel brought in to conduct training and for related activities.

Analysis of Expenditures of Installations:

The analysis that follows is based on expenditures amounting to over \$29 million by selected military installations located in Maine. While the exact months of expenditures may vary from one installation to another, the data for each represents 12 months of expenditures in 1990 or 1991. The focus of the study is on the extent of military spending in the Maine economy and is therefore limited only to purchases made from Maine firms; it does not include additional purchases made from non-Maine companies, and therefore does not represent 100% of direct spending by the installations themselves.

Installations included in Study

Major Bases:

- Loring AFB*
- Brunswick NAS*
- Kittery-Portsmouth NSY

*Includes expenditures associated with off-base sites used for training missions. BNAS data also includes expenditures of the Naval Reserve Center located in Brunswick.

Guard Facilities:

- Camp Keyes

Naval Communications Facilities:

- Winter Harbor
- Prospect Harbor
- Cutler

Reserve Centers:

- Bangor Naval Reserve Center
- Augusta Naval Reserve Center

Installations not included in the study are primarily smaller units such as army and navy reserve centers and coast guard operations. The largest military installation not included is the Air National Guard in Bangor and the various units

associated with it.

1. Sector Impact

The expenditures of military installations are primarily for goods and services that are necessary to the operation and maintenance of the facility, and as such are not substantially different from those of any other major industry or firm. Three broad economic sectors are affected most by military installations in Maine, public utilities, construction (including repair and maintenance services) and the service sector.

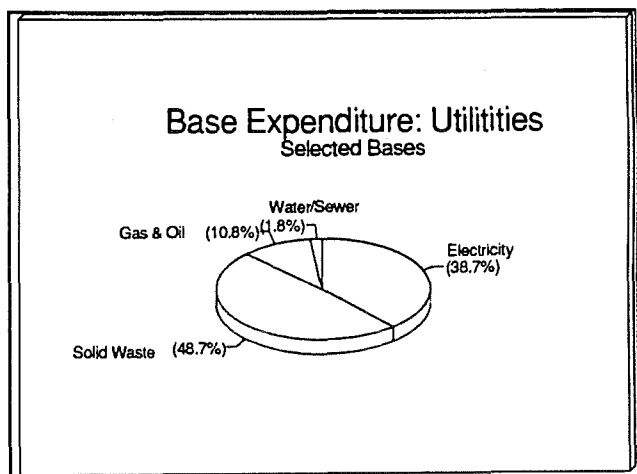
A. Utilities:

It is clear that utilities are the single largest expenditure of Maine military installations. Utilities include gas and oil, electricity, water and sewer, and waste disposal (both solid waste and hazardous wastes). Some installations included complete information on expenditures for utilities while others did not. Loring AFB and the Winter Harbor Naval Security Group provided full detail of their utility costs while others provided information on some of their costs. Overall, \$14 million of the \$29 million included in this analysis were utility related expenditures, nearly half of base expenditures.

1. Electricity and Heating Oil.

Nearly a third of the expenditures at Loring AFB in FY90 were for heating oil and electricity. Electricity alone cost LAFB in excess of \$4.5 million, most paid to Maine Public Service Co.

At the Winter Harbor Naval Security Group, a much smaller installation, electricity and heating oil accounted for over half (59%) of FY91 expenses. In cases where military installations account for a substantial share of demand, as the case of Loring AFB to MPS, utilities will be hard pressed to survive.



2. Municipal Water and Sewer. Military installations also rely on municipal

water and sewer services. In light of base expenditures in the millions of dollars, municipal water and sewer fees appear small. However, LAFB paid over \$100,000 to Presque Isle, Limestone and Caribou, and the Winter Harbor Naval Security Group paid over \$42,000 to the Winter Harbor water and sewer districts last year. For small towns, fees from military installations account for a significant share of their revenues and the volume of waste from the bases have caused towns to build systems much larger than would otherwise be necessary. If rates are redistributed over remaining customers upon closure of a military facility, the residents in smaller communities may face rising rates to maintain the excess capacity.

3. Solid Waste, Hazardous and Special Waste Removal. Military installations spend large sums of money on solid waste, including removal of hazardous wastes and medical wastes. While municipalities provide or contract for solid waste disposal for residents, solid waste appears to be the only public/municipal service not used by military installations. Most contract directly with private firms for general trash disposal and disposal of special wastes. The amount spent on waste disposal by the three major installations and by Keyes and Winter Harbor NSG amounted to nearly \$6.9 million during one year's time.

B. Facility Maintenance and Operation:

Maintenance and operation of the facilities themselves accounts for most of the expenditures of military installations made to private sector businesses. Expenditure data reflects both day to day services - solid waste removal, snow plowing, lawn mowing and grounds keeping, and maintenance and repair services such as re-paving, painting buildings, repairing/replacing roofs, building additions and conversions, repairs and improvements to runways, etc. The primary beneficiaries of these expenditures are local construction firms and service enterprises. Though minor in comparison to large repair jobs, area retail outlets - local hardware stores, department stores, and supermarkets - benefit from small purchases made by installations.

Some installations provided information on what was purchased as well as the firm with which the transaction was made. Others provided only a list of firms and the amount of the transaction. Because data on expenditures to firms was not matched with the firm's SIC code, it is not possible to quantify the amount spent by installations to each type of firm or for each purpose. It is clear, however, from the names of the firms and the lists of services provided from some of the

installations that many millions of are flow into the construction and service sectors of the Maine economy through military installations located in the State.

C. Supplies & Services:

The Department of Defense purchases billions of dollars worth of supplies and equipment which we generally define as "military hardware" - ships, machine guns, uniforms, etc.. Supplies and services purchased by installations are much different in nature. Installations obtain most of their large-volume supplies from central supply centers rather than by direct expenditure. Local purchases are generally limited to small quantity needs or specialized materials and equipment. Most local installation purchases are more accurately categorized as purchase of services. They include leases and purchases of typewriters, photocopy machines, etc. and accompanying service agreements, laundry services, repairs to machinery, vehicle maintenance and replacement, etc. associated with the day to day operation of the base. As is the case with maintenance and operating costs, an analysis by SIC code is needed to provide quantifiable information on the dollars spent for services, repairs, and related expenditures.

2. Geographic Impact:

Military installations purchase most needed services from local firms, usually from those located within a 25 mile radius of the installation. Installations are more likely to look further for specialized services (such as laboratories, special parts, etc.) and large construction projects which require a certain size of firm or specialization. Overall, there are fewer such firms in the State and they are usually located in or near the larger metropolitan areas of the State rather than in proximity to a military installation.

Table 1. illustrates the concentration of expenditures of each installation in the county in which it is located. For instance, 77.6% of the purchases made by Loring AFB are from firms located in Aroostook County. Of the remaining 22.4% of their expenditures during that fiscal year, the largest portion (10%) were made to firms in Cumberland County, and the remaining 12% were spread throughout the balance of the state.

Table 1.

Concentration of Purchases from Maine firms by Maine Military Installations by County

Installation	Location (County)	Purchases (Pct in Co.)	Purchases: Other Key Counties
Loring AFB	Aroostook	77.6%	Cumberland, 10.0%
Bruns. NAS	Cumberland	31.5%	Kennebec, 23.8% Androscoggin, 15.3% Sagadahoc. 16.7%
Portsmouth NSY	York	28.8%	Cumberland, 44.4% Kennebec, 13.4%
Camp Keyes	Kennebec	11.6%	Cumberland, 45.4% Androscoggin, 9.5%
Augusta NRC*	Kennebec	98.0%	Androscoggin, 2%
Winter Hbr	Hancock	51.2%	Washington, 15.2% Penobscot, 29.0%
Cutler	Washington	21.8%	Penobscot, 47.4% Cumberland, 15.4%
Bangor NRC	Penobscot	28.6%	Washington, 42.9% Hancock, 14.3%

*NRC = Naval Reserve Center.

Thus, while firms doing business with military installations located in Maine are widely distributed throughout the State, high concentrations occur in regions where installations are located. Table 2. displays the distribution of firms by county and the value of purchases.

Table 2.

Distribution of Maine Firms doing business with Maine Military Installations
By County.

County	Firms	Value	Percent (Value)
Androscoggin	172	\$1,235,771	5.6%
Aroostook	293	10,267,644	46.9%
Cumberland	608	4,219,788	19.3%
Franklin	7	264,318	1.2%
Hancock	129	525,782	2.4%
Kennebec	302	1,779,052	8.1%
Knox	10	14,499	0.1%
Lincoln	12	25,150	0.1%
Oxford	10	30,038	0.1%
Penobscot	330	1,481,717	6.8%
Piscataquis	2	6,925	0.0%
Sagadahoc	58	808,273	3.7%
Somerset	18	74,610	0.3%
Waldo	7	7,364	0.0%
Washington	72	205,130	0.9%
York	103	927,657	4.2%
Total	2134	\$21,873,718	100.0%

The widespread nature of the spending of military installations in Maine even more obvious when spending is compared among the 36 extended communities. Two maps depicting the 36 community groupings and the towns included in each

are located at the back of this paper. Most of the firms doing business with Maine military installations are located in the I-95 Corridor between Portland and Bangor (62.6%) or in Aroostook County (13.8%). However, spending reports from the installations show that areas of the state that do not have military installations located in them have a number of firms that do business with Maine military bases. As expected, the number of firms and total volume of spending is relatively small in these regions. The fact that there are expenditures in these non-associated regions indicates the extent to which military spending reaches to all segments of the Maine economy and all geographic areas of the State. The impact of Loring AFB, for example, is felt not just in the Limestone area, but county-wide and even state wide as firms in Lewiston, Portland and other localities do business with Loring.

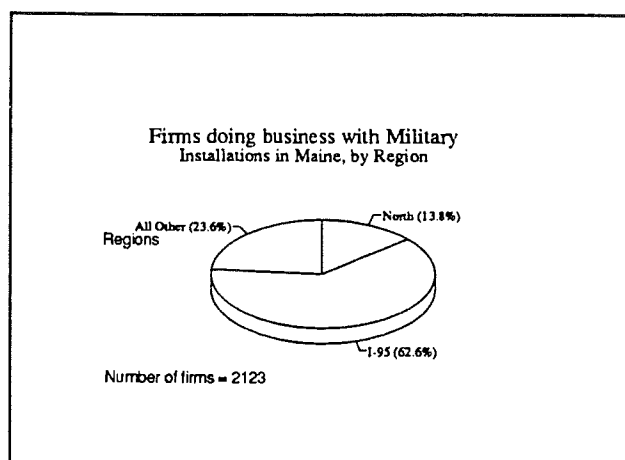


Table 3.

Firms doing business with Maine Military Installations by Location (Extended Community)

Region	Firms	Value	Percent (Value)
MAINE	2123	\$28,706,116	100.00
I. Northern Me.	293	*15,387,282	53.60
Ashland	4	15,255	.05
Fort Kent	11	76,367	.27
Madawaska	10	89,169	.31
Houlton	10	51,726	.18
Patten	4	17,277	.06
**Presque Isle	254	*15,137,488	52.73

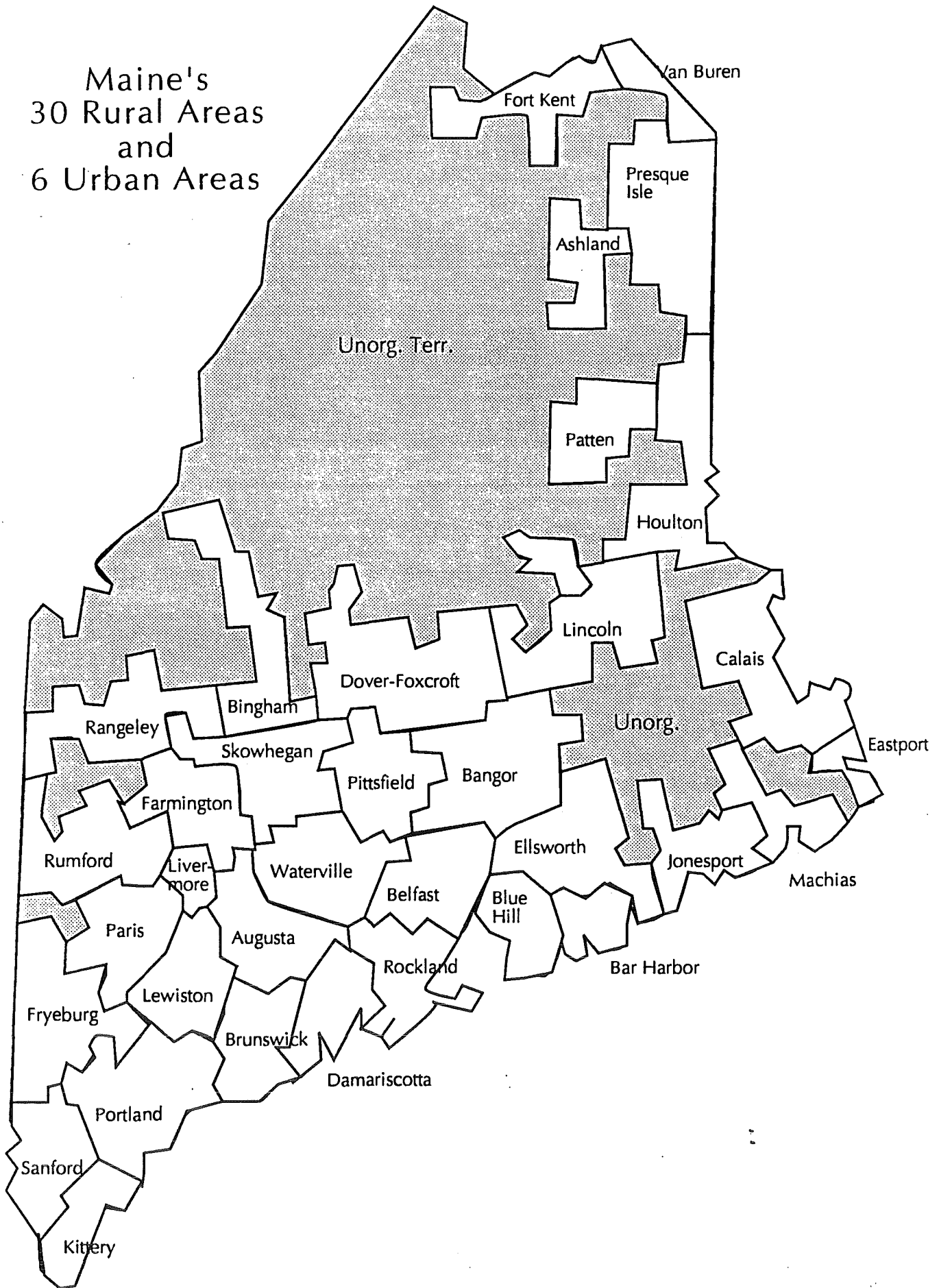
Region	Firms	Value	Percent (value)
II. Inland Me.	40	418,926	1.46
Millinockett	6	38,210	.13
Lincoln	2	265	0
Dover-Foxcroft	2	6,925	.02
Pittsfield	5	72,089	.25
Skowhegan	8	16,440	.06
Bingham	2	11,158	.04
Farmington	3	2,088	.01
Rangeley	0	0	0
Rumford	3	2,090	.01
Livermore	9	269,661	.94
III. Eastern Me.	201	1,984,284	6.91
Calais	11	10,598	.04
Eastport	2	168	0
Jonesport	13	124,726	.43
Machias	46	69,638	.24
Bar Harbor	6	39,768	.14
**Ellsworth	120	1,736,615	6.05
Blue Hill	3	2,771	.01
IV. Mid Coast	159	1,438,178	5.01
Belfast	6	118,687	.41
Rockland	10	14,499	.05
Damariscotta	7	24,825	.09
**Brunswick	136	1,280,167	4.46

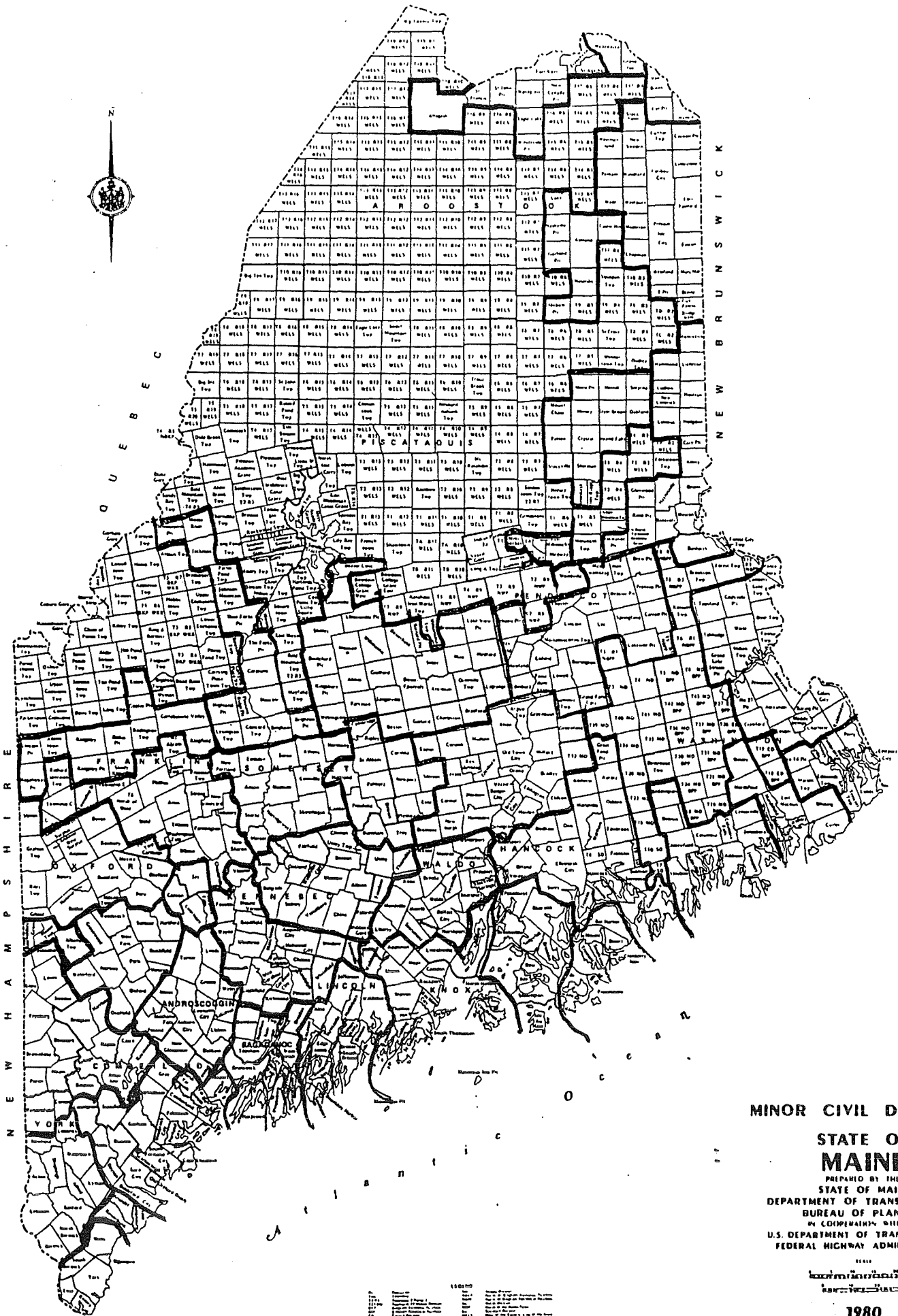
Region	Firms	Value	Percent (value)
V. I-95 Corridor	1,329	8,391,738	29.23
Bangor	319	1,580,766	5.51
Waterville	51	201,898	.70
**Augusta	250	1,606,450	5.60
Lewiston	168	1,230,431	4.29
Portland	541	3,772,193	13.14
VI: South/West	101	1,085,727	3.78
Fryeburg	12	105,074	.37
Paris	1	1,480	.01
Sanford	11	182,990	.64
**Kittery	77	796,183	2.77

* Figures for Northern Maine appear disproportionately high because data from Loring AFB included all of their utilities costs while BNAS did not provide figures on utilities. As noted earlier, the cost of utilities is the single largest expenditure of most installations and runs in the millions of dollars annually. Based on the information provided by the installations, it also appears that the Air Force directly solicits bids for large construction/repair projects on their bases whereas the Navy tends to use the DOD prime contract bid process for major repair and construction projects at BNAS. (see background paper on prime contract awards)

** Extended Communities in which the larger military installations included in the analysis are located.

Maine's 30 Rural Areas and 6 Urban Areas





APPENDIX 3

DEFENSE SUBCONTRACTING BY MAINE BUSINESSES

Background:

Vendor lists supplied by military installations located in the State and lists of prime contracts awarded by the Department of Defense indicate the widespread nature of defense spending in the state and the extent to which Maine's private businesses are doing business with the DOD and with individual installations and military bases.

It was generally believed, however, that direct expenditures of the DOD and its various installations are only a portion of the total picture of the role of defense in the Maine economy. In addition, there are other firms for whom defense spending represents a significant portion of their business but all work is done in the role of a subcontractor providing materials and components needed by other large defense contractors. Thus the State Planning Office sought to assess the extent to which defense-related subcontracting is a factor in Maine's defense economy. Since most such firms are believed to be manufacturers, the Office turned to the annual Census of Maine Manufacturing.

The Maine Department of Labor, Bureau of Labor Statistics (BLS) annually conducts the census of manufacturing establishments (SICs 20-39). All firms whose primary role is the production of manufactured goods in the State are required to complete the census, making it the ideal vehicle for studying the role of defense subcontracting. In coordination with the BLS, the SPO added three questions to the 1991 Census dealing with the defense-relatedness of manufacturing firms. They were:

1. Does any of your production include work done either as a prime contractor or subcontractor for the Department of Defense?

2. If so, what percentage of your gross value product does it represent? Prime Contracts ____ % Subcontracts ____ %.
3. Over the next two years, do you expect your defense-related production to: ____ Increase ____ Decrease ____ No Change.

Defense-related sub-contracting by Maine firms:

The 1991 Census of Manufacturing was mailed to 2,777 firms doing business in Maine. The results turned up 98 firms who indicated that a portion of their 1991 gross product was defense-related. Of these, 60 indicated doing business as a subcontractor. Subcontracts totaled nearly \$73 million. The following summary analysis is based on the data provided by these firms.

Analysis of Findings

1. Defense Dependency of Sub-contractors:

Subcontractors are on average less dependent on defense-related work than prime contractors. For prime contractors, defense accounted for over 60% of their total sales compared to only 18.5% of all sales by subcontractors.

Table 1. Share of Gross Sales attributed to Defense-Related Sales

	Subcontractors	Prime Contractors	Total
Number of Firms	60	47	98*
Gross Product	\$394,130,129	\$1,540,388,647	\$1,866,685,273
Defense Related	72,731,494	933,907,943	1,006,639,437
Pct. Defense	18.5%	60.6%	53.9%

* Some firms had both direct contracts and subcontracts.

Source: 1991 Census of Maine Manufacturing

While overall dependency of subcontractors is relatively low, some are highly dependent while defense related business accounts for a small share of the total for others. Two subcontractors indicated that 100% of their gross sales were defense-related and seven additional firms indicated that half or more of their sales were defense-related.

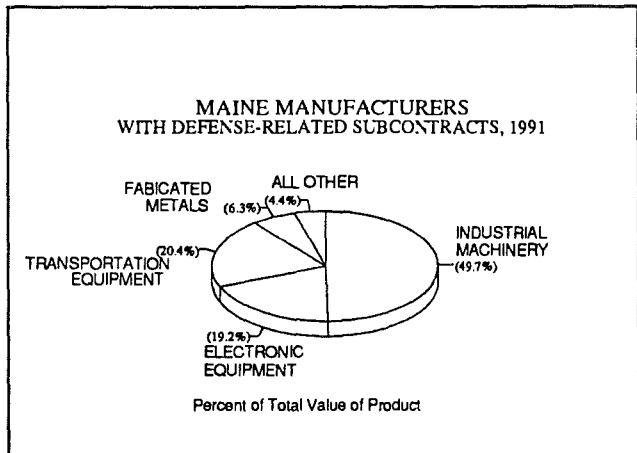
Table 2. Distribution of Subcontractors by Level of Dependency

Dependency Level	Number of Firms	Total Value of Product	Value of Defense*	Percent Defense
100%	2	\$675,000	\$675,000	100.0%
50-99%	7	42,236,842	26,191,709	62.0%
20-49%	9	37,421,079	11,725,913	31.3%
10-19%	14	141,738,852	23,941,448	16.9%
Under 10%	28	172,058,356	10,197,425	5.9%
Total	60	394,130,129	72,731,494	18.5%

* Computed. The census questionnaire asked each firm to indicate total value of product produced in 1991 and the percent that was produced as a subcontractor on a defense-related product. Most firms were careful to compute the defense-related percent while others simply indicated an approximate amount (about 5%, a third, etc.) The value of product related to defense used in this table and in subsequent tables is a direct computation of total value multiplied by the percent indicated. Because of respondent rounding or estimating the percent, this figure is believed to reflect the approximate value of defense related activity, not the exact amount.

2. Products supplied by Subcontractors:

The sixty Maine firms identified by the Census as defense-related subcontractors produce a wide variety of goods. In all, thirteen broad (2-digit SIC) industrial classifications are represented. Some provide specialized fabrics, canvas products, waterproof clothing, wood products, paper and cardboard products, printing and publishing, and other non-durables.



Most of the subcontractors are engaged in making parts for military hardware. They include foundries, makers of fabricated metal products, industrial machinery and components, electric machinery, electronic components, turbines and motors, and ships and equipment for ships.

Manufacturers of industrial machinery (turbines & generators, machine tools and specially designed parts, etc., SIC 35) account for half of the total defense-related value of product and a third of the firms. Five firms engaged in the manufacture of transportation equipment account for a fifth of the value. Ten electric machinery and electronic equipment manufacturers account for another fifth of the total value of defense-related production.

The following table illustrates the range of industrial sectors in Maine that are represented by subcontractors who produce products for defense-related programs.

Table 3. Major products supplied by Sub-contractors, 1991

Industry (SIC)	Number of Firms	Value of Product
Textiles (22)	1	\$524,710
Apparel (23)	3	735,511
Lumber/Wood (24)	3	316,517
Furniture (25)	2	88,759
Paper, nec (26)	1	66,825
Printing, Publishing (27)	2	612,267
Coal, Petroleum (29)	2	1,246,646
Primary Metals (33)	2	87,921
Fabricated Metals (34)	9	4,547,126
Industrial Machinery(35)	19	36,172,943
Electric, Electronic Mach. (36)	10	13,979,294
Transportation Equipment (37)	5	14,851,843
Instruments (38)	1	22,842
TOTAL	60	\$72,731,49

3. Geographic Distribution of Subcontractors

Firms that indicated having done subcontract work of a defense-related nature in 1991 are located in ten counties, but are concentrated in central and southern Maine, and in Aroostook and Penobscot Counties. Half of the 60 firms are located in Cumberland and York Counties. They account for over nearly half of the value of defense-related output. The eight Penobscot County firms account for 30% of

output value.

Table 4. Distribution of Subcontractors by County

County	Number of Firms	Pct	Value of Contracts	Pct
Androscoggin	2	3.3	\$157,309	0.2
Aroostook	4	6.7	1,803,120	2.5
Cumberland	16	26.7	8,552,310	11.8
Franklin	0	0	0	0
Hancock	0	0	0	0
Kennebec	3	5.0	7,605,255	10.5
Knox	4	6.7	2,485,602	3.4
Lincoln	0	0	0	0
Oxford	4	6.7	4,443,943	6.1
Penobscot	8	13.3	26,653,671	29.8
Piscataquis	0	0	0	0
Sagadahoc	3	5.0	22,301	0
Somerset	0	0	0	0
Waldo	2	3.3	20,317	0
Washington	0	0	0	0
York	14	23.3	25,987,667	35.7
Total	60	100.0	\$72,731,494	100.0

4. Employment

The sixty firms employ a total of 3,882 workers, an average of 65 workers apiece. The size of the work force of these firms ranges from 1 person to over a thousand. Sixty percent of the workers are employed by the 30 firms located in Cumberland and York Counties.

The eleven subcontractors who are most heavily dependent on defense-related jobs (i.e., defense accounts for at third or more of their total output) employ 936 workers (24% of the workers employed by the 60 firms in the study). Seven have less than 50 employees. One has over 400.

Most of the jobs in the eleven highly defense-dependent firms are in the areas of machine work, valves, precision products, electronic components and fabricated metal.

Reliability and Completeness of Data:

The census provided valuable information about the nature and impact of defense-related subcontracting. However, there is reason to believe that the results provide an incomplete picture at best, based on the following observations:

1. A large number of firms did not answer the defense-related questions. It is not possible to know if no answer meant that they did no defense-related business or if they simply ignored the question or did not know. It is possible that the person filling out the census form may not have been fully aware of the amount of defense-related business the firm was engaged in last year or may not consider defense-related work as significant to their business and therefore, feel it unimportant.

Some firms who either did not answer the questions or indicated that they did no defense-related work in 1991 were firms which other sources indicated either are or had been engaged in defense-related activities. It is possible that some firms may not be aware that the item they are making for another manufacturer is ultimately part of a product that is being purchased by DOD. Others may not have done any defense-work in 1991 though they had previously been engaged in such or are now involved in defense-related work.

2. The SIC classification of diversified firms may have resulted in their exclusion from the Census. The database contains solely manufacturing establishments as defined by the Maine Department of Labor. Many establishments that do manufacturing work may be classified as non-manufacturers, for example, those establishments with a large portion of their revenue or work force involved with sales and distribution may be considered wholesale or retail distributors rather than manufacturers. {Note: BLS's classification of manufacturers differs slightly from Labor's Research Division and is a bit more liberal in classifying a firm as a manufacturer.}

3. Many non-manufacturing firms are also subcontractors. The Census turned up 60 firms producing \$73 million worth of product in 1991. These subcontractors produce materials for numerous prime defense contractors. In order to test the completeness of the results of the Census of Manufacturing, a confidential file of BIW vendor data was examined. This comparison revealed striking gaps in the profile of defense sub-contracting as it is portrayed when only the findings of the Census of Manufacturing data are considered.

Data from BIW indicated that they alone purchased nearly \$50 million in 1991 from the top 200 Maine firms (out of a list of over 2,000 vendors) with whom they did business. A further examination of the 200 vendors indicates that almost 40% of the firms are classified as wholesale suppliers rather than manufacturers. Manufacturers (SIC 20-39) and the construction sector account for over a fifth of BIW's purchases from these 200 firms.

The information from BIW indicates that subcontracting is important to the trade and construction sectors as well as to the manufacturing sector of the Maine economy. Their data also indicates that subcontracting spreads across nearly all sectors of the economy. The 200 firms examined represent 40 SIC codes at the 2-digit level.

APPENDIX 4

Mt. Auburn Associates

**Defense Impact
Analysis in
Southern
York County**

FINAL REPORT

Submitted to:

The KEYS Coalition

Submitted by:

Mt. Auburn Associates

**408 Highland Avenue, Somerville, MA 02144
Telephone: (617) 625-7770**

September 14, 1992

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We also want to thank the many businesses and manufacturers in the region who responded to our surveys and gave interviews for this research. As well, many local and state officials granted us their time and assistance in collecting information, for which we thank them. In particular, the staff of the Maine State Planning Office, including Steve Adams, Harold Payson III, and Joyce Benson, provided useful direction and supplied us with essential data. Cheryl Sanborn of the Worker's Assistance Center was especially helpful as well.

Two individuals went out of their way to cooperate with our research and deserve special credit. They are Russell Van Billiard and Captain William McDonough, both members of the Save Our Shipyard Association.

Many people at the Portsmouth Naval Shipyard deserve thanks as well, including the various staff members and officers who supplied us with data on purchasing and answered our numerous questions. In particular, Lieutenant Commander Andy Eckert, Mike Levesque, and Kathy Levesque deserve special thanks. Finally, we thank those recently laid off Navy Yard employees who responded to our survey, and wish all of the displaced workers and their families the best of luck in their future pursuits.

Mt. Auburn Staff

Beth Siegel
Tom Webb

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Chapter 1

Introduction

Responding to the economic conditions of the 1980s -- rapid growth, low unemployment, and development pressures -- a primary concern of the residents of the towns of Kittery, Eliot, York, and South Berwick (KEYS) was controlling growth and limiting development. Following this period of sustained growth, the KEYS towns are now facing a very different economic environment. A deep recession in New England, along with the closing of Pease and workforce reductions at the Portsmouth Naval Shipyard (PNSY), are having a serious impact on overall economic conditions in the region. A growing number of residents are out of work or underemployed and the towns are facing increased fiscal challenges.

The continued dependence of the region on defense-related jobs, particularly those at the Portsmouth Naval Shipyard, is a cause for serious concern about deeper economic impacts in the coming years. The priorities in the towns are shifting from controlling growth to promoting employment opportunities for local residents hard hit by current economic forces.

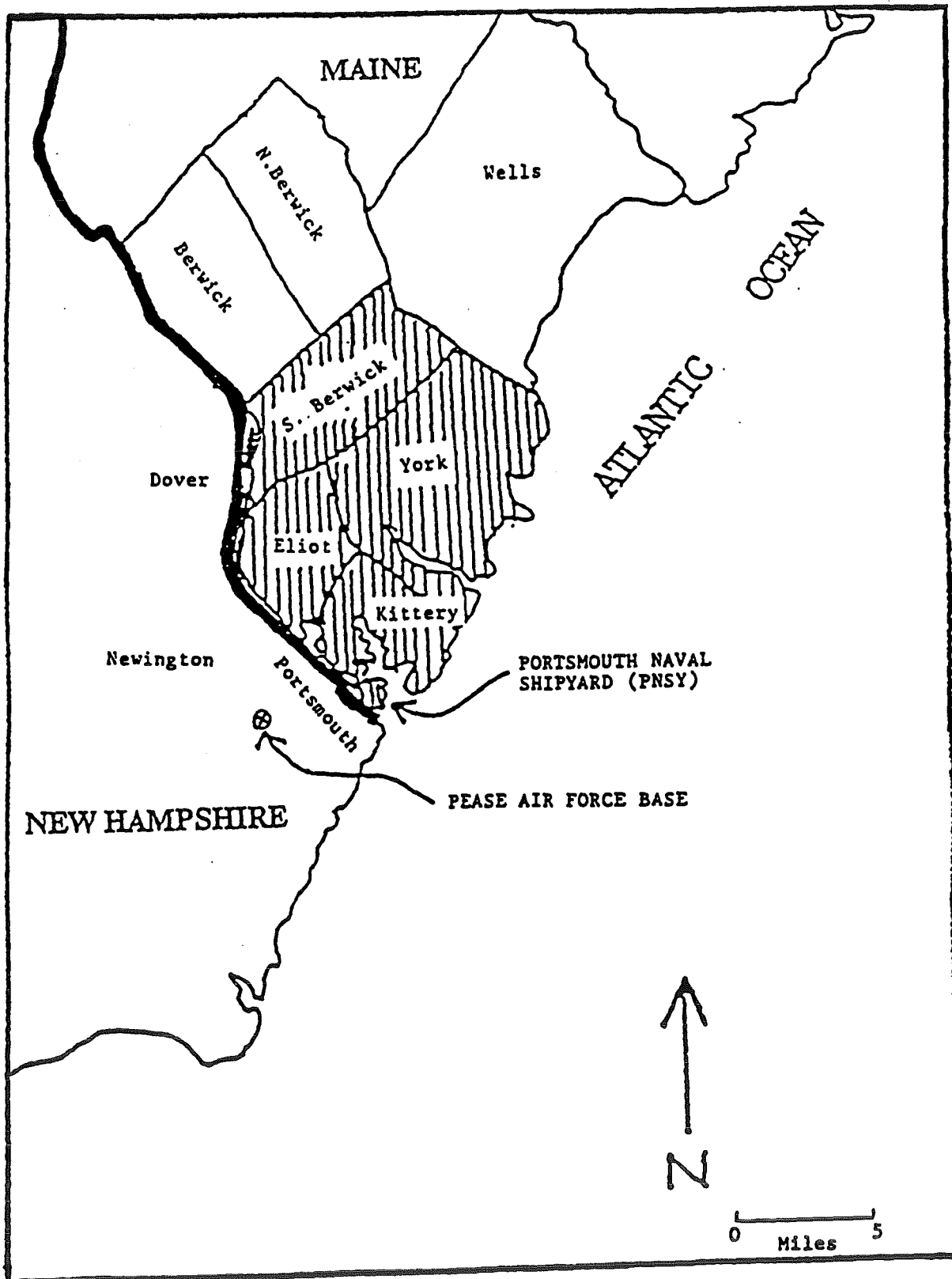
Recognizing that their towns are vulnerable to further job losses and the related social and economic impacts associated with those losses, the four towns of the KEYS region have formed a coalition to understand the economic impacts of the defense-related dislocations already experienced, as well as the potential economic impacts of further job losses in the defense sector. The goal of this coalition is to develop a comprehensive adjustment strategy that will ease the transition for residents currently impacted by existing layoffs and those who might be impacted in the future.

The impact of the existing and potential defense cuts on the region goes well beyond just the number of direct jobs being affected. The overall dependency of the region on defense-related employment exacerbated the effects of any cutbacks at the Naval Yard. Moreover, the potential re-employment of laid-off workers, hopefully without significant cuts in wages, rests in the health and vitality of the larger regional economy -- the Seacoast of New Hampshire and Maine.

This current report looks at the KEYS towns in the context of the larger regional economy in order to understand:

- ♦ the current economic environment in the KEYS towns and the region as a whole;**
- ♦ the exact nature of the defense dependency in the region;**
- ♦ the areas of vulnerability or opportunity in the regional economy;**
- ♦ the implications of the economic trends on the residents of the towns of Kittery, Eliot, York, and South Berwick; and**
- ♦ the next steps to be taken to develop an effective response to the economic challenges the region faces.**

It is important to note that this study only comprises a first phase of a larger undertaking -- the development of an effective community adjustment strategy. Hopefully, it will provide the appropriate backdrop to ensure that a strategic response is based upon a comprehensive understanding of economic conditions in the region.



Chapter 2

Economic Overview

Analysis of the short- and long-term impacts of cutbacks in defense and the capacity of the region to respond must start with an understanding of the economic performance of the communities in the KEYS area and the structure of the regional economy. Looking at demographic, labor force, and employment trends over the past decade provides some insights into the types of impacts that further cutbacks in the defense industry will have as well as the magnitude of those impacts.

2.1 Economic Performance: The Economic Well-being of the Residents of KEYS

For the most part, the 1980s was a decade of outstanding economic performance for the four towns in the KEYS region. Even with a rapidly growing population and labor force, the region was able to maintain an extremely low unemployment rate. During the past decade:

- ♦ The KEYS communities grew at a faster rate than the state or the U.S., primarily due to in-migration. Together, the population of the four towns grew by 3,600 residents, or 14 percent. (It should be noted that some local analysts believe that the 1990 U.S. Census figures undercount the population (see Chart 1).
- ♦ The unemployment rate has been consistently low, at times almost negligible. Even during the recession of the early 1980s, the unemployment rate in the four towns remained under four percent. In 1988, at the economic peak, the unemployment rate in KEYS communities was below one percent (see Chart 2).
- ♦ The residents are relatively prosperous, with per capita and household income above the state and national averages. While per capita income in the region was below the national average in 1979, the high rate of

growth in income led to the region's per capita income surpassing the national average by 1989. Median household income in 1989 was higher than the rest of York County, the state of Maine, and the U.S. as whole (see Chart 3).

The residents of the four towns of the KEYS region have the following characteristics in 1990:

- ♦ According to the 1990 Census, a larger proportion of employed KEYS residents are in skilled occupations. Fourteen percent of KEYS residents are in executive, administrative, and management positions as compared to only 11 percent in the rest of Maine and about 12 percent in the U.S. as a whole. Moreover, over 15 percent are classified in professional speciality occupations as compared to only 14 percent in the U.S. and Maine. The region also has a relatively high proportion of skilled blue collar workers. About 14 percent are classified as precision production workers as compared to only about 11 percent in the U.S. as a whole (see Tables 1 and 2).
- ♦ A relatively large proportion of employed KEYS residents work in the retail sector and manufacturing (including the Shipyard). Twenty-two percent of the residents work in manufacturing as compared to only 20 percent in the state of Maine and 18 percent in the U.S. And, about 19 percent work in retailing as compared to 18 percent in the state as a whole and 17 percent in the U.S. (see Tables 3 and 4).
- ♦ A very large number of employed KEYS residents work for the U.S. government at the Naval Yard. Fourteen percent of the employed KEYS residents work for the U.S. government. This compares to a national average of only three percent. Almost all of this employment is tied to the Portsmouth Naval Shipyard. In Kittery, 18.5 percent of all employed residents depend on the federal government for jobs (see Tables 5 and 6).
- ♦ The region has a strong entrepreneurial base. In the four KEYS towns, about 11.5 percent of the employed residents are classified as self-employed as compared to only nine percent in the state of Maine and seven percent in the U.S. as a whole. The level of self-employment was highest in Kittery and York (see Tables 5 and 6).

While economic conditions have substantially worsened over the past three years, the economic environment in the KEYS towns has not declined as rapidly or as deeply as in other communities in New England. For example, while unemployment in the four towns has been growing steadily since 1988, it is still very low and well below that of the county, state, and U.S. In fact, in April 1992 the Kittery Labor Market Area (LMA) had the lowest unemployment rate in the state, 4.5 percent.

In contrast, other communities in York County are experiencing double digit unemployment. For example, as of March 1992 when the unemployment rate was 4.9 percent in the Kittery Labor Market Area, the Biddeford area had a 9.1 percent unemployment rate and Sanford Labor Market Area had a 10.4 percent unemployment rate.

It is very important to note, however, that in percentage terms, the rate of increase in unemployment in the four towns has been very high. Between 1988 and 1991, the number of unemployed residents of the four KEYS towns has increased by 213 percent and has continued to rise in 1992.

There are other indications of deteriorating economic performance in the local communities. Two major trends facing towns are increased tax delinquencies on real property and greater demand for town- and state-funded General Assistance (GA):

- ♦ Tax delinquencies are up in all four towns from FY91 to FY92 (estimated), as are the number of actual foreclosures on properties. The increase is largest for Kittery (1.6 percent) where the percentage of unpaid property taxes at year end increased from 16.4 percent in FY90 to 18.0 percent in FY91. The estimated percentage of unpaid taxes in Eliot for FY92 is 15.3 percent; in York, 8 percent; and in South Berwick, 9.5 percent.

Other signs of a weakening tax base are found in data on foreclosures and tax liens filed. The number of foreclosures in Kittery increased from 32 in FY90 to 100 in FY92 (an increase of 213 percent). In Eliot, there was just one foreclosure in FY90, but four are expected in FY92. Tax liens went up 56.3 percent in York between FY88 (320) and FY92 (500 - estimated). The largest leap in York during that period occurred between FY88 and FY89 -- the trend has been downward since FY89. In South Berwick, officials note that in FY92 there are about 250 "new"

accounts who are mostly homeowners feeling the pinch of the economy, and not developers who are waiting for a sale to pay taxes.¹

- ♦ The number of people receiving General Assistance has risen dramatically, and town expenditures for GA are rising in turn. In January 1989, there were about 200 people receiving General Assistance in KEYS communities. By January 1992, there were more than 350 people on Assistance, or an increase of 70.9 percent. Relative to 1990 census data, the percentage of individuals receiving GA to KEYS population increased from 0.7 percent in 1989 to 1.2 percent in 1991. The largest increases occurred in Kittery and South Berwick. These figures do not reflect the recent 1992 layoffs at Portsmouth Naval Shipyard (see Tables 7 and 8).

As a result of the increase in GA caseloads, town budgets for GA are showing an increase as well. In Kittery, expenditures for GA have increased 39.1 percent, from \$66,919 (FY90) to an estimated \$93,094 (FY92). In addition, towns are spending more on managing GA. The person in charge of GA in South Berwick just became a full-time employee. Another observation that has not been quantified is that the GA disbursement per case is increasing because currently there is less part-time work available to offset financial need by laid-off persons.

The administrator of the South Berwick General Assistance summed up the local situation in a recent report: "The shortfall within the state's budget and the subsequent cuts in the General Assistance Program resulted in several major changes in the General Assistance laws. This program now falls short in some cases of meeting even basic needs of our residents. For the first time in the 12 years I have been administering this program, some applicants are now having to choose between feeding their children and paying the rent."

¹The implications of increases in delinquencies, tax liens, and foreclosures are complicated. Although towns may eventually collect more funds due to higher interest charged on late payments, it is not clear that they come out ahead in the long run. Delinquencies require more staff time, short-term borrowing to maintain town cash reserves, and, together with inflation, these factors eventually eat away at any potential gains.

2.2 Economic Environment: By Location of Employment

In analyzing the economic conditions, it is important to distinguish between where people live and where jobs are located. No longer can one assume that the residents of a community primarily work in that community. The workforce is increasingly mobile with employees willing to commute long distances for appropriate jobs (according to the 1990 U.S. Census, the *average* travel time to work in York County in 1990 was 22 minutes). Residents of the four KEYS towns work throughout the Seacoast region of Maine and New Hampshire with many commuting as far as Portland to the north and Boston to the south. As just one example of the regional nature of the economy, more KEYS residents work at Davidson in New Hampshire (about 120 according to the Mt. Auburn survey) than work at most of the manufacturing companies located in the four KEYS towns.

Moreover, with advances in technology, there are increased opportunities to work out of one's home. Thus, in the KEYS towns there is also evidence of a growing number of home-based businesses.

Understanding the economic environment in which KEYS residents operate thus means understanding the larger economic region -- where the jobs are located in which KEYS residents currently work or could potentially work. One can examine the regional economy relevant to the residents of KEYS on three levels:

1. *Employment opportunities available in close proximity to the KEYS towns* -- the Kittery Labor Market Area that includes the KEYS towns, Berwick, North Berwick, Ogunquit, and Wells.
2. *Employment opportunities within an average commute* -- the rest of York County in Maine and the Portsmouth Metropolitan Area in New Hampshire.
3. *The economic "sphere of influence"* -- Portland, Maine to Boston. Commuting to Boston or Portland is no longer unusual. For example, a resident survey in South Berwick found that two percent of the residents commuted to Boston. Moreover, the business environment in the region is heavily influenced by the larger economic forces emanating from Boston -- the regional center.

2.2.1 Structural Changes in the Economy

Like much of New England, the KEYS region has experienced rapid job growth over the past decade. In the Kittery Labor Market Area, about 3,800 jobs were added between 1984 and 1990, accounting for an employment growth rate of 18.5 percent. This level of job growth was lower than the rate of employment growth in the state of Maine (20 percent) during this period, but higher than the level of job growth for the U.S. as a whole (16 percent). The Portsmouth metropolitan area (of which the Kittery Labor Market is a part) has seen similar job growth in the decade. In the five year period between 1982 and 1985, when the economy peaked, about 15,500 jobs were added to the region, a growth rate of 15.7 percent (see Charts 4 and 5).

Not only was the economy of the region expanding, it was also changing structurally during this period. This change is seen both in the immediate Kittery area -- where the growth in manufacturing, retail, and service jobs has meant a diversification away from dependence on the Naval Yard, and in the larger region, which has seen a shift from traditional manufacturing to a more diversified manufacturing base including high technology products (see Charts 6 and 9).

Historically, the Kittery Labor Market Area was dominated by the jobs at the Naval Yard. In 1984, for example, 9,000 of the area's 21,000 jobs (43 percent) were U.S. government, primarily at the Naval Yard (see Chart 7). The dominance of U.S. government employment in the four KEYS towns is even higher than it is in the Labor Market Area. Over the decade, government employment has become a smaller and smaller component of the job base. Currently, about 29 percent of the jobs in the Kittery Labor Market Area are related to the Naval Yard. While declining as a percentage of total jobs, the Naval Yard still accounts for a very large proportion of employment, particularly when compared to the U.S. overall where only about three percent of all jobs are through the U.S. government.

The Manufacturing Sector

Unlike many other similar communities in New England, the manufacturing sector in the Kittery area remained relatively healthy during the 1980s. Starting in the late 1970s when Pratt and Whitney was attracted to North Berwick, the region has been seeing steady growth in manufacturing (see Chart 8). While employment in manufacturing was declining in the state and the U.S., the region has seen a growth of about 2,600 manufacturing jobs over the last decade (about 70 percent due to Pratt and Whitney's growth). While starting as a very small percentage of total jobs in the beginning of the 1980s, the percentage of manufacturing jobs in the area is now closer to the state and national average (see Chart 9).

The manufacturing base in the Kittery Labor Market Area is relatively diverse. There are about 30 manufacturing companies in the Labor Market Area employing about 4,150 individuals. Of these, about 22 companies employing 706 individuals are located in the four KEYS towns. Pratt and Whitney, located in the LMA but outside the four towns, with 1,900 employees accounts for about 46 percent of all manufacturing jobs in the region.

The manufacturers located in the four KEYS towns are primarily small. Only four companies have over 50 employees. Most of the companies employ less than ten people. A number of the companies in the four towns are either in wood products (i.e., Northern Cabana, Maine Post and Beam) or marine-related (i.e., Martin Marine, East West Custom Boards, and the P.E. Rollins Boat Company). The largest manufacturers in the four towns are Watts Fluidair in Kittery, a maker of compressed air filters, regulators, and lubricators; and Duchess Footwear in South Berwick.

Mt. Auburn completed surveys of about 60 percent of the manufacturers accounting for 74 percent of the manufacturing jobs in the four KEYS towns. The survey found that on average about 61 percent of the employees at KEYS-based manufacturers were residents of KEYS. The survey also found that a number of the local manufacturers planned to expand their operations. Seven of the companies reported that they planned to expand and seven companies reported that they were developing new products or new production processes. All of the companies that planned to make new investment reported that lack of available financing was a constraint to their activity.

The manufacturing base of the larger Kittery Labor Market Area is dominated by Pratt and Whitney, which alone accounts for almost half of all manufacturing jobs in the Labor Market Area, and some traditional manufacturers in industries of historic importance (i.e., tanning and shoes). The region also has a relatively large percentage of jobs in wood products (14 percent), and printing and publishing (12 percent).

According to the Mt. Auburn survey, which covered 60 percent of all manufacturers and 86 percent of all manufacturing jobs in the Kittery LMA, the local manufacturers expect to increase their level of employment by about five percent over the next three years. If one assumes this level of growth for the entire manufacturing sector in the region, there would be an additional 225 manufacturing jobs by 1995.

The economic region surrounding KEYS -- including other parts of York County and the remainder of the Portsmouth Metropolitan area -- is more manufacturing-oriented. Communities such as Sanford, Dover, Portsmouth, and Rochester -- all within

an easy commute of the four KEYS towns -- have a relatively diverse manufacturing base. Residents of the KEYS towns live within commuting distance of over 8,000 additional manufacturing jobs located in the Biddeford LMA and the Sanford LMA. There are another 12,000 manufacturing jobs in the non-KEYS portion of the Portsmouth Metropolitan Statistical Area (MSA) (see Tables 9 and 10).

York County still maintains a number of manufacturing concerns in its traditional industries. Textiles, apparel, and footwear together account for about 20 percent of the manufacturing jobs in the county. However, the county has also developed a concentration of firms in the machinery, electronics, and instruments industries. Sanford alone has about 30 manufacturing companies, many of which are producing relatively high-tech products.

The New Hampshire portion of the Portsmouth MSA also has a relatively diverse manufacturing base with both traditional industries and high-technology companies involved in cutting edge products. The region is home to a number of longstanding companies in its traditional manufacturing base. Shoe, textile, and apparel companies still provide over 2,000 jobs in the region. In addition, there are a number of companies involved in manufacturing parts for the automotive industry, including Davidson Interior Trim, with over 1,200 employees. There are also a number of companies in the electronics and machinery industries. Other major manufacturers include: General Electric in Somersworth, Simplex Wire and Cable in Portsmouth, and Cabletron in Rochester (see Charts 10 and 11).

The Service Sector

The growth of the service sector -- most notably retail trade activity -- has probably been the most obvious sign of the changing economic environment to most residents of the KEYS region. Between 1984 and 1991, the region added about 2,800 retail jobs and about 2,700 jobs in the service sector. Service sector employment grew from 11 percent of total employment in 1984 to close to 14 percent by 1990. Retail employment went from 17 percent to 21 percent during this same period. Between 1984 and 1990, the rate of job growth in both retail and services was higher than that of the state of Maine and the U.S. as a whole (see Charts 12 and 13).

There are two main components of the service sector in the region:

1. *The retail activity related to the outlet malls in Kittery.* During the 1980s, Kittery developed as one of the major centers for outlet retailing in the Northeast. This development occurred relatively

quickly, changing the economic and physical environment of the community. Currently, there are about 120 factory outlet retailers in Kittery that annually net the state about \$8 million in sales tax. Women's Day Magazine ranked Kittery as the number one outlet center in the nation. Its strength is evidenced by the fact that vacancies in the outlet malls do not tend to last longer than one month. The outlet retail stores have organized themselves into an association that is aggressively marketing the area nationally and internationally. According to several tenants, outlet stores have weathered the recession quite well, and growth prospects for the future appear to be strong with continued developer and retailer interest.

2. *Services related to the tourism industry in the region.* The KEYS region has a relatively strong tourism sector, with a large number of hotels, restaurants, and a range of other services serving the tourism industry. A study of the tourism sector in York County found that about 29 percent of all consumer sales in York County were attributable to tourism. Similarly, Mt. Auburn's survey of KEYS retail and tourist businesses (May 1992) found that 56.6 percent of the firms responding indicated that most of their customers live outside the Seacoast region. Sales in this sector are also increasing. During the period between 1983 and 1990, restaurant and lodging sales increased by 98 percent in York County.

According to the York County study, York and Kittery are the more tourism-oriented communities. In York, about 46 percent of all sales in 1990 came from restaurant and lodging business. In Kittery, the amount was about 17 percent. Employment related to tourism was estimated to be about 16 percent of all jobs annually and about 23 percent of all employment during the month of August for the Kittery Labor Market Area in 1989.

An analysis of retail sales activities in York County completed by the Cooperative Extension of the University of Maine provides further evidence of the strength of the retail sector in the Kittery/Eliot area. While per capita retail sales of about \$2.50 in the Kittery/Eliot area was well below that of Saco, Biddeford, and Sanford in the early 1980s, by 1990 per capita retail sales in the area were over \$10.00 -- well above the other communities in the county, but still substantially below that of Freeport and Ogunquit. The Kittery/Eliot area also increased from 12 percent of total York County retail sales in 1985 to 17 percent in 1990.

Within the greater Portsmouth area there are additional areas of service sector strength including the health care sector and the financial sector. There were about 6,100 jobs in the health sector in the Portsmouth area, about nine percent of all jobs in the region, and this number has been growing rapidly during the decade.

Financial service jobs are concentrated in one company -- Liberty Mutual. Liberty Mutual, a provider of both personal and business insurance and financial services, employs 23,000 people in 340 offices nationally. In the Seacoast region of New Hampshire, the firm operates four offices employing a total of about 2,865 people. Of three offices in Portsmouth, one is devoted to production functions (employing about 450), another provides information systems support (employing another 1,200), and a third is a small sales office (employing 15). In addition, the company employs about 1,200 workers in its home office located in the renovated Cocheco Falls Mill in Dover. The corporation's main headquarters are located in Boston.

While the growth of the retail and service sector in the region has added jobs to the region and provided some stability during a period of economic decline, it is important to note that *the quality of jobs in most components of the service sector is poor. For example, as compared to the average manufacturing wage of \$25,000 in York County in 1990, the average wage in retail was \$11,400, and in services was \$15,700.*

The Mt. Auburn survey of retailers and tourist businesses in the four KEYS towns provides additional evidence of the strength of this sector in the economy. Of the 60 companies responding to the survey, 72 percent were positive about the economic environment and reported that they expected their business to improve in the future. Only nine percent of the respondents expected their business to worsen. A large number of the respondents to the survey also had planned to expand or invest in their business over the next few years. Twenty percent of the respondents reported that they expected to expand at the current site and another 50 percent reported that they expected to make improvements at their site.

When asked if there were any barriers to their development, about 12 percent of the respondents noted that the availability of financing was a constraint. The type and amount of financing needed by businesses included mortgages, seasonal lines of credit (\$10-15,000), and short-term loans. Seven percent noted that the availability of skilled labor was a constraint, and five percent mentioned the need for suitable water and septic facilities.

2.2.2 Recent Economic Conditions

While not experiencing the current economic recession as badly as other communities in New England, the Portsmouth MSA and the Kittery LMA have experienced job losses over the past couple of years. Since 1989 when employment peaked, the Portsmouth MSA has lost about 11,500 jobs or about 10 percent of its jobs. The immediate Kittery Labor Market Area has proven more stable. Even with dramatic losses in construction employment and the layoffs at the Shipyard, total jobs in the area have only been reduced by a few hundred jobs or about one percent of its employment base (see Table 11).

A number of closings and layoffs in local manufacturing companies have added to the concerns about the availability of good, skilled manufacturing jobs in the region. In Biddeford, Fiber Materials, a manufacturer of woven materials for the aerospace industry, cut its workforce by 100, and Shape, Inc., a maker of video and audio cassette tapes, cut forces by 150. Saco Defense, a machine gun manufacturer in Saco, reduced its employment by about 50. In the Sanford area, Sprague Electric, a semi-conductor manufacturer has let go 100 of its employees recently. Another semi-conductor firm in South Portland, National Semi-Conductor, reduced employment by 200. Further down east, Bath Iron Works is preparing to reduce forces by 2,000.

On the New Hampshire side, Clarostat, a producer of electronic components, announced they were moving their Dover, New Hampshire operation to Mexico resulting in the loss of about 340 jobs. Also in Dover, Hidelberg Harris, Inc. laid off about 100 employees. In Portsmouth, about 200 jobs were lost when Data General closed. Rochester, New Hampshire lost Algor Shoe in 1990, and with it 175 jobs.

The retail sector has been growing despite the recession. In fact, the outlet stores in Kittery are reporting growing sales levels. Even at the height of the recession, the number of retail and service jobs has been growing in the Kittery Labor Market Area.

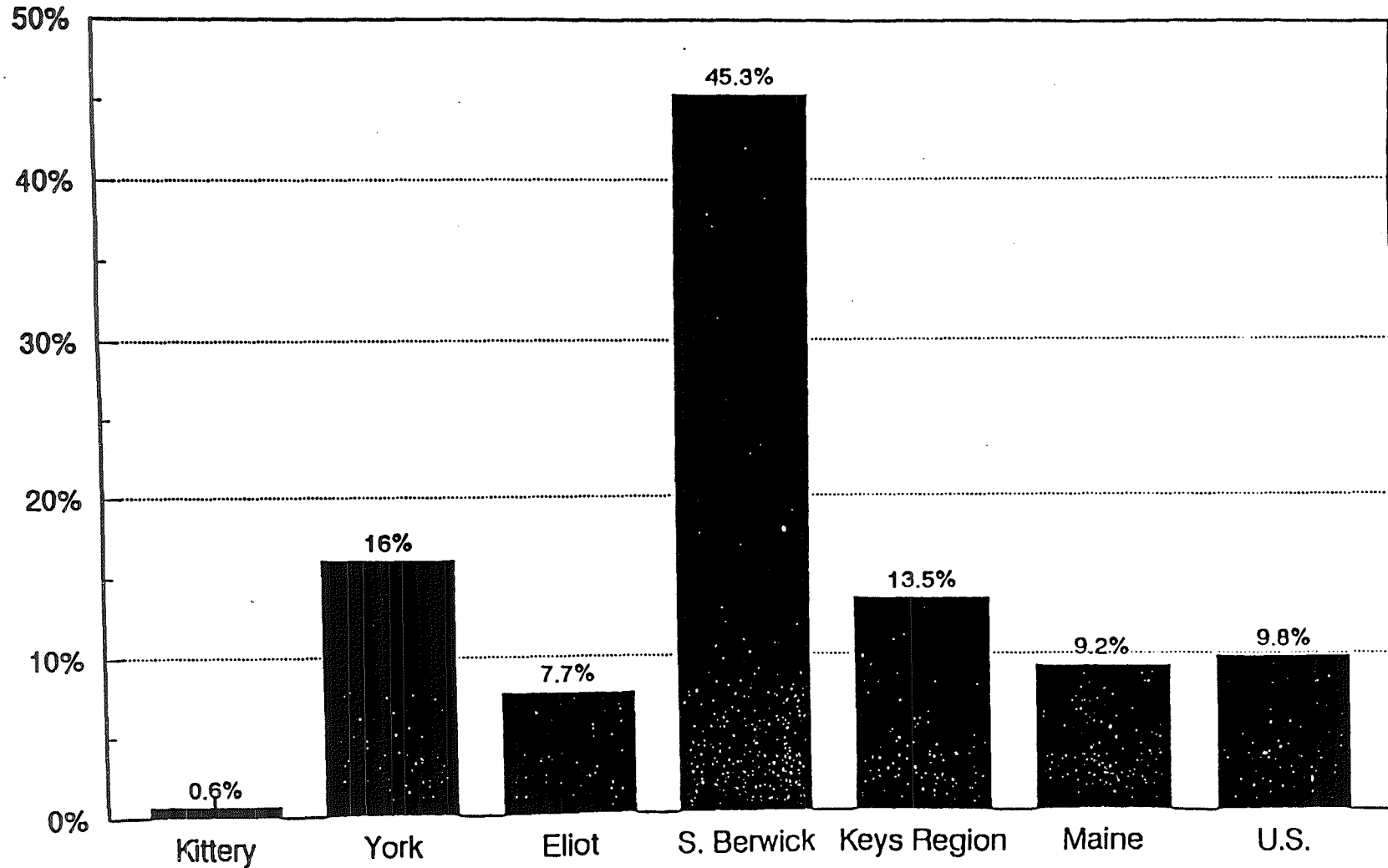
2.3 Conclusions

- 1. While the region has not been hit as hard as most others in New England, the impacts of the recession and cutbacks at the Naval Yard are evidenced in rapidly rising unemployment, increased welfare caseloads, and significant job losses in the regional economy. The further reductions at the Naval Yard are likely to add stress to the public assistance system and to the overall health of the economy.*

2. *The regional economy provides residents of the four towns with a relatively diverse range of jobs.* While the four town KEYS region is dominated by jobs at the Shipyard, the surrounding communities provide residents of KEYS with a wide range of jobs in manufacturing, sales, finance, and other services. This diversity may cushion some of the impact.
3. *The growing sectors in the regional economy -- retail and tourism -- do not offer the quality of jobs appropriate to the skills and wage scale of the employees of the Naval Yard.* An important part of the adjustment process will be attracting new firms to the area who see the high skill level of the residents as a key attraction.
4. *The region is vulnerable given the high number of good jobs in the region that are concentrated in only a few employers.* For example, closure of the Naval Yard would result in the loss of about 14 percent of jobs held by KEYS residents, and close to 50 percent of the manufacturing jobs in the Kittery LMA are associated with Pratt and Whitney located in North Berwick.

Population Growth 1980-1990

Percentage Growth

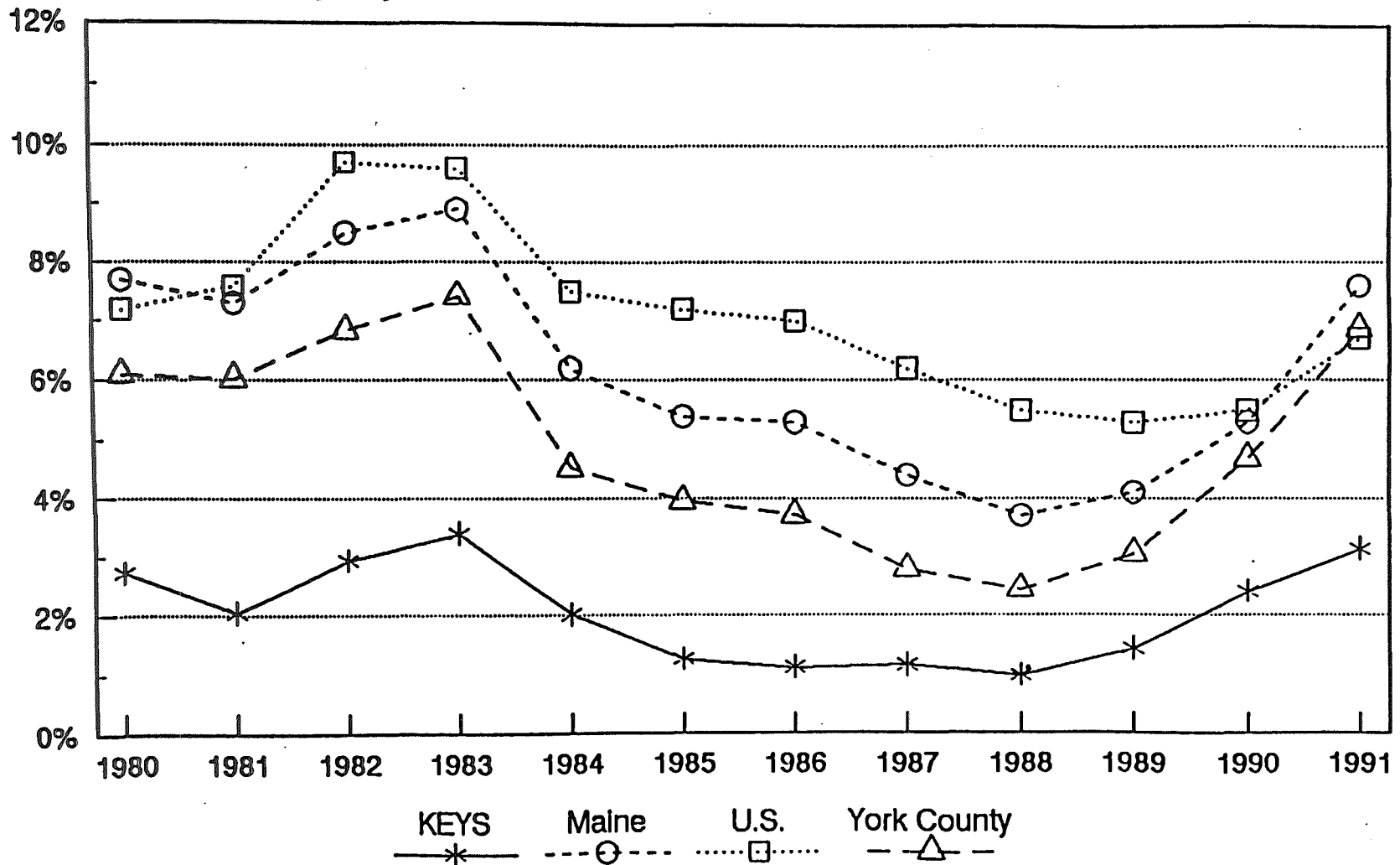


SOURCE: 1990 U.S. Census.

Chart 1

Unemployment Rates

Percent Unemployed

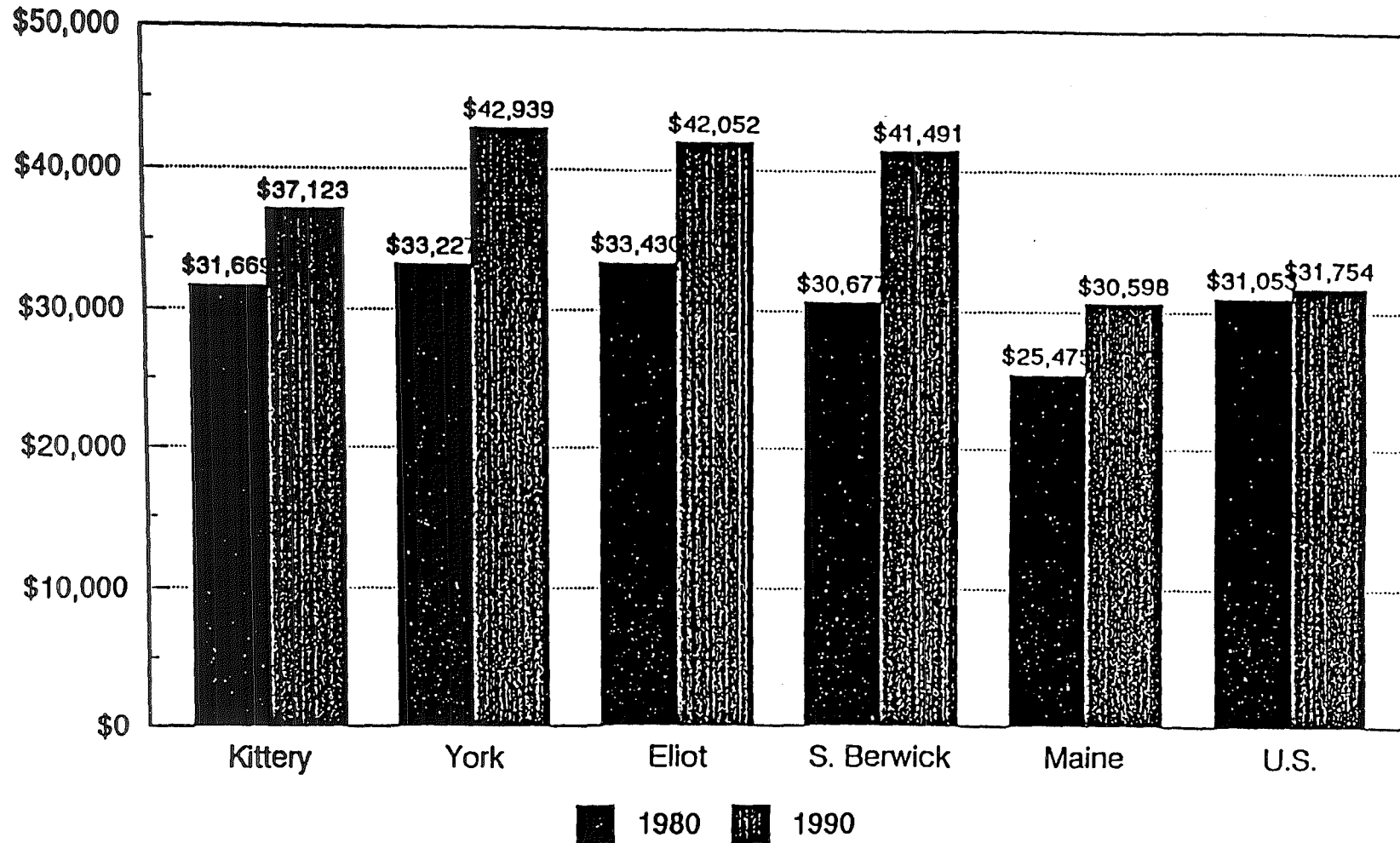


SOURCE: 1992, Maine Dept. of Labor

Median Household Income: 1979 and 1989

In 1991 \$

Median Household Income



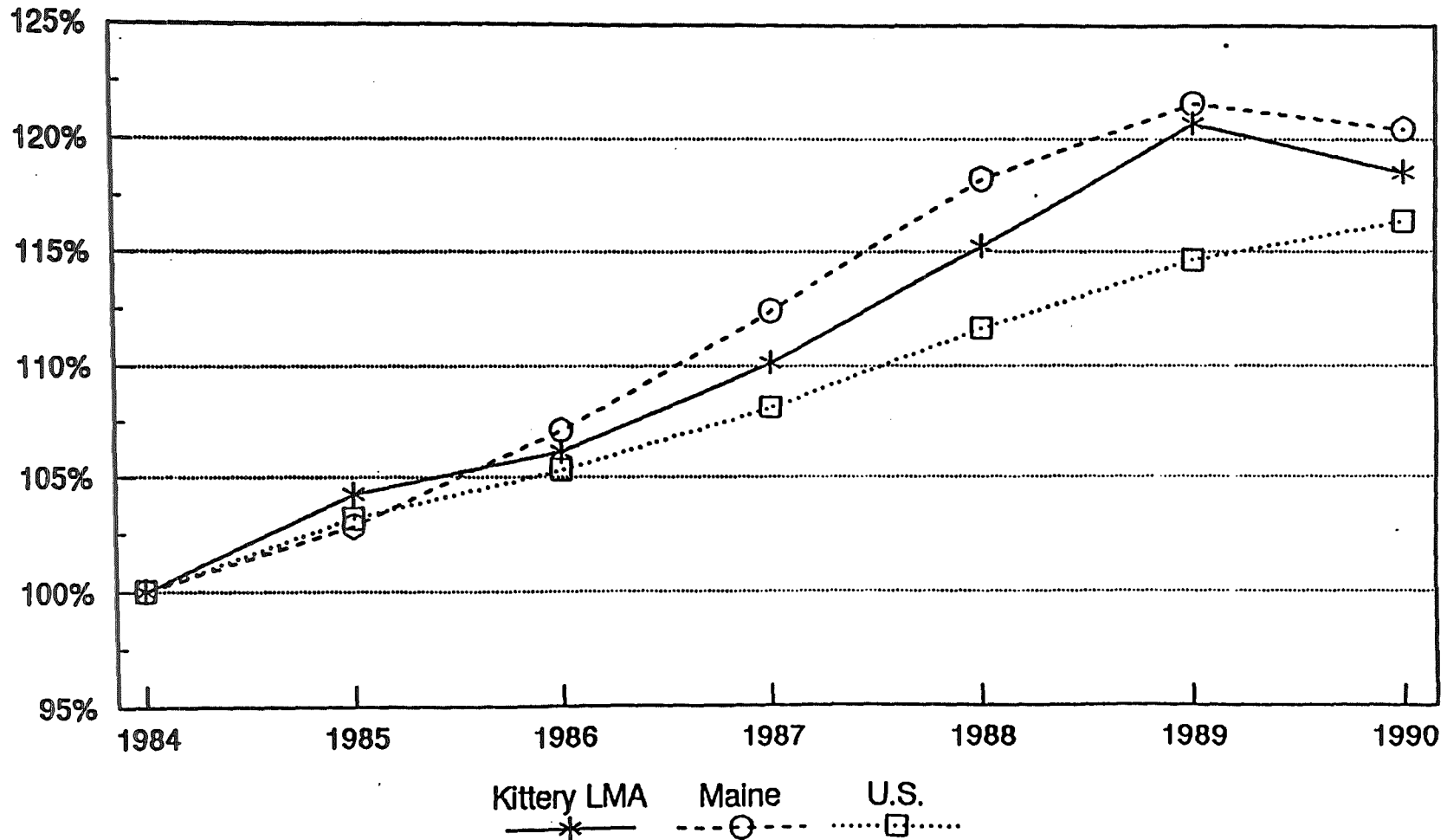
SOURCE: 1990, U.S. Census

Chart 3

Total Employment Growth

Index 1984=100

Percentage Job Growth



SOURCE: 1992, Maine Dept.
of Labor

Chart 4

Total Employment: Portsmouth MSA

Index 1985=1

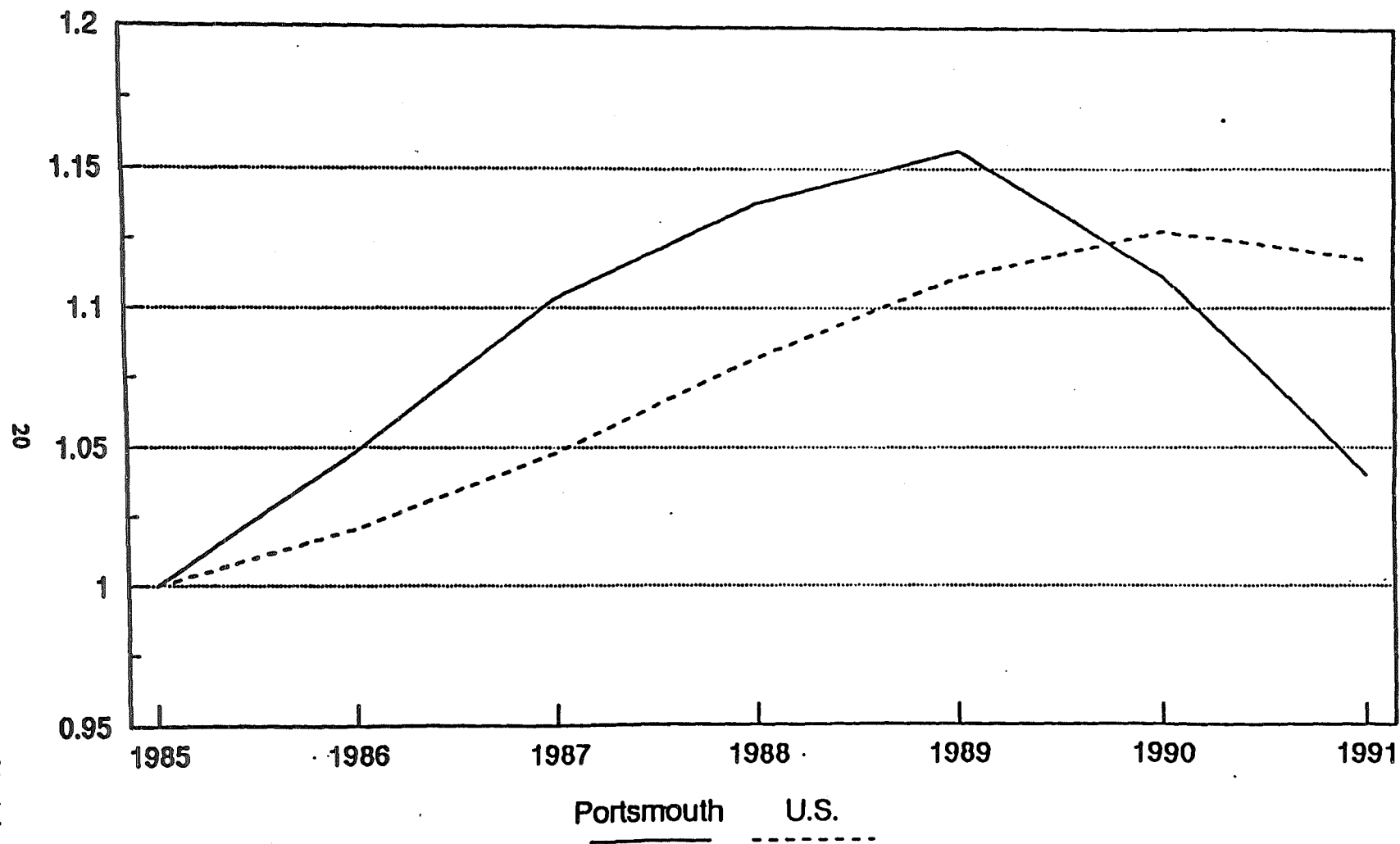


Chart 5

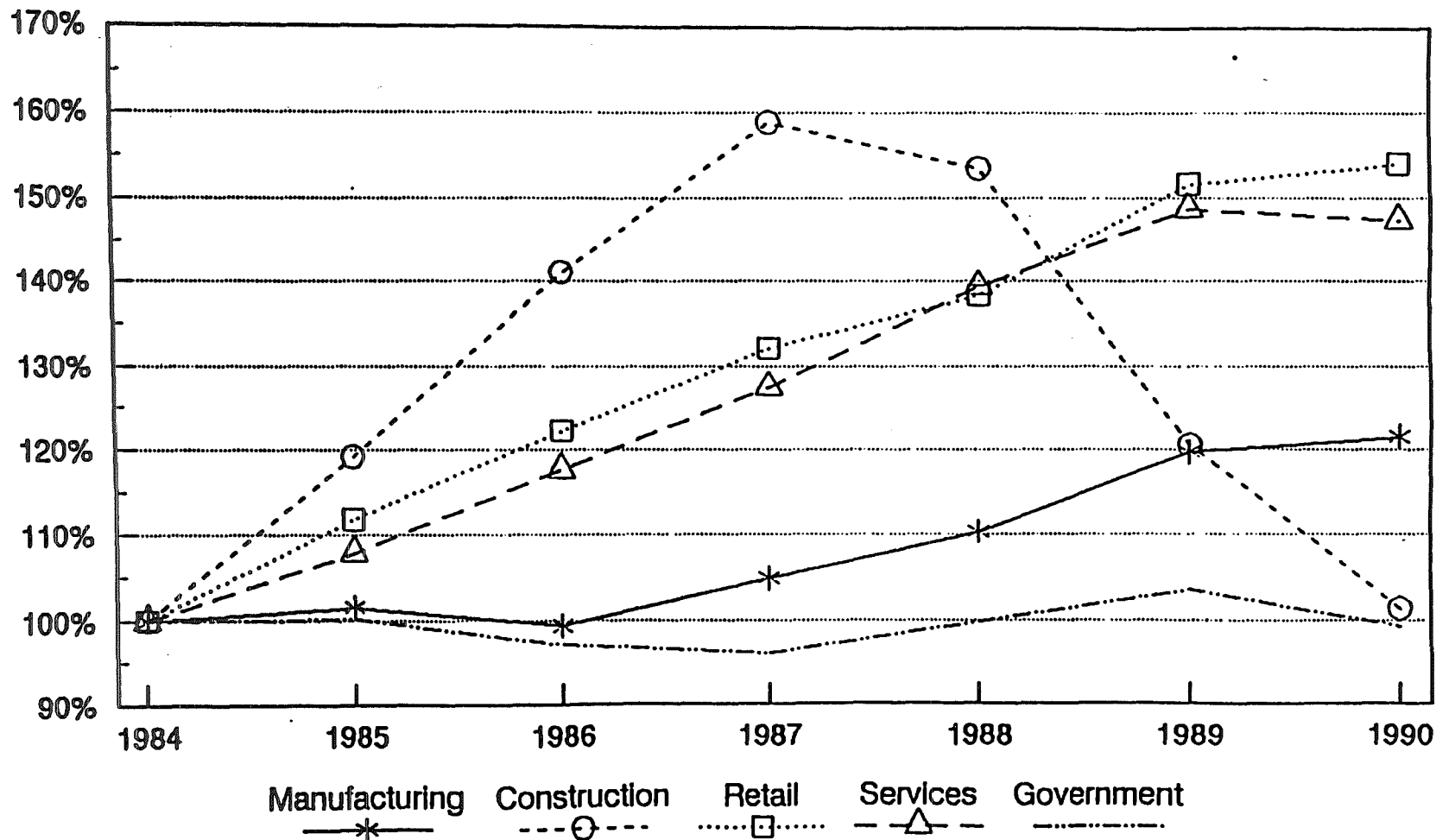
Portsmouth MSA Established in 1985

SOURCE: 1992, New Hampshire
Dept. of Labor

Job Growth By Sector: Kittery LMA

Index: 1984=100

Percentage Job Growth



SOURCE: 1992, Maine Dept.
of Labor

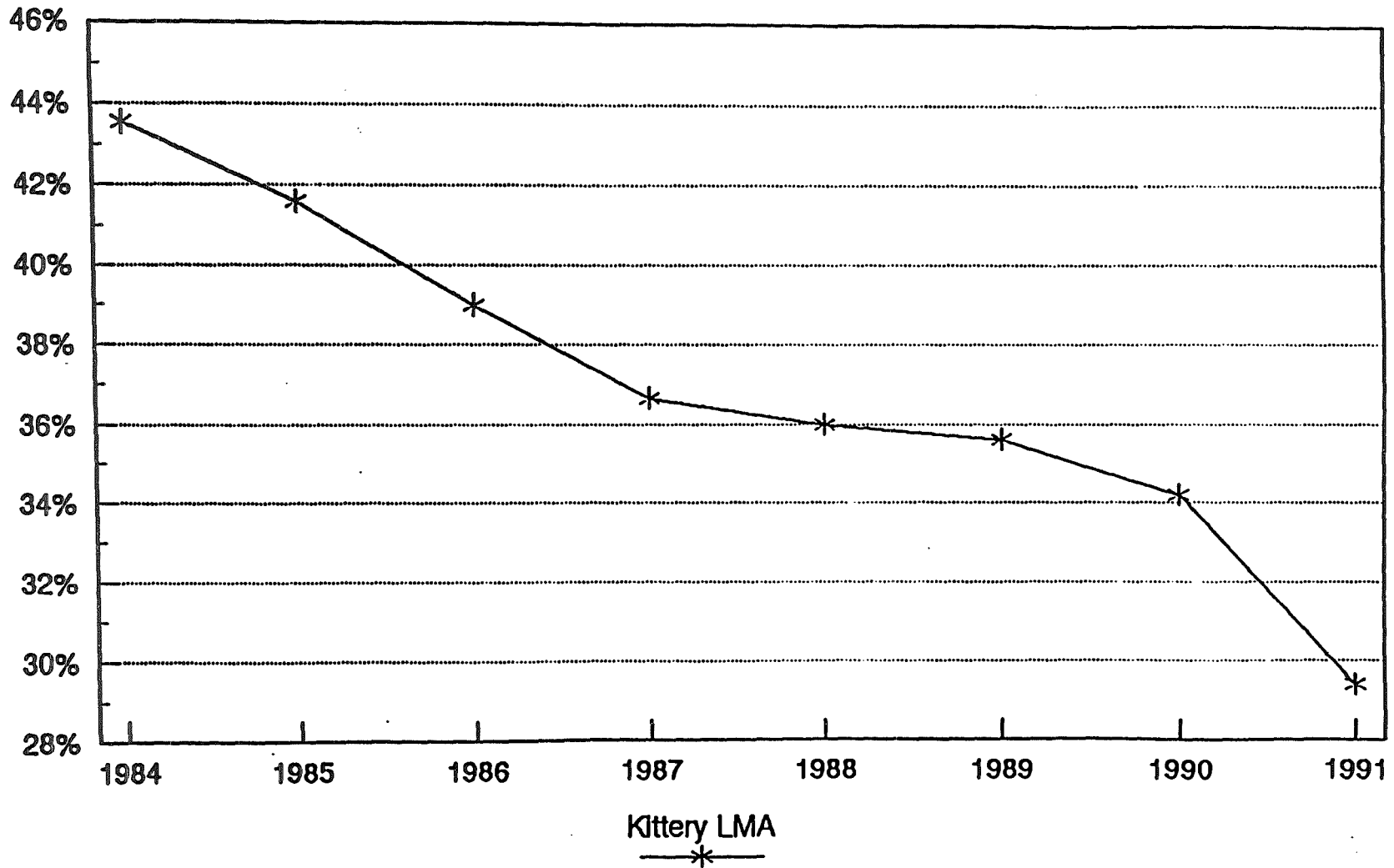
Chart 6

Dependence on U.S. Government Employment

KEYS Labor Market Area

Chart 7

US jobs as % of total



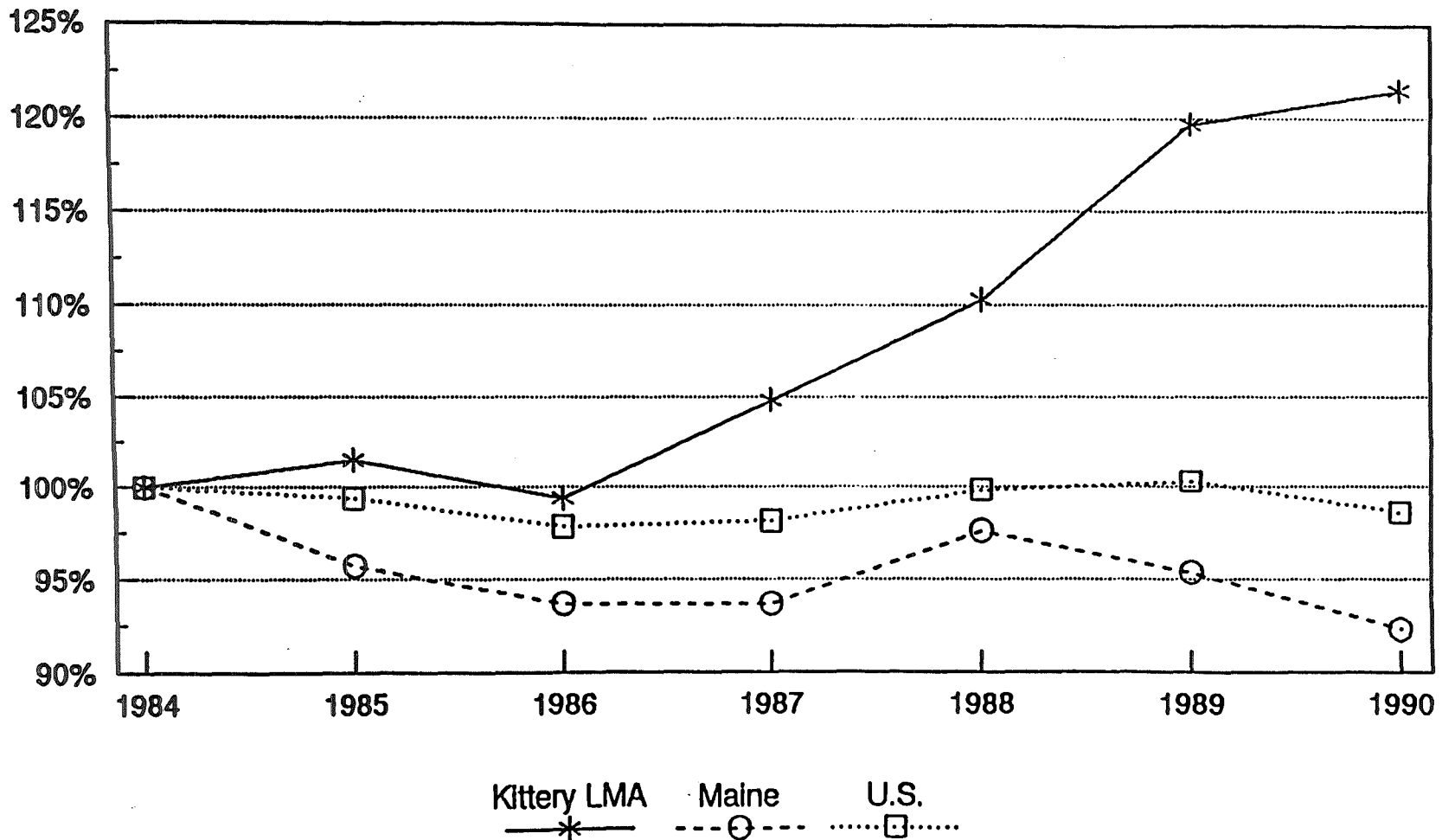
1991 is Preliminary September Data

SOURCE: 1992, Maine Dept.
of Labor

Manufacturing Job Growth

Index: 1984=100

Percentage Job Growth

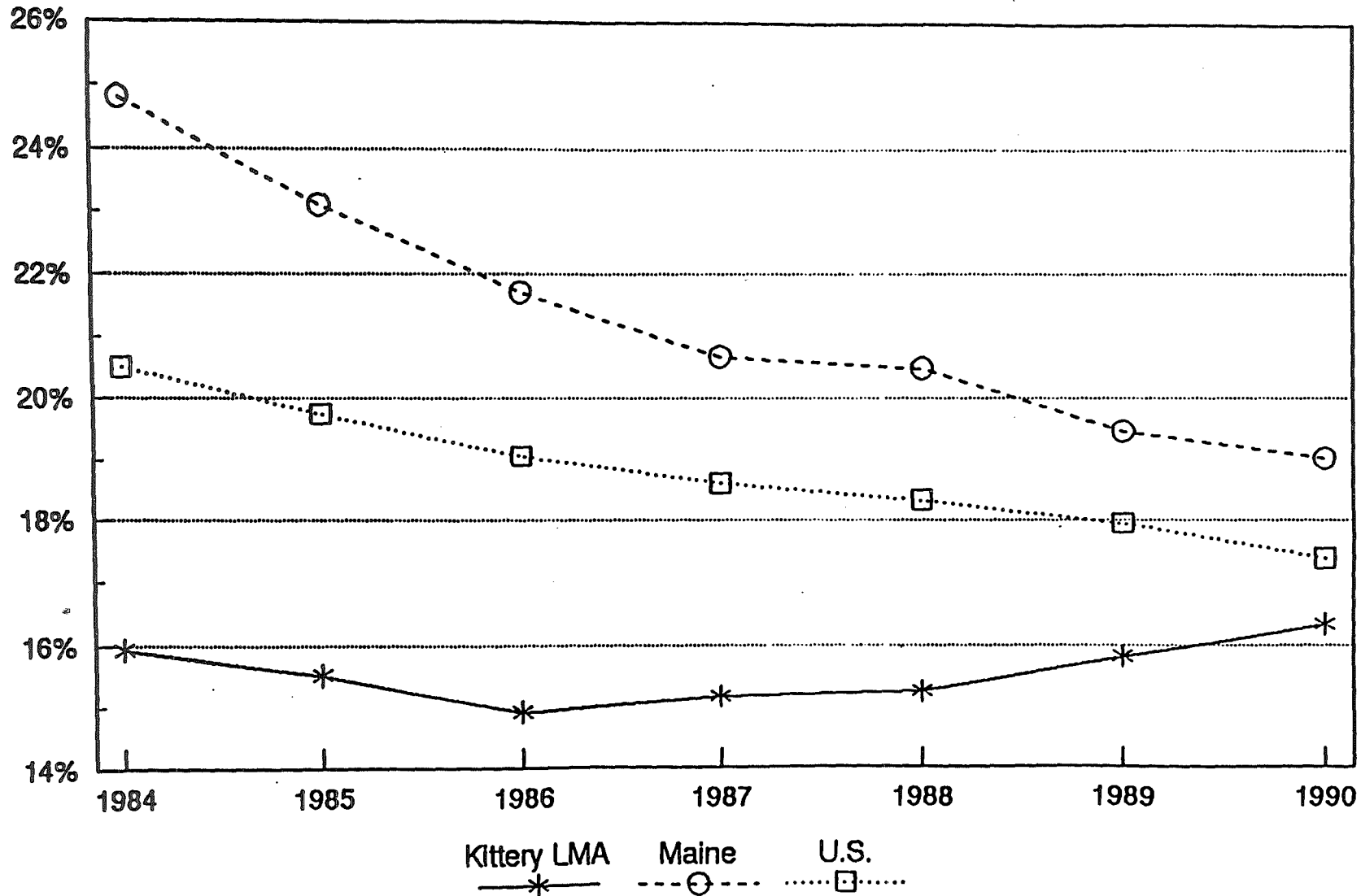


SOURCE: 1992, Maine Dept.
of Labor

Chart 8

Manufacturing Employment: Proportion of Total

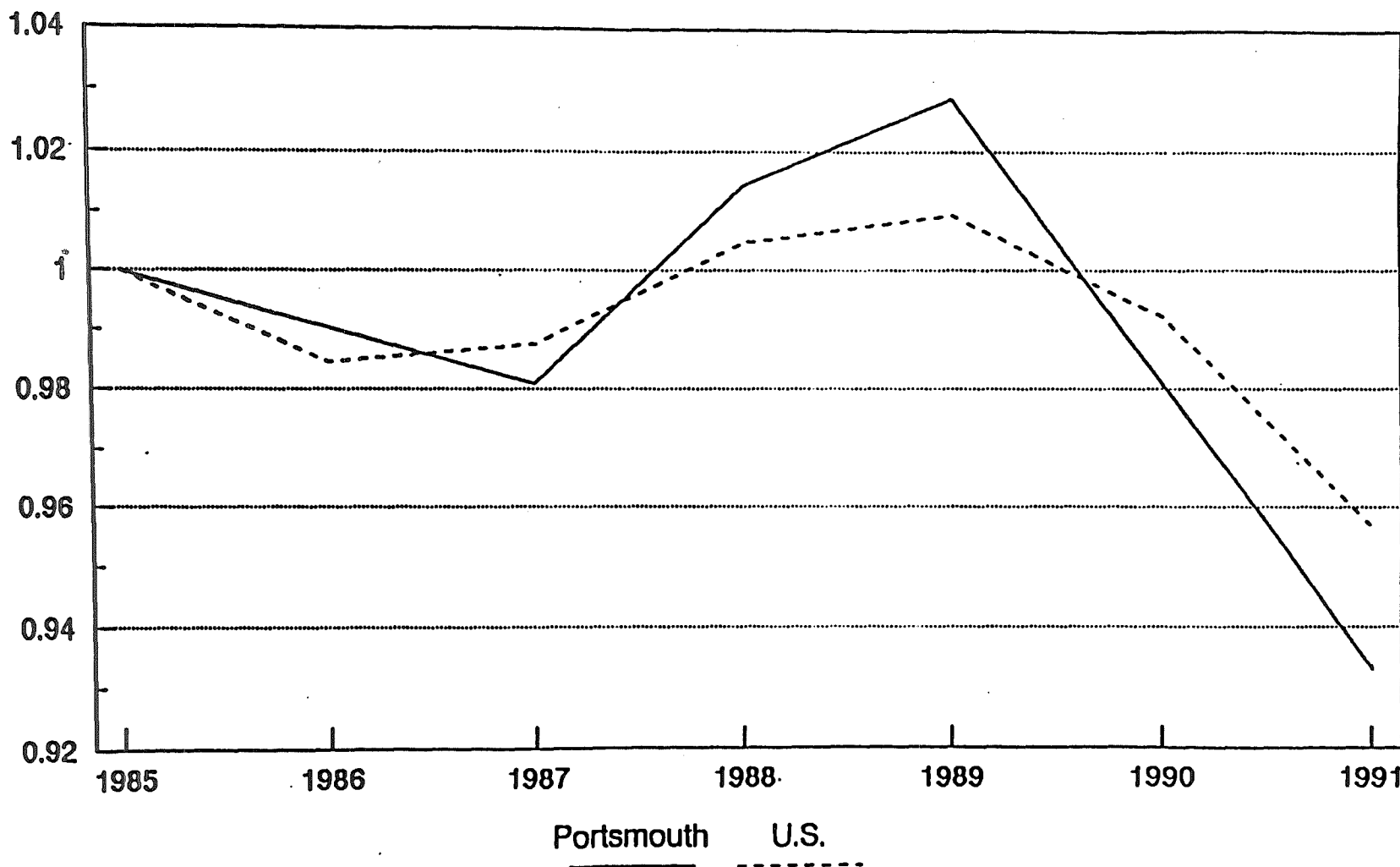
mfg jobs as % of total



SOURCE: 1992, Maine Dept.
of Labor

Manufacturing Employment: Portsmouth MSA

Index 1985=1



Portsmouth MSA Established in 1985

SOURCE: 1992, New Hampshire
Dept. of Labor

Job Trends By Sector: Portsmouth MSA

Index 1985=1

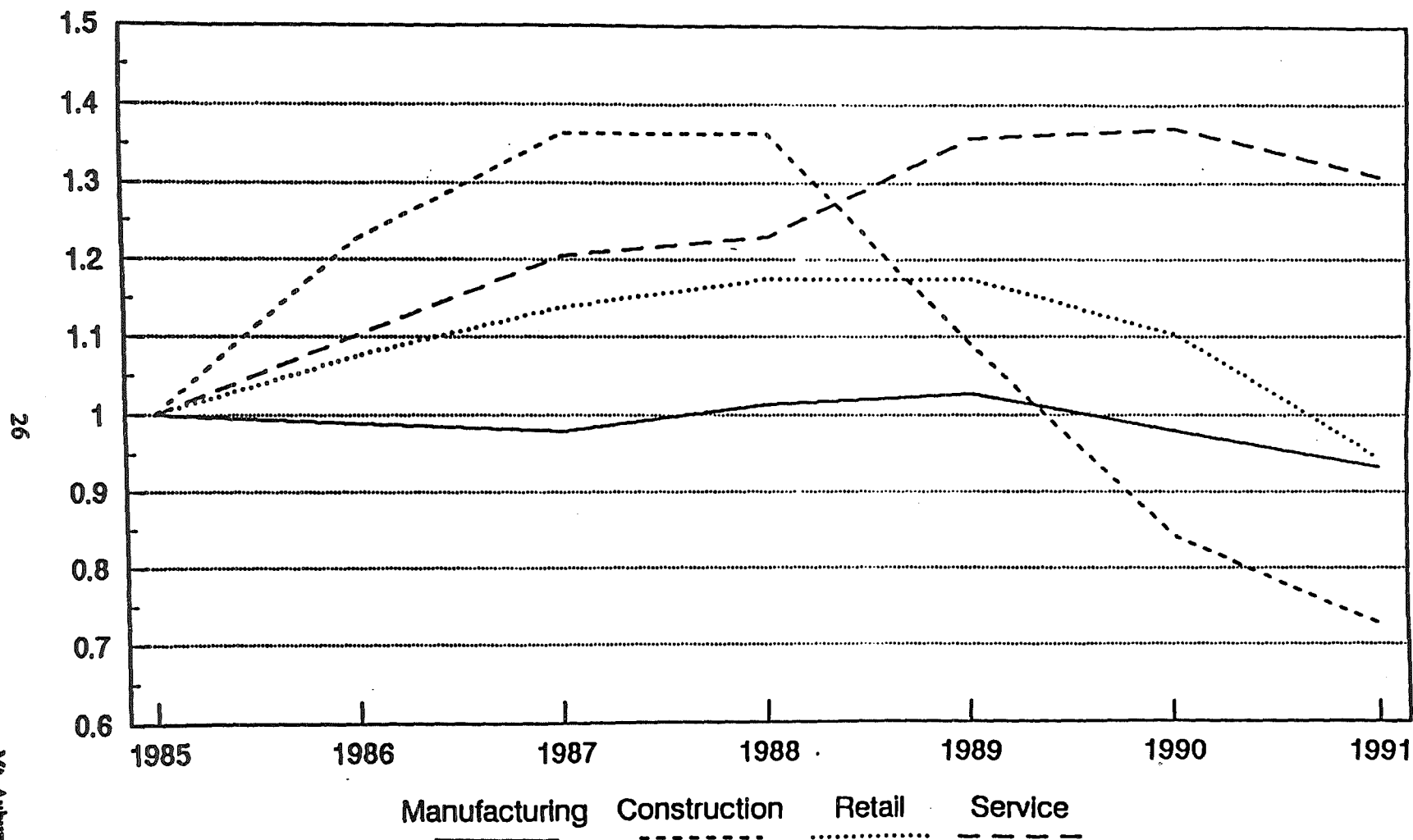


Chart 11

Mt. Auburn Associates

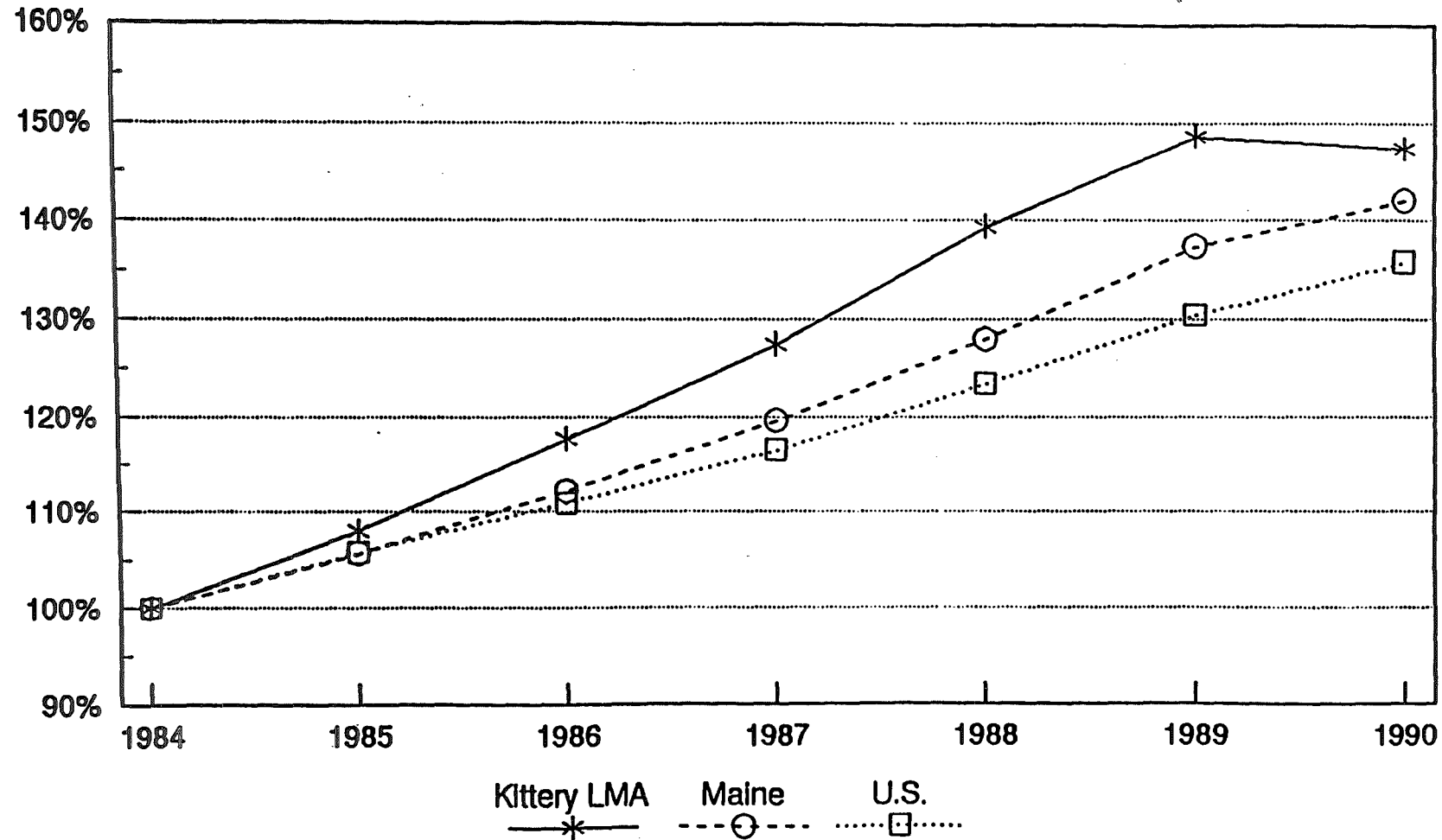
Portsmouth MSA Established in 1985

SOURCE: 1992, New Hampshire
Dept. of Labor

Job Growth in Services

Index: 1984=100

Percentage Job Growth

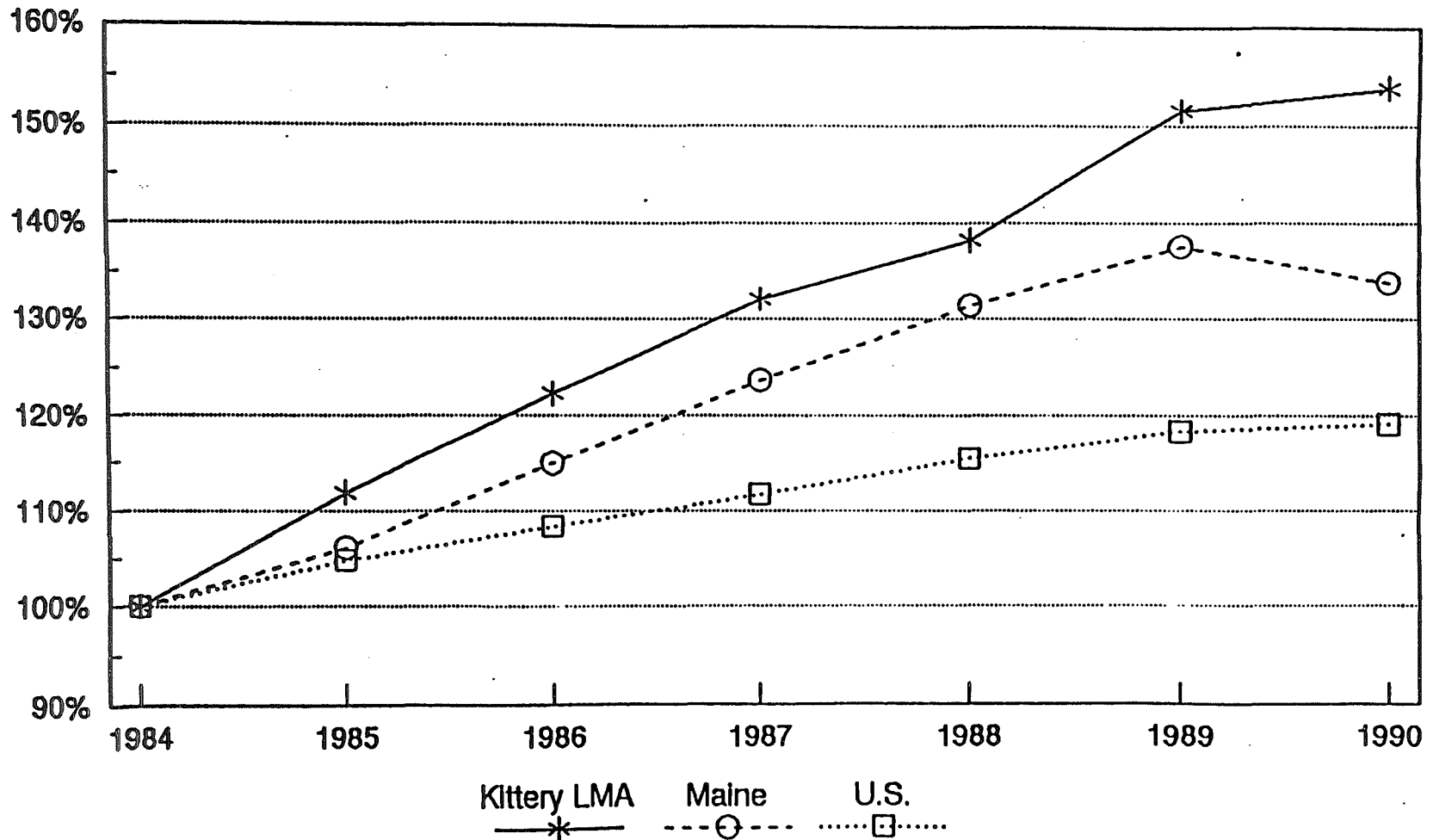


SOURCE: 1992, Maine Dept.
of Labor

Retail Job Growth

Index: 1984=100

Percentage Job Growth



SOURCE: 1992, Maine Dept.
of Labor

Table 1

OCCUPATION OF EMPLOYED RESIDENTS 16 Years + (1990)

Occupation	Kittery	Eliot	York	South Berwick	KEYS
Exec/Admin/Mgmt	12.5%	11.7%	14.8%	14.7%	13.6%
Prof. Specialty	14.2%	13.8%	18.1%	14.1%	15.4%
Tech. and Related	3.9%	3.1%	3.2%	5.0%	3.7%
Sales	13.2%	13.5%	14.4%	11.4%	13.3%
Admin Support/ Clerical	11.5%	16.0%	14.0%	12.6%	13.3%
Priv. Household	0.0%	0.3%	0.6%	0.4%	0.3%
Protect. Services	1.2%	1.5%	1.6%	0.7%	1.3%
Other Services	12.1%	10.8%	10.6%	11.0%	11.2%
Farming/Forestry/ Fishing	3.3%	1.2%	3.0%	1.5%	2.5%
Precision Production	17.6%	15.6%	11.9%	12.5%	14.3%
Machine Operators	5.6%	5.2%	2.4%	9.7%	5.3%
Trans./Material Moving	2.4%	5.1%	2.6%	2.8%	3.0%
Handlers/Helpers/ Laborers	2.3%	2.3%	2.7%	3.5%	2.7%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

SOURCE: U.S. Census, 1990.
OCCUP2.WK1

Table 2

OCCUPATION OF EMPLOYED RESIDENTS

16 Years +

(1990)

Occupation	KEYS	York County	Maine	U.S.
Exec/Admin/Mgmt	13.6%	11.1%	10.7%	12.3%
Prof. Specialty	15.4%	12.8%	13.8%	14.1%
Tech. and Related	3.7%	3.7%	3.2%	3.7%
Sales	13.3%	10.9%	10.9%	11.8%
Admin Support/ Clerical	13.3%	13.7%	14.5%	16.3%
Priv. Household	0.3%	0.3%	0.4%	0.5%
Protect. Services	1.3%	1.4%	1.4%	1.7%
Other Services	11.2%	11.4%	12.2%	11.0%
Farming/Forestry/ Fishing	2.5%	1.7%	2.8%	2.5%
Precision Production	14.3%	15.3%	13.4%	11.3%
Machine Operators	5.3%	9.8%	8.0%	6.8%
Trans./Material Moving	3.0%	4.2%	4.4%	4.1%
Handlers/Helpers/ Laborers	2.7%	3.7%	4.3%	3.9%
TOTAL	100.0%	100.0%	100.0%	100.0%

SOURCE: U.S. Census, 1990.
OCCUP2.WK1

Table 3

EMPLOYMENT BY INDUSTRY
Employed Residents 16 Years +
(1990)

	Kittery	Eliot	York	South Berwick	KEYS
Agriculture/Forestry/ Fisheries	2.9%	1.1%	3.0%	2.5%	2.5%
Mining	0.0%	0.3%	0.1%	0.0%	0.1%
Construction	7.4%	8.2%	9.7%	7.7%	8.4%
Manufacturing	22.6%	23.4%	16.6%	27.2%	21.7%
Transportation	3.0%	5.1%	2.7%	1.5%	3.0%
Communications/ Public Utilities	2.1%	3.0%	2.1%	1.9%	2.2%
Wholesale Trade	3.1%	3.4%	2.3%	3.9%	3.1%
Retail Trade	19.2%	18.8%	20.3%	16.2%	18.9%
Finance/Insurance/ Real Estate	5.7%	7.8%	8.1%	7.2%	7.2%
Business and Repair Services	4.8%	5.2%	2.4%	3.2%	3.8%
Personal Services	2.1%	3.6%	4.8%	2.5%	3.3%
Entertainment/ Recreation	0.7%	0.6%	0.9%	0.5%	0.7%
Health Services	5.8%	3.0%	8.8%	7.3%	6.6%
Educational Services	9.1%	7.1%	8.0%	6.6%	7.9%
Other Professional Services	6.1%	5.6%	3.9%	7.2%	5.5%
Public Administration	5.5%	3.9%	6.0%	4.5%	5.2%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

SOURCE: U.S. Census, 1990.

Table 4

EMPLOYMENT BY INDUSTRY
Employed Residents 16 Years +
(1990)

	KEYS	York Cty	Maine	U.S.
Agriculture/Forestry/ Fisheries	2.5%	1.8%	2.6%	2.69%
Mining	0.1%	0.1%	0.1%	0.63%
Construction	8.4%	7.7%	7.3%	6.24%
Manufacturing	21.7%	26.0%	19.7%	17.69%
Transportation	3.0%	3.3%	3.4%	4.42%
Communications/ Public Utilities	2.2%	2.0%	2.2%	2.68%
Wholesale Trade	3.1%	3.1%	3.6%	4.38%
Retail Trade	18.9%	17.8%	18.4%	16.84%
Finance/Insurance/ Real Estate	7.2%	6.2%	5.6%	6.90%
Business and Repair Services	3.8%	3.2%	3.5%	4.82%
Personal Services	3.3%	3.5%	3.2%	3.17%
Entertainment/ Recreation	0.7%	0.9%	0.9%	1.41%
Health Services	6.6%	7.5%	9.2%	8.37%
Educational Services	7.9%	7.8%	9.4%	8.33%
Other Professional Services	5.5%	5.4%	6.2%	6.64%
Public Administration	5.2%	3.7%	4.4%	4.79%
TOTAL	100.0%	100.0%	100.0%	100.00%

SOURCE: U.S. Census, 1990.

EMPINDUS.WK1

Table 5

EMPLOYMENT RESIDENTS BY TYPE

Employed Residents 16 Years +
(1990)

Employment Type	KEYS	York Cty	Maine	U.S.
Private Salary/Wage	64.1%	74.9%	74.9%	77.4%
Local Government	7.1%	7.2%	7.4%	7.1%
State Government	2.4%	2.1%	4.9%	4.7%
Federal Government	14.2%	6.9%	3.3%	3.4%
Self-Employed	11.5%	8.5%	9.2%	7.0%
Unpaid Family Workers	0.6%	0.4%	0.4%	0.4%
Total	100.0%	100.0%	100.0%	100.0%

SOURCE: U.S. Census, 1990.

EMPTYTYPE.WK1

Table 6

EMPLOYMENT RESIDENTS BY TYPE
Employed Residents 16 Years +
(1990)

Employment Type	Kittery	Eliot	York	South Berwick	KEYS
Private Salary/Wage	57.8%	64.6%	66.8%	68.3%	64.1%
Local Government	6.4%	7.0%	7.9%	7.0%	7.1%
State Government	4.7%	1.2%	1.5%	1.7%	2.4%
Federal Government	18.5%	15.4%	10.7%	13.0%	14.2%
Self-Employed	12.4%	10.3%	12.2%	10.0%	11.5%
Unpaid Family Workers	0.2%	1.6%	0.9%	0.0%	0.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

SOURCE: U.S. Census, 1990.

EMPTYE.WK1

AID TO FAMILIES WITH DEPENDENT CHILDREN
KEYS (1990 & 1992)

	Kittery	Eliot	York	S.Berwick	KEYS	York Co.	Maine
1990							
No. of Cases	56	30	40	44	170	2,120	19,690
No. of Individuals	163	83	114	121	481	5,910	55,384
No. of Children	106	53	73	77	309	3,718	34,880
Individuals as a % of 1989 Pop.	1.7%	1.6%	1.2%	2.1%	1.6%	3.6%	4.5%
1992							
No. of Cases	70	39	61	62	232	2,607	22,925
No. of Individuals	203	125	174	183	685	7,503	65,843
No. of Children	124	79	107	120	430	4,676	41,198
Individuals as a % of 1989 Pop.	2.2%	2.3%	1.8%	3.1%	2.3%	4.6%	5.4%
Change 90-92							
No. of Cases	14	9	21	18	62	487	3,235
No. of Individuals	40	42	60	62	204	1,593	10,459

SOURCE: Maine Department of Human Services and towns.

KEYSGA.WK1

GENERAL ASSISTANCE

KEYS (1990-92)

	Kittery	Eliot	York	S.Berwick	KEYS	York Co.	Maine	
GENERAL ASSISTANCE	January 1990						Avg. Monthly	
						(FY 90)	(FY 90)	
	No. of Cases	31	n/a	28	21	80	1,383	8,487
	No. of Individuals	80	n/a	67	59	206	1,844	14,078
	Individuals as a % of 1989 Pop.	0.9%	n/a	0.7%	1.0%	0.7%	1.1%	1.1%
	January 1991						(FY 91)	(FY 91)
	No. of Cases	55	20	39	17	131	n/a	8,364
	No. of Individuals	138	65	78	53	334	n/a	16,612
	Individuals as a % of 1989 Pop.	1.5%	1.2%	0.8%	0.9%	1.1%	n/a	1.4%
	January 1992							
	No. of Cases	54	18	31	34	137	n/a	n/a
	No. of Individuals	132	59	67	94	352	n/a	n/a
Individuals as a % of 1989 Pop.	1.4%	1.1%	0.7%	1.6%	1.2%	n/a	n/a	

SOURCE: Maine Department of Human Services.

KEYSGA.WK1

Table 8

Table 9
ECONOMIC STRUCTURE OF KEYS REGION
1990

	Kittery LMA	Sanford LMA	Biddeford LMA	Portsmouth (NH Portion)	TOTAL
Manufacturing	16.33%	32.66%	22.45%	19.32%	20.30%
Construction	3.01%	4.34%	4.68%	3.47%	3.64%
TPU	1.51%	1.85%	2.23%	3.08%	2.59%
FIRE	1.51%	2.49%	5.06%	7.89%	5.95%
Retail Trade	21.14%	20.39%	23.65%	22.62%	22.35%
Wholesale Trade	0.69%	1.48%	2.78%	3.20%	2.57%
Services	13.56%	21.13%	28.80%	22.58%	21.86%
Hotels	4.20%	0.74%	2.09%	1.11%	1.76%
Personal	0.37%	0.83%	1.16%	1.11%	0.97%
Business	1.10%	1.57%	1.72%	3.91%	2.91%
Health	3.14%	8.95%	8.95%	7.16%	6.87%
Government	42.24%	15.77%	10.34%	17.84%	20.76%

SOURCE: 1992, Maine & New Hampshire Departments of Labor

Table 10

YORK COUNTY MANUFACTURING EMPLOYMENT

	1980	1985	1989
Food and Kindred Products	(20-99)	0	0
Textile Mill Products	1,935	1,728	1,237
Apparel	355	(250-499)	357
Lumber & Wood Products	411	428	438
Furniture	(250-499)	(250-499)	(250-499)
Paper Products	169	235	(20-99)
Printing and Publishing	333	748	788
Rubber and Plastics	2,176	2,011	1,119
Chemical Products	0	0	(100-249)
Leather and Footwear	2,219	(500-999)	1,117
Stone, Glass, and Clay	380	115	238
Fabricated Metals	2,046	1,449	1,353
Machinery, except electric	426	642	411
Electronic Equipment	2,256	2,158	2,614
Transportation Equip.	150	(1,000-2,499)	(2,500-4,999)
Instruments	(250-499)	(100-249)	(250-499)
Total	13,624	13,420	13,326

Source: U.S. County Business Patterns

Recent Economic Performance

INDUSTRY	Kittery LMA		Maine		Kittery		Maine	
	9/90	9/91	9/90	9/91	1990-1991 # change	1990-1991 % change	1990-1991 # change	1990-1991 % change
Manufacturing	4,040	4,148	102,700	97,200	108	2.7%	(5,500)	-5.4%
Construction	790	630	30,370	24,100	(160)	-20.3%	(6,270)	-20.6%
Retail	6,030	6,218	110,450	107,400	188	3.1%	(3,050)	-2.8%
Services	3,910	4,912	132,480	128,000	1,002	25.6%	(4,480)	-3.4%
Government	10,260	9,123	97,220	77,300	(1,137)	-11.1%	(19,920)	-20.5%
Federal	8,210	7,293	18,560	18,000	(917)	-11.2%	(560)	-3.0%
TOTAL	25,990	24,792	546,090	522,800	(1,198)	-4.6%	(23,290)	-4.3%

SOURCE: 1992, Maine Department of Labor

KEYS91.WK1

Table 11

Chapter 3

Defense Sector of the Regional Economy

While there are other communities throughout the U.S. that are likely to see a substantial decline in employment due to cutbacks in the U.S. defense sector, there are few communities and only several other states as vulnerable as the four KEYS towns and the state of Maine. As noted earlier, the towns of the KEYS region are highly dependent on direct U.S. government employment, primarily at the Naval Yard. However, the dependence on U.S. defense spending over the past decade went well beyond the direct employment at the Naval Yard and includes:

- 1. direct and indirect employment related to the Naval Yard -- local vendors and jobs tied to income of residents employed at the Yard;*
- 2. direct and indirect jobs losses related to the closing of Pease Air Force Base; and*
- 3. jobs at other defense contractors and subcontractors in York County and New Hampshire.*

The following section looks at each area of defense-dependency in detail.

3.1 The Role of the Portsmouth Naval Shipyard in the Regional Economy

The Portsmouth Naval Shipyard (PNSY), occupying 278 acres of land on Seavey Island in the Portsmouth Harbor, has been part of the southern Maine economy for almost two centuries. It is one of the oldest naval yards in the country and has played an historic role in the shipbuilding and submarine industries. Over its long history in the region, the shipyard has grown and contracted many times. At its peak during WWII there were about 24,500 people working or affiliated with the Yard. The Yard has also faced total closure in the past. In 1964, the Yard was designated for closure by the

Navy. However, through the active involvement of employees and local residents, the Save our Shipyard organization was formed and successfully fought the closure. The order was rescinded by President Nixon in 1971.

With changing U.S. defense needs and a very competitive environment amongst government and private entities involved in shipbuilding and repair, the future of the Shipyard is again questionable. What happens to the Shipyard over the next decade is the most critical economic issue facing the towns in the Seacoast region of Maine and New Hampshire. At present, the Shipyard is an economic power house in the local economy. Its closure would create a crisis from which it would be difficult to recover.

3.1.1 Current Facilities and Services

The Portsmouth Naval Yard performs a variety of functions for the U.S. Navy including repair and maintenance of submarines, research and development, and a federal supply source for other Naval installations. While it is best known for its submarine work, it is also engaged in planning and design (about 25 percent of the workforce is comprised of engineers and engineering technicians). Additionally, it procures a wide variety of submarine supplies for other naval yards. The stock and distribution operation has been in existence for several decades.

At present, the Naval Yard provides services to the Navy's "688 Los Angeles" class nuclear submarines, as well as servicing prior classes of subs, including the 594-, 637-, and 688-classes. The Portsmouth Yard is presently the only nuclear submarine refueling and overhauling facility operated on the East Coast by the U.S. government. While it no longer makes submarines, it does manufacture, repair, and test large and small components for submarines.

To perform its services, the Naval Yard has extensive facilities. PNSY has the capacity to work on six submarines at a time. It can work on any sub built prior to and including the 688-class. Housed on the base are about 200 buildings, including laboratories, machine shops, dry docks, warehouses, offices, housing, five restaurants, a post office, a daycare center, a health clinic, and a former federal prison. About one-fourth of the island is used for high-security work for the U.S. Navy.

Despite being one of the oldest naval yards in the country, PNSY is in excellent condition. The Navy has invested money and made substantial improvements to the Shipyard in the last two decades. In the last ten years, approximately \$100 million has been invested in various projects including a new engineering facility, a totally enclosed

and climate-controlled dry-dock for ship repairs, and a new stiff leg derrick capable of heavy lifting needed in performing refuelings. PNSY is considered to be the most modern facility for performing repairs and refuelings of the 688-class submarines.

The Yard boasts state-of-the-art facilities in modern design and manufacturing. Its advanced manufacturing facilities are equipped with computer-aided design, manufacturing and engineering (CAD/CAM/CAE). Other facilities available are an optical equipment repair facility, a transducer repair facility, an antenna repair facility, a calibration laboratory, combat systems services, and fire control equipment repair. Among its heavy industrial equipment are machines that can bend very thick steel for metal fabrications. The Yard is also extensively outfitted for doing all kinds of sophisticated installation work.

3.1.2 Current and Planned Workload

The Navy counts both attack submarines and missile launching submarines within its fleet. The Polaris, Poseidon, and, most recently, the Trident are the Navy's missile launching subs. The attack subs still in operation today include the 594-class; the 637-class; and the 688-class (or Los Angeles) submarine, considered the most modern attack submarine today. Construction of the 688 submarine began during the 1970s. Sixty-two ships in this class are supposed to be built. To date, about 50 have been built. The remaining 12 will be built during the next decade by Electric Boat and Newport News. The Seawolf, the newest class of attack submarine to be built, appears to be a victim of the changing defense environment. Only one Seawolf has been built, and the second, while ordered, may be the last to be built.

The workload at PNSY is currently driven by the maintenance and overhauling requirements that occur in the lifetime of the 688-class submarines. The lifespan of the 688-class sub is expected to be about 30 years. During its lifetime, it is expected that a 688 sub will come into port about four times for major overhauling and refueling. In the first 7.5 years of its life, the sub typically spends one year in port for technological modernization. Then at 15 years, it comes in for a major overhaul and refueling, which requires approximately two years in the shipyard. Another one-year modernization job occurs at about 22.5 years of its life span. Finally, at 30 years, the sub will spend a little less than a year in port for de-commissioning. In addition, subs undergo two-month checkups every couple of years. In all then, a typical 688-class sub spends about five out of 30 years in port for various maintenance and modernization.

Besides planning and design, the bulk of PNSY's submarine work has been in the maintenance, refueling, and modernization end of repairs. Deactivation is typically carried out in shipyards on the West Coast. Of the remaining maintenance and repair work required by class-688 subs, modernization is the most demanding and largest of the three areas of sub work carried out at the Portsmouth Naval Shipyard.

The sub building boom of the '50s to '70s is expected to produce maintenance and modernization work for yards like the PNSY through the turn of the century. During the next few years, PNSY's workload appears to be fairly steady. It begins its first refueling of a 688-class sub in October of 1992. In 1993, it has one depot modernization plan (DMP) scheduled. In 1994, it has both another refueling plus a conversion project of the USS Memphis into a research and development ship for the Navy. No new starts are yet planned for 1995, but the business office at the Portsmouth Yard anticipates a steady flow of refueling projects from 1996 through the year 2,000.

However, the future work stream at PNSY is no longer guaranteed. The Yard has recently begun feeling the pinch from competition by the private builders. These private yards are starting to compete for maintenance work on the 688-class submarines. Companies like Electric Boat, which is struggling to make up for losses in the construction of the Seawolf submarine, are beginning to compete with PNSY for the regular two-month maintenance jobs that most subs frequently require. Historically, two-month maintenance jobs comprised from 10-25 percent of the PNSY's annual business. In the past, PNSY used to enjoy a 95 percent success rate in bidding for these maintenance jobs. In just the last year, PNSY reports losing four out of five maintenance bids to private yards.

3.1.3 The Impacts on the Local Economy

Direct Employment of KEYS Residents

The Portsmouth Naval Shipyard is the second largest employer in the state of Maine after Bath Iron Works, and is by far the largest employer for the residents of the KEYS communities. Currently, the Yard employs about 6,400 persons, mostly civilians. Employment at the Naval Yard has expanded and contracted over the decades to respond to national defense needs. Employment reached a high during WWII with 24,050 employees. During the 1980s, average employment peaked at 8,875 in 1983 and has been steadily declining since 1989 (see Charts 14, 15, and 16).

Employment for residents of the KEYS towns is heavily dependent upon the Naval Yard. According to average annual data provided by the Shipyard, 1,687 of the Yard's 7,505 employees (or 22.5 percent) lived in one of the KEYS towns during 1991.

Likewise, the annual payroll in 1991 of these 1,687 workers was \$56.2 million. While dependency of towns in the Kittery LMA on employment at the Yard has declined from a high of about 43 percent of total jobs in 1984 to 29 percent in 1992, it still presents a substantial threat should the Naval Yard close in the near future. No other single employer in the area accounts for a similar share of all jobs.

Vendors to the Shipyard

Although PNSY purchases millions of dollars annually in supplies and services for the submarines and facilities on the island, only a small portion of those contracts go to private firms located in KEYS towns. The same may be said for the rest of York County and the metro Portsmouth area. Most of the large contracts go to firms outside the immediate area surrounding the Yard. The period examined was from June 1, 1991 to May 31, 1992. All contracts for the two largest purchasing divisions of the Yard were included in the analysis: Code 530, which purchases supplies for the submarines, and Code 495, which purchases supplies and services for the Yard's facilities.

During this period, firms located in the seacoast region won slightly more than 6 percent (or \$5,964,958) of all contracts (\$97.6 million) awarded by the Navy Yard. Altogether, only one percent (or \$981,085) went to firms located in southern Maine (south of Portland). Of total PNSY contracts, only 0.6 percent (or \$544,810) went to firms located in the four KEYS towns. Firms located in the Portsmouth, Newington, Dover, and Rochester area, received \$4,983,873 (or 5.1 percent) in contracts with the Navy Yard. The remaining \$91.6 million (or 94%) went to firms located outside the seacoast region. The reader should note that these figures do not capture all of the purchasing business generated by the Navy Yard. They exclude any sub-contracting to local firms by outside vendors. As well, some of the local prime contractors may sub-contact portions of their contracts to firms outside the area. (See Table 12.)

Indirect Impacts on Retailers Dependent on Workers' and Residents' Incomes

Local retail and service firms in KEYS towns depend in part upon the business generated by both the civilian and military personnel employed by PNSY and residing in the area. We mentioned above that in calendar year 1991, KEYS residents employed at PNSY collected \$56.2 million in wages and salaries. The town with the largest share of employees and wages was Kittery/Kittery Point, which accounted for 642 employees (or 38 percent of 1,687) and \$20.2 million in salaries and wages (or 36 percent). Section 4.2 analyzes the impacts that these wages and salaries are likely to have on the local economy (see Charts 17 and 18).

Mt. Auburn Associates surveyed 60 retail establishments in the KEYS communities to learn about their dependence on business generated by the Shipyard. Only one-third of the respondents indicated they were not at all adversely impacted by last year's workforce reduction, nor did they expect to be impacted by this year's staff cuts. Nearly 10 percent said that this year's cuts would hurt them a lot.

In addition, the Yard also pays salaries to a number of military personnel housed both on the island as well as in Kittery. In 1991, these military personnel earned \$18 million in wages and salaries. Although many of these personnel will spend their income on the base, for example in the commissary, they will probably spend a portion of their disposable income in other KEYS towns.

Fiscal and Service Impacts

The economic activity of the Yard generates a number of sources of revenue for local towns and for the state of Maine. The state of Maine collects approximately \$9.9 million in state income taxes from salaries paid to all PNSY civilian workers regardless of the state in which they live. If earnings are estimated from indirect and induced jobs linked to the Naval Yard, then that total state income tax volume rises to the \$14.1 million level (see Appendix D). These figures represent high-end estimates because they make conservative assumptions about filing status and deductions, and because the \$14.1 million assumes all jobs associated with the Yard are located in Maine where income taxes are paid to the state of Maine. In any event, any significant reduction in revenues of this magnitude could seriously affect the state's budget.

Another source of revenue that might be affected is local property taxes. Since a large number of the PNSY employees live in KEYS towns, we estimate that the towns collect approximately \$2.4 million in property taxes associated with these PNSY employees. If there were further substantial reductions at the Naval Yard, a considerable portion of this important tax base might become at risk. Because property taxes represent nearly 80 percent of each KEYS community's total budget, endangering this tax base presents a serious threat to fiscal stability.

The operations at the Yard generate other fiscal impacts for the town of Kittery especially. The Yard pays the town for sewage and water, and provides added fire service in kind to the town. During the last five quarters (through March 31, 1992), the Naval Yard was billed about \$56,000 on average for sewage disposal. During 1991, the Yard paid a total sewage bill of \$223,677 based on a portion of the fixed and operating costs of operating and maintaining the town's sewage treatment plant. In essence, the Naval Yard helps to lower rates for all other users (including a portion of users in Eliot) because it is such a large consumer.

The Portsmouth Naval Yard has the same cost reduction effect per unit on water consumption for users in the Kittery Water District, which covers portions of Eliot and York in addition to Kittery. PNSY used about 749 million gallons of water in calendar year 1991 and was billed \$1.1 million. PNSY is estimated to consume about 65-70 percent of the total flow in the water district.

Finally, the Yard cultivates a good neighbor relationship with Kittery by providing free backup fire protection to area residents. The Yard maintains a substantial fire protection crew to service the island and a couple hundred units owned by the Navy located in Kittery. In addition, the Navy contributes to the local community in other ways, including the Mutual Aid program, providing scholarships to local school children, and operating the Christmas Caravan, which delivers toys to underprivileged children in the area.

Impact on Housing Market

The Shipyard has a significant impact on the housing market in local towns. Aside from 200 Department of Defense-owned housing units for military employees located in Kittery, civilian employees of PNSY make up a large portion of all housing units in KEYS towns. Because employees make up 22.5 percent of the employed labor force in KEYS, we estimate that approximately 15-20 percent of all housing units in these towns are occupied by PNSY employees (the adjustment downward is made to account for households headed by unemployed persons, persons outside the labor force, and seasonal housing). The closure of the base, or significant layoffs would greatly exacerbate the present decline in the value of the local housing market.

Impact on the Skill Base

While information on the occupations of KEYS residents employed at the Naval Yard is not available, information is available for all PNSY employees. The occupational mix includes 38.8 percent white collar (including engineering, scientific, technicians, clerical, and managerial) and 61.2 percent blue collar trades (welders, machinists, electricians, etc.). The workforce is tremendously well-trained given the high level of sophistication required by advanced nuclear industrial processes.

Over the years, the Shipyard has played an important role in the economy of providing intensive training to non-college bound youth. The Yard's training and apprenticeship program worked with over 100 individuals every year in engineering, the trades, and environmental monitoring and controls. The apprenticeship program runs a

four-year program in 20 different trades. The net result has been to build the human capital base in the region. Workers trained at the Naval Yard are able to go on to other activities with a very high skill level. In some cases, workers have gone on to develop their own businesses, such as electricians, or have gone to other area firms, already with a great deal of training.

3.1.4 Impacts of Recent Layoffs

Local towns have recently had a taste of the impacts of reductions at the Naval Yard. In the last two years, 980 PNSY employees have been laid off. In 1991, 380 received severance notices and another 600 received pink slips this May. The first group in 1991 were employees with less seniority than those laid off in 1992. The average length of employment among the 1991 group was less than three years, whereas a sample survey done by Mt. Auburn Associates on the 1992 group found that the average length of employment was slightly more than seven years. A significant portion of this group occupied engineering and highly-skilled production jobs, whereas many of the workers laid off last year occupied more entry level occupations.

While a more detailed analysis of the economic and fiscal impacts from these staff reductions (and of the methodology used) is presented in section 4.2, we estimate that KEYS towns took a substantial hit for their share of lost jobs and wages. We estimate that 220 of the 980 lost jobs at PNSY were jobs held by KEYS residents. In annual payroll, KEYS towns lost approximately \$7.3 million in 1991 dollars. The full effects of these reductions in terms of indirect job losses in retail, out-migration, unemployment, income loss, and declining tax revenues remains to be seen. However, we can expect the length of unemployment and its ensuing costs to be greater because the overwhelming majority of civilian employees wish to remain in the area and face difficult chances for re-employment within similar industries and occupations.

Based on records kept by the Worker Assistance Center in Kittery, approximately 138 (or 36 percent) of the 380 workers laid off in 1991 had either found work, relocated, or left the workforce. Of the remaining 242, about 147 (or nearly 61 percent) have or still are actively using the Center's services. Out of that 147, 62 were using the Center only for job placement (42 percent), and the other 85 (58 percent) were using job training services provided through the Center. Of 55 people who have completed training or placement, 41 (75 percent) were placed in jobs by February 1992, nearly one year later. Of all active (147) users of the Center, that 41 represents nearly 28 percent. On average, re-employed workers experienced a loss in hourly wage.

3.1.5 Strengths and Weaknesses Relative to the Competition

With current and future defense cutbacks anticipated, the basic dilemma facing people who make and repair submarines is how to adjust to meeting new and reduced defense spending priorities. An overcapacity of shipyards exists today given the changes and reductions in the size of the Navy's fleet. As the workload for new ships and submarines changes, the competition among shipyards is heating up. The world of submarines is split up in several ways: by geography (Atlantic versus Pacific), by type of service (shipbuilding versus repair), and by ownership (public versus private). The future of the Portsmouth Naval Shipyard depends in part upon federal defense priorities and on its ability to exploit its competitive strengths over those of its competitors.

At present, the Navy operates a total of six shipyards equipped for handling nuclear powered ships. The largest of these are Norfolk in Portsmouth, Virginia; Bremerton, Washington; and Charleston, South Carolina. Each of these yards is capable of handling ships as large as aircraft carriers. The Navy operates two yards on each coast that are devoted to servicing submarines -- Mare Island in Vallejo, California, and the Portsmouth Naval Shipyard. The sixth shipyard is Pearl Harbor, which is strategically located in the far Pacific. All six yards are capable of submarine repairs.

In addition to these six naval yards, there are two private shipyards -- Electric Boat in Groton, Connecticut and Newport News Shipbuilding in Newport News, Virginia. These two companies build ships for the Navy, including the 688-class submarine, which is the mainstay of PNSY's current repair workload. The private companies, like Electric Boat in Groton, Connecticut, have large cash reserves capable of sustaining them in times of transition. Electric Boat employs nearly 22,000 and Newport News employs about 25,000, which raises the political stakes should the federal government have to make choices of places to cut back shipbuilding and repair capacity.

PNSY is facing its greatest competition right now from Electric Boat, which is building both the 688-class and the next class of nuclear subs, the Seawolf. Because construction of new subs has slowed, Electric Boat has seen its workload significantly decline. It is now trying to capture more of the maintenance work that is currently going to PNSY. Electric Boat recently appeared before Congress making the case for assigning it more repair work. With the overall reduction in work, there is surplus capacity that will affect either the naval yards, the private companies like Electric Boat, or both.

Should the Navy decide to maintain just one public yard on the East Coast for submarine repair, another potential competitor is Charleston, South Carolina. Charleston also repairs submarines and is about the same size as PNSY. But according to

knowledgeable sources, facilities lag behind those of PNSY, productivity is down, and it has no experience working on 688-class submarines. It works exclusively on 630-class and older subs. However, Charleston is designated home port, which helps guarantee a certain amount of repair work for the fleet based there.

In facing a very competitive environment, the Portsmouth Naval Yard has some clear competitive strengths:

- ♦ the PNSY is a highly-specialized submarine yard. It is considered to be the best at repairing class-688 subs. Evidence of this claim exists in the record PNSY holds for the lowest cost and shortest duration for a depot modernization job on the SSN-706 in 1991. Typically, this job requires 12 months, but PNSY completed the work in just nine months. This figure was compared against similar jobs done at other yards in the country;
- ♦ PNSY is specially equipped for handling maintenance work. It is costly to switch from constructing subs to repairing them. While a yard that is equipped and staffed to build subs can make the transition to doing maintenance work, making that transition is costly. One engineer we spoke to said that overhaul work is more complicated than construction and requires a totally different mix of trades. For example, to build a sub requires nearly ten times as many metal workers as it takes to overhaul. Overhauling involves more internal work, and refueling takes special equipment;
- ♦ PNSY's facilities are modern and in good repair. In the past five years, the Navy has made significant investments in the modernization of the facilities including new dry dock and derrick;
- ♦ the Naval Yard has a greater impact on a relatively rural community where it is by far the largest employer, than in the more urban environments of its competitors.

On the other hand, there are some competitive disadvantages that may work against the Naval Yard. These include:

- ♦ the Naval Yard is not diversified enough. The other yards are able to handle submarines and other types of ships;

- ♦ the U.S. has to maintain the submarine building capacity, even during a period when no new subs are coming on-line. This could give strength to the argument to shift repair work to builders.

3.1.6 The Future

U.S. Military Spending

PNSY's future is integrally tied to realignments in world security and growing pressure to reduce the federal deficit. Spending for national defense is undergoing major reorientation and reduction. Since the Reagan defense buildup peaked in 1986, spending plans have already declined 35 percent according to the Defense Budget Project in Washington. Defense budgets are expected to decline another 15 percent in real terms between FY92 and FY97 based on the administration's revised spending plan. Already the FY93 request for \$281 billion is down in real terms by 4.5 percent from the proposed FY92 budget.

The cuts being made represent a shift in strategic defense planning. Strategies have changed in the areas of R&D, procurement, and base forces. Last year (FY92), the focus was on cutting back current-generation procurement programs and on reducing active military personnel from 2.07 million in FY90 to 1.6 million in FY97. This year (FY93), the emphasis is on terminating next-generation procurement programs, such as the Seawolf (SSN-21) attack submarine built by Electric Boat.

Current plans for the Navy show reductions in active duty military personnel from 583,000 in 1990 to 501,000 (14 percent) by 1997. Navy research and development is expected to decline in current dollars from \$9.5 billion in FY90 to \$8.5 billion in FY93 (or a 10.5 percent reduction). R&D will continue to receive emphasis as a component of the new acquisition strategy to ensure U.S. technological advantage. So too, modification and upgrading of existing weapon systems will likely be a priority in leaner budget times.

The reductions in procurement of existing-generation and cancellation of next-generation obviously reduces the overall size of the Naval fleet. This reduction affects PNSY in two ways: first, there are fewer numbers of ships needing repair; and, secondly, there are more yards competing for maintenance work with PNSY (such as Electric Boat). There is one next-generation submarine on the drawing board, the Centurion, which if it goes into production might generate work for PNSY in the distant future. However, it is likely to be a small class of submarine in number and size, designed to need less maintenance.

The Base Closure Process

The procedure for selecting and finalizing base closures is different today than it was two decades ago when closure decisions tended to be highly politicized and often arbitrary. The new process is designed to ensure a timely, independent, and fair outcome. Current selection criteria weigh the military value of the installation, the costs versus savings of closing or realigning the installation, and the impacts on local communities and the environment.

That process begins with the Secretary of Defense, who submits a list of proposed base closures and realignments to the Defense Base Closure and Realignment Commission, an eight member independent body appointed by the President. The Commission reviews that list to see that it conforms with the force-structure plan and selection criteria developed by the Department of Defense and Congress. The force-structure plan is developed before the base closure and realignment process begins, and it describes the national security needs for a six year period. The Commission may recommend changes to the closure and realignment list when they find it deviates substantially from the force-structure plan.

When the Commission has finalized the list, it forwards it to the President who must sign or veto the list, but cannot alter it. Finally, Congress must accept or reject the list after presidential approval. Only the Commission may revise the list if the President disapproves of it in whole or in part. The first list was released in 1991. The process is scheduled to repeat again in 1993 and 1995. Unless the statutes are changed, the process and criteria for choosing bases to close should remain the same.

If there is a decision to close the PNSY, it will probably come some time in the next one to three years. Once the closure decision is made, the quickest the Yard could be shut down would probably be five years between the time of the decision and final sale and conveyance. Existing orders would have to be filled and future planned work reassigned to other yards. An economic and environmental impact assessment would have to be done, along with local community organizing and planning for reuse and redevelopment.

Scenarios for the Future

According to most knowledgeable sources, the future of the Portsmouth Naval Shipyard could take one of several paths. The optimistic scenario is the Yard remains open indefinitely employing the same number it presently employs, 6,400. Another

scenario is that it remains open indefinitely but is forced to make further reductions in size, operating more in the 5,000 employee range. A third scenario is that the Naval Yard is closed within the next five to 10 years and redeveloped for new uses.

In order for the Yard to continue operating at the 6,400 or greater employee level would require a commitment from the Pentagon to maintain and use the facility to its potential. Whether those uses would be entirely public, or perhaps a combination of public and private contracts, would be an important factor in determining employment levels. Any steps to allow private activities to occur on the Yard, would require legislative approval.

Sources familiar with PNSY operations say that operations are most likely to stabilize at about the 5,000 employee level. However, this figure depends upon what aspects of current operation remain in tact. Certain research and industrial activities could continue at the Yard under a skeletal management structure, while other management and support functions might not. For example, it is possible that the Navy might decide to consolidate purchasing or payroll operations of several different installations. If these functions are carried on elsewhere, then the workforce at PNSY could drop substantially. However, maintaining and operating the industrial infrastructure would require a critical mass of workers. These structural changes would not only affect total employment, but occupational mix. Overall reduction might affect all occupations proportionately, or might occur within certain occupations if certain management divisions such as payroll are relocated.

Conclusion

The fate of the KEYS communities and the state of Maine is integrally tied to the future of the Portsmouth Naval Shipyard given its important fiscal, economic, and service impacts on the region. For generations, the livelihood of many businesses and residents has depended upon the jobs and economic activity generated by the Shipyard's presence in these communities. Although it does not pay taxes directly, the Shipyard's employees help pay a significant share of the state's income tax base and the towns' property tax base. As the largest industrial operation in the area, the Shipyard is the most important consumer of water and sewer services. All of these factors indicate the serious impact that further reductions, or the closing of the Yard, would have on the region's towns and on the state.

It is very difficult to assess the future of the Portsmouth Naval Shipyard at this time. There are knowledgeable people who express both optimism and skepticism that the Yard will remain open into the 21st Century. The changes underway in the world

and in national policy make predictions guesses at best. If the Yard remains open, it will come because of strategic requirements combined with top notch performance by the Yard's staff and equipment. If the Yard closes, new opportunities and challenges face the former employees and residents of KEYS. There are successful base redevelopment efforts to examine, such as that of Boston's Charlestown Naval Shipyard, which now includes advanced medical laboratories, government offices, and private housing.

3.2 Economic Impacts Related to the Closing of Pease Air Force Base

Pease Air Force Base, located between Newington and Portsmouth, New Hampshire and just a very short distance from the four KEYS towns, was a stable U.S. Air Force facility for 35 years. The Base was constructed to host two bomb wings and to support the Strategic Air Command mission of nuclear deterrence. The Base had 3.8 million square feet in facility space and the longest runway in the Northeast.

In 1988, much of the Seacoast region was taken by surprise when Pease was placed on the U.S. Department of Defense base closure list. After a number of years of planning and impact studies, the Base was officially closed in March of 1991.

The towns in the KEYS communities were not included in much of the planning work associated with both the closure and the plans for the Base's future. However, like many of the towns in New Hampshire, the KEYS towns were very concerned about the impact that the Pease closing would have on local economic conditions, and are now very interested in how plans for the reuse of Pease will affect the economic well-being of their residents.

3.2.1 Role of Pease in the Regional Economy

At full operation, Pease Air Force Base employed over 4,500 military and civilian workers and had a base-related population of about 10,700. Moreover, the annual payroll of the base was estimated to be about \$110 million. Given these numbers, it is not surprising that the announcement of its closing led to concerns in the local economy.

However, it is important to note that Pease Air Force Base played a very different role in the local economy than does the Portsmouth Naval Yard for a number of reasons:

- ◆ most of the employees associated with the Base were military personnel,
not civilian;

- ♦ a large number of the civilian jobs on the Base were held by spouses of military personnel. Of the 1,256 civilian jobs associated with the Base, about 500 were held by spouses of military personnel;
- ♦ a large number of personnel lived on base;
- ♦ the civilian workforce at Pease was not highly skilled or paid. Eighty percent of the civilian workforce earned less than \$30,000;
- ♦ a large proportion of the personal consumption expenditures of the military personnel was spent on base.

Given these differences, one can not compare the impact that the Pease closing had on the Seacoast region with the depth and breadth of the impacts that layoffs at the Naval Yard have had, and could potentially have on the region.

3.2.2 Projected Regional Economic Impacts

Prior to its closing, the Air Force provided estimates on the impact that Pease had on the local economy. According to its estimates, Pease accounted directly for about \$107 million a year in the local economy. Using a national multiplier, the Air Force estimated that the Base stimulated about \$341 million worth of economic activity each year. RKG Associates, a Durham-based consulting firm working for the Pease Development Authority (PDA), undertook its own estimate of impacts. According to RKG, the Air Force figures were overblown. Since the Air Force did not spend much money locally, the multiplier impact was much lower than estimated. According to RKG, the total impact of Pease on the local economy was about \$100 million a year.

While the impact of the Pease closing was mitigated by a number of factors, those examining the impacts did identify far-reaching and extensive negative economic effects of the closing. These impacts included:

1. *A large number of civilians lost their jobs. There was a total of 1,088 civilian jobs associated with the Base.*
2. *In addition to the housing owned and rented by civilians working at the Base, a number of the military personnel lived off-base. An impact study by RKG estimated that about \$7.6 million was spent on allowance for*

quarters -- primarily for rentals. It was estimated that about 252 owners and 707 renters would move upon Base closure -- representing about 1.1 percent of the MSA housing inventory.

3. *Local businesses were affected by the loss in direct spending by the Base.* Local spending by Pease in the regional economy amounted to \$35.2 million in FY 1989. RKG estimated that employment associated with that local spending using RIMS model totaled 432 employees. The loss of these 432 jobs was estimated to increase the unemployment rate in the three counties by .2 percent.
4. *Many local businesses were affected by the reduction in consumer expenditures in the local economy due to the movement of a large number of military personnel and the loss of payroll of the civilian employees.* A portion of the payroll of the military personnel and the civilian employees was spent in the local economy. RKG estimated that about \$68 million in local consumption would be lost. This translated into an additional 1,267 jobs.

RKG's study on impacts summarized the worst case scenario as being: total annual output in all of the regional industries can be expected to decline by nearly \$102 million. Associated with the decline in output is a loss of over \$57.6 million in regional earnings. Job losses total 2,787, which broken down includes 432 jobs lost due to the reduction in Base spending in the local economy, 1,088 direct civilian jobs at the Base, and 1,267 jobs that are sustained by the off-base personal consumption expenditure supported by the Base payroll.

However, RKG also noted a number of mitigating factors that were likely to reduce the magnitude of the impacts. These mitigating factors included the fact that a number of the jobs being lost were currently held by military personnel working part-time or by their spouses. A second mitigating factor was that the closing of the Base exchange would lead to a redirection of some consumption into the local economy. Given these mitigated factors, RKG estimated the net employment impact to be 1,307 jobs, which would lead to an increase in the local unemployment rate of about .6 percent.

Since the actual closing, a number of observers in the region seem to agree that the impact on housing has been the most visible impact of the closure. The overall decline in the real estate market in New England coincided with the closing of Pease.

While the higher than normal vacancy rates in the region and the declining value of real estate can not all be attributed to the Pease closing, there is general agreement that the closing exacerbated an already volatile market. According to local realtors:

- ♦ property values in the region declined by between 30 percent and 50 percent in those communities with large numbers of Pease-related residents. According to current MLS statistics, the average price has dropped from about \$200,000 in 1988 to about \$150,000 today;
- ♦ sales declined by about 75 percent since the closing;
- ♦ HUD buyouts helped prevent further decline in the real estate market in the region.

Other than housing, the only other impact that most people point to has been the foreclosure of the Newington Mall and the general retail environment surrounding the Base. The Newington Mall, which opened in the late 1970s, has seen a steady out-migration of retailers since the closing. However, much of this has been due to competition with the Fox Run Mall and the general economic environment. Again, it is difficult to separate out the impacts related to the recession from those that are specifically due to the Pease closing.

While it is clear that the closing came at a difficult time in the regional economy, and resulted in job and income losses to area residents, there seems to be consensus amongst those interviewed that the closing did not have anywhere near the impact anticipated.

3.2.3 Impacts on the Towns of Kittery, Eliot, York, and South Berwick

Clearly, most of the economic impact associated with the closing of Pease hit the surrounding towns of Dover, Rochester, Portsmouth, and Newmarket hardest. These towns had the largest contingents of off-base personnel and their families. Of active duty personnel living off-base about 24 percent lived in Dover, 20 percent in Portsmouth, nine percent in Rochester. These communities experienced loss of a large number of residents -- with related impacts on school enrollment and town revenues. As just one example, Portsmouth had to adjust its school system to the loss of over 20 percent of its students.

Fiscally, those communities in close proximity to the Base were also most at risk. Not only were they likely to see the largest out-migration and the greatest vacancy rates, but they also experienced other impacts. For example, Newington had relied upon Pease Air Force personnel for a large portion of its volunteer fire department.

This is not to say that there was no impact on KEYS communities. About four percent of the military personnel lived in the Berwicks and four percent in Kittery. In addition, four percent of Pease civilian employees lived in the Berwicks and three percent in Kittery. In all, the Pease closing left about 180 residents of the four KEYS towns without work. There has been no follow-up on these residents, so it is unclear how many of them left the community, how many found alternative employment, and how many remained unemployed for a long period. Indirect employment losses in southern Maine were probably minimal since only a small proportion of the spending related to Pease was in the KEYS communities.

The overall sense has been that the local communities have not been particularly hard hit by the Pease closing, but that the closing further eroded an already depressed housing market. In terms of the housing market, realtors said most of the declines were felt in Kittery, Eliot, and the Berwicks. In South Berwick and Eliot, selling prices for single family homes declined from approximately \$120,000 to about \$95,000. In Kittery, the average selling price is down to about \$80,000. Properties in York tended to be owned by officers and sold relatively quickly.

3.2.4 Plans for the Future

At this point, the most significant aspect of the Pease closing for the four towns in the KEYS region is the plans for its redevelopment. The type and level of economic activity developed at Pease over the next decade will probably be key to the re-employment prospects of Shipyard workers. The redevelopment plans have, however, had somewhat of a rocky beginning.

Since its closing was announced in 1988, Pease has been the focus of very heated debates within the region. Environmentalists have been at odds with those who have supported aggressive redevelopment plans and communities such as Newington, the most seriously impacted by the plans, have had differences with other local towns. While plans for redevelopment are proceeding, they are being affected by continuing controversy, most notably by a lawsuit filed by the Conservation Law Foundation. This lawsuit charges that the Air Force, the EPA, and the FAA failed to develop necessary emission control plans related to potential air pollution.

Since 1990, the planning for the Base has been overseen by the Pease Development Authority (PDA). The New Hampshire legislature provide PDA with relatively broad powers and with \$50 million in bonding authority. This bonding authority has supplemented significant federal, state, and local resources associated with the closing.

The most notable activity of PDA has been negotiations with Deutsche Airbus North America. This firm is considering developing a maintenance facility at the Base that could employ up to 2,000 workers. The Seacoast region is competing with a number of other locations for this facility. One of the concerns of the company has been that there are not enough skilled mechanics in the region. As a result, PDA placed ads in newspapers nationwide and received 225 responses. It does not appear that PDA considered how skilled, laid-off Naval Yard workers could be retrained to meet the company's needs. The German company has recently gone through a restructuring, resulting in a delay in its location decision.

So far, the PDA has successfully attracted two enterprises to Pease:

1. *Business Express, a commuter airline, is locating a maintenance facility at Pease.* According to their agreement, the company will employ 200 people within the first year, 300 jobs by the end of the second year, and 400 jobs by the end of third year. According to the company, maintenance personnel are paid between \$25,000 and \$30,000 annually.
2. *A federal State Department visa and passport processing center will be located at Pease.* It is projected that there will be about 400 jobs associated with the location of a federal visa center. Few of these jobs will be permanent, civil service jobs and most will pay between only \$7 and \$9 an hour.

The PDA has hired a firm, JBF, to develop a marketing plan for Pease. The focus of its efforts is aviation-oriented. It is attempting to attract regional airlines, aviation overhaul and maintenance facilities, priority parcel and air cargo services, and aircraft and component manufacturing. There are also attempts at attracting a hotel and conference center associated with the airport-related activities. In terms of non-aviation uses, most of the interest in the Base has come from businesses seeking warehousing and distribution space. The site is considered attractive for this use due to its good transportation networks (port, rail, and highway).

In reviewing the plans for Pease it is important to note that the lawsuit by the Conservation Law Foundation can have an impact on its future development. Secondly, PDA is facing enormous competition from similarly closed bases around the county. Many communities are attempting to teach the same aviation-oriented market. Significant state and local incentives are being offered to companies willing to locate aviation-related uses in closed military bases.

3.3 Other Defense Contractors in York County

In addition to the direct and indirect jobs linked to large Department of Defense facilities, there are additional manufacturing jobs in the region that are dependent upon U.S. Department of Defense spending. This additional employment is tied to:

1. *Department of Defense prime contractors located in the region;*
2. *companies that contract with Department of Defense prime contractors for a certain proportion of their business.*

Through the efforts of the Maine State Planning Office, which has been completing research on the state's dependence on defense spending as part of the Governor's Task Force on Defense and the Maine Economy, information is available on other prime contractors and subcontractors in York County. Unfortunately, less information is available on companies in New Hampshire that either contract directly with the Department of Defense or subcontract. Mt. Auburn Associates was also able to identify a number of subcontractors in Maine and New Hampshire through its survey process.

Mt. Auburn Associates completed a survey of the major defense contractors and subcontracts in the immediate region. We have identified 30 manufacturing companies in the York County/Portsmouth area that do some level of defense contracting. *We interviewed 24, or 80 percent, of these companies. Our estimates are that in this economic region there are approximately 1,400 additional defense-related manufacturing jobs.*

Of these companies, very few are dependent on the defense industry for over 50 percent of their sales. We identified six companies that were highly defense-dependent. Of these, only two -- Saco Defense and Fiber Materials -- employ a relatively large number of residents.

Saco Defense, headquartered in Saco, manufactures machine guns and grenade launchers. The company went through a major downsizing about two years ago with a reduction of about 200 jobs. The company has been relatively stable since. The future of this company is tied to its efforts to increase the international sales of its products and to develop new markets tied to its capacity as a precision machine shop.

The other major defense prime contractor in the county is Fiber Materials, a Biddeford-based company that produces highly-technical materials for use in missiles and rockets. This privately-held company, owned by an entrepreneur from Massachusetts, has been seriously affected by decreases in U.S. defense spending. In particular, the company lost many jobs as a result of the cancellation of the Trident missile. While the company has somewhat stabilized, it still faces serious challenges in developing new commercial products in light of further reduction in its primary markets. The company is seeking to develop commercial applications for its products, and has been working with the University of Southern Maine on some specific product ideas.

In addition to these firms that are largely defense-dependent, there are other defense prime contractors in the region whose defense work is a relatively small proportion of total sales. These companies include Pratt and Whitney, Sprague, and Simplex Wire and Cable. There are also a relatively large number of other companies in the region that do a portion of their work for other companies that are contracting with the Department of Defense. Subcontracting firms are usually small businesses and lack the marketing and engineering skills that larger companies have to pursue diversification work. These firms are often the last brought on and the first dropped in defense work. In the KEYS region, seven out of the 16 companies responding to the Mt. Auburn survey noted that they did some contracting or subcontracting work with the U.S. Department of Defense.

While the loss of defense dollars is a concern of many of these firms, the Mt. Auburn survey found that many of the subcontractors expected additional cuts in defense spending to have a minor or moderate impact on their business. This view was held for a number of reasons:

- ♦ a number of companies have already downsized. Companies began to feel the impact of declining defense spending two and three years ago. A number of the companies laid off workers at that time and have now stabilized;
- ♦ a few companies have already diversified. A number of the contractors and subcontractors reported that they are currently much less dependent on defense funds than they were a few years ago. U.S. Felt in Sanford is a good example of this diversification. A company official reports that up until last year, it was about 99 percent defense-dependent. After losing a major defense contract, it undertook a diversification strategy that has so far worked. Today, it reports that only five

percent of sales are defense-related, and it has preserved all 16 jobs from last year. Simplex Wire and Cable also reports having reduced its defense dependency over the past five years;

- ♦ a couple of companies reported that their military sales have actually increased, and they are optimistic about retaining or expanding their market share. Companies that make very specialized products or are dependent on research and development dollars have actually seen some improvement in sales. Moreover, with contractions in the industry, their competition has been reduced;
- ♦ a number of companies have been actively pursuing new markets and new products. They are hopeful that these efforts will help them adapt to changing market conditions.

Dependence on Navy Yard Employment *% of Employed Residents Working At Yard*

Percentage of Employed Residents At Yard

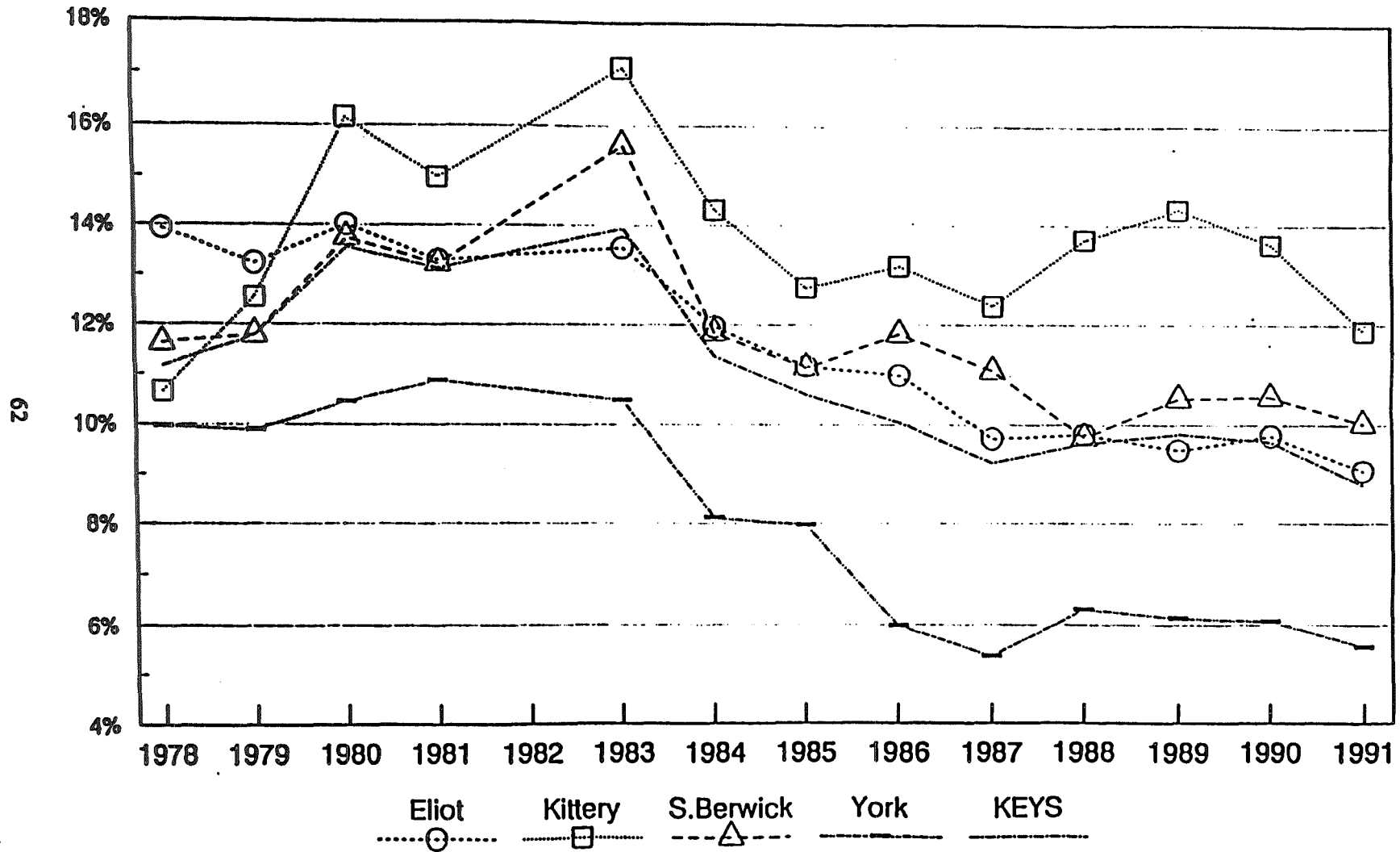
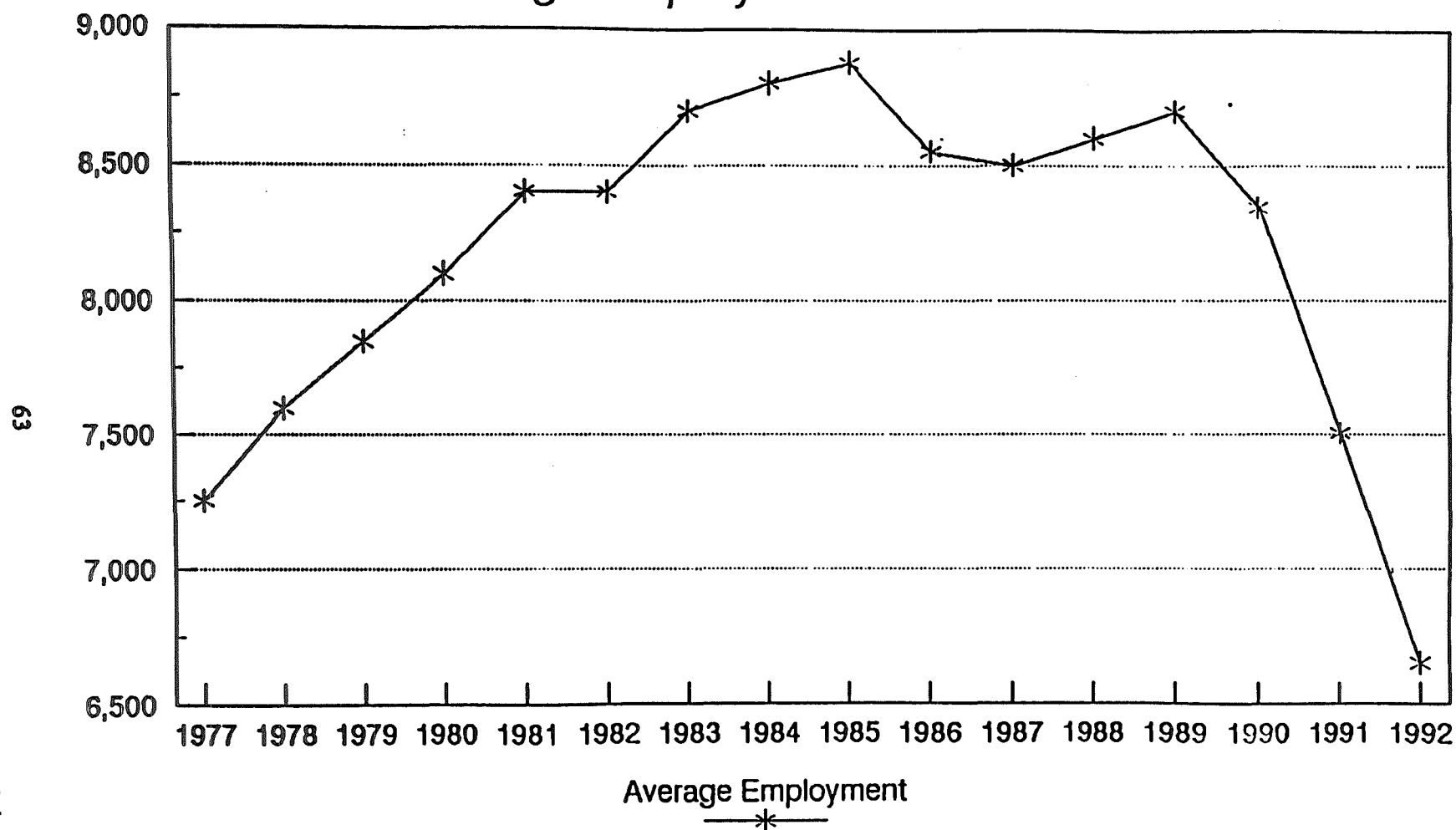


Chart 14

SOURCE: 1991, Maine Department of Labor & Seacoast Shipyard Association

Portsmouth Naval Shipyard

Average Employment: 1977-1992



1992 is an estimate

SOURCE: 1992, Mt. Auburn Associates

Portsmouth Naval Shipyard

Jobs in Maine: 1977-1992

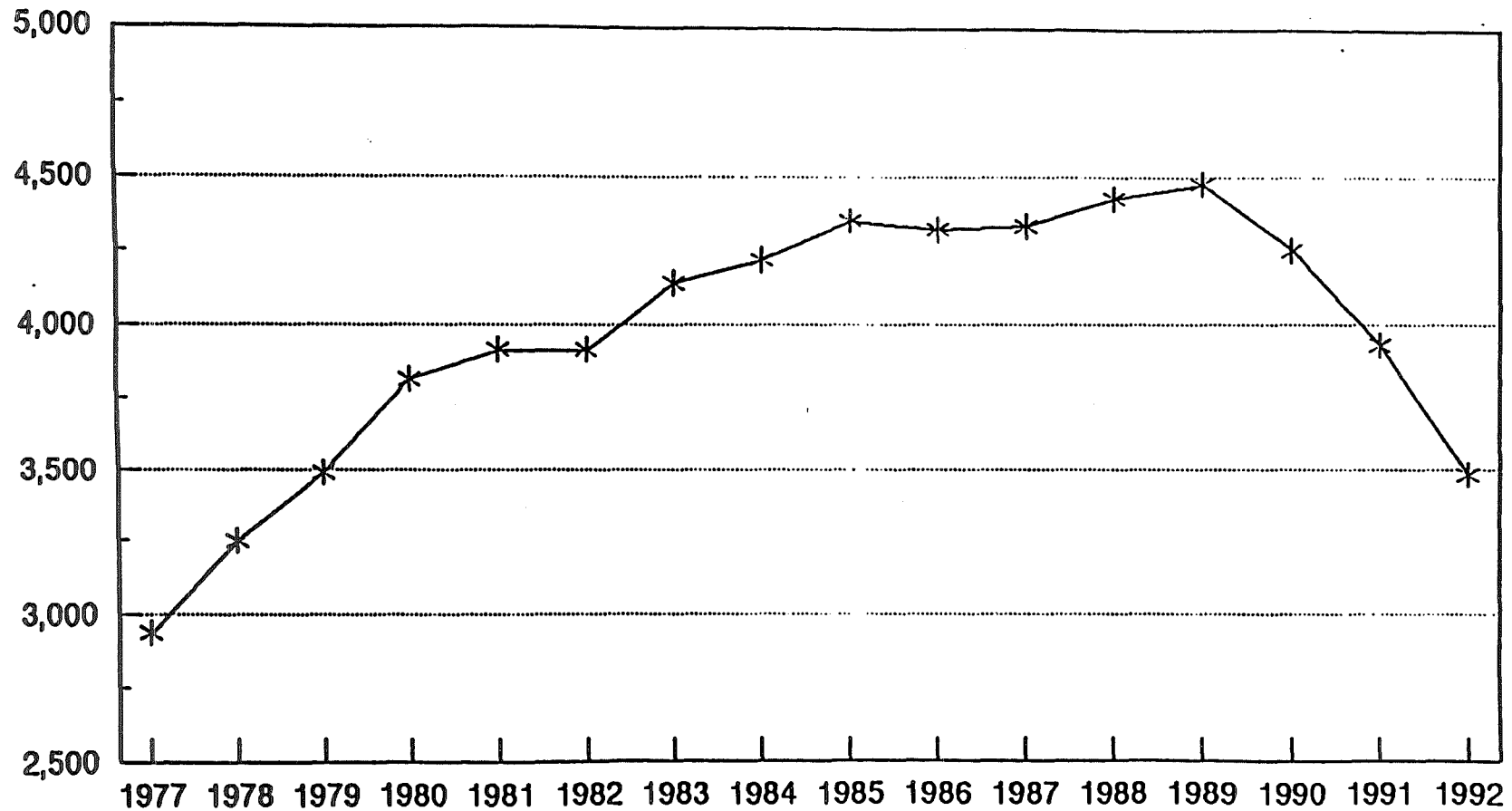


Chart 16

Maine

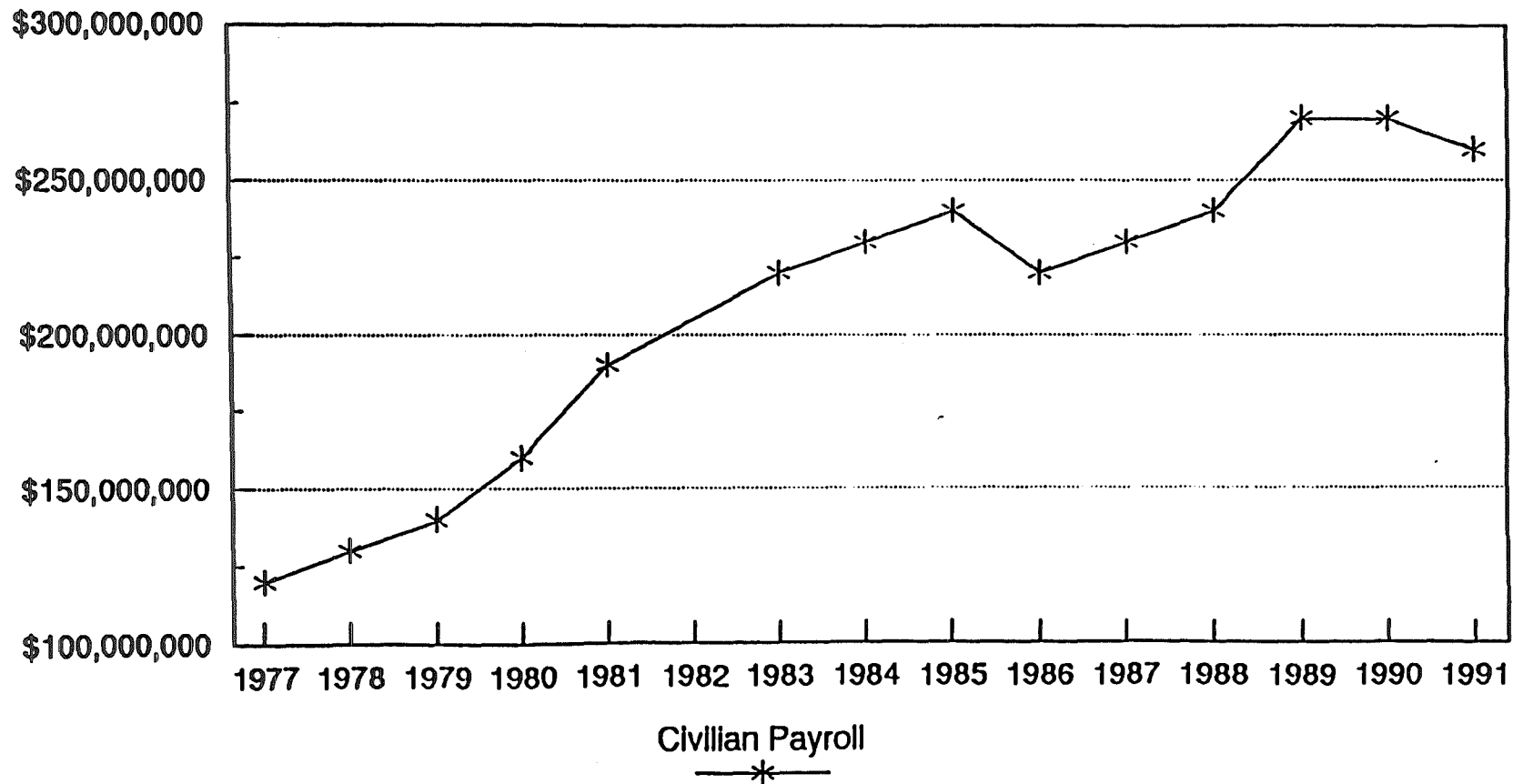
—*—

1992 is an estimate

SOURCE: 1991, Seacoast
Shipyard Assoc.

Civilian Payroll 1977-1991

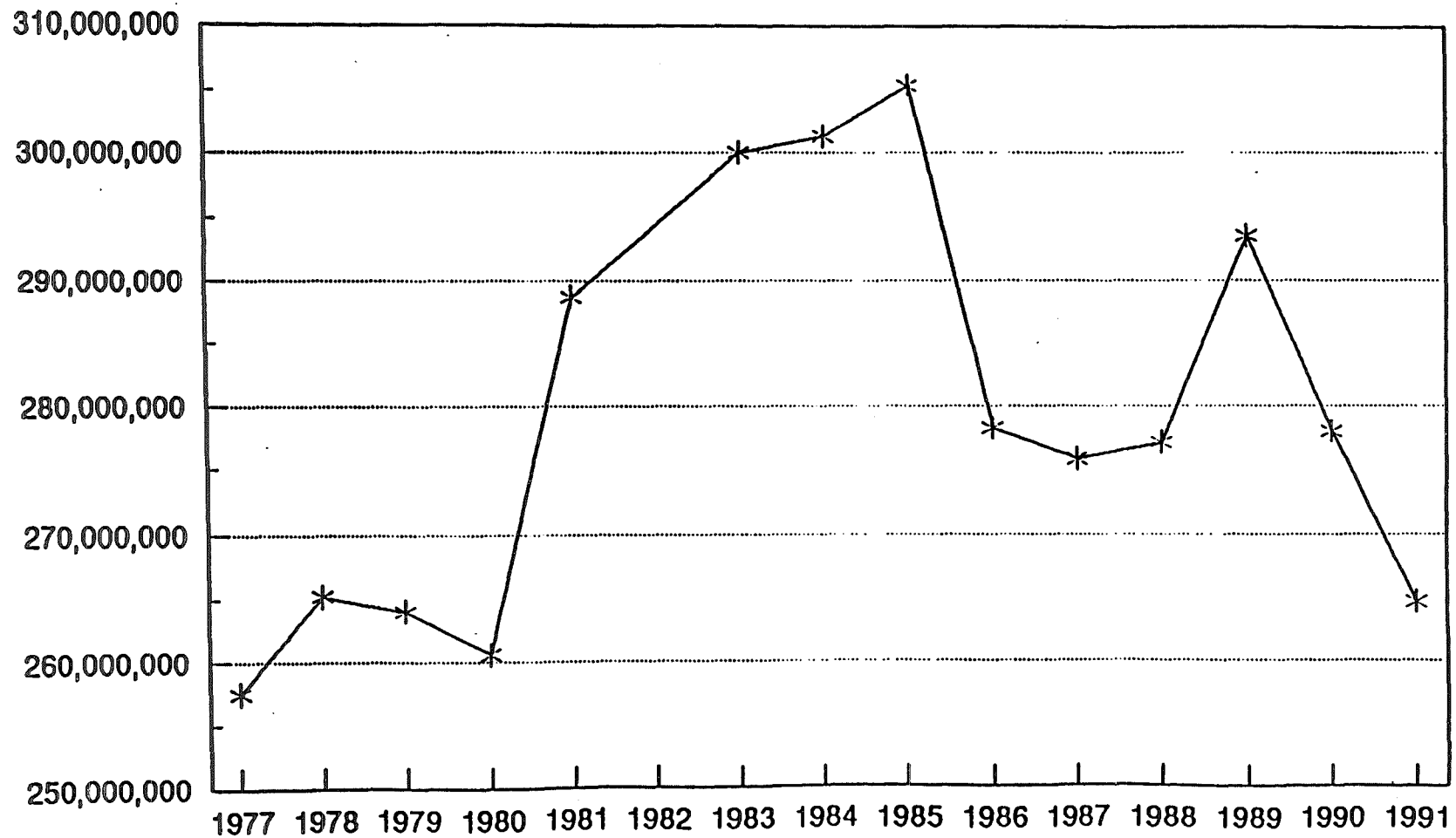
Portsmouth Naval Shipyard
Actual Dollars



SOURCE: 1991, Seacoast
Shipyard Assoc.

Civilian Payroll 1977-1991

Portsmouth Naval Shipyard
1991 \$



SOURCE: 1991, Seacoast
Shipyard Assoc.

Table 12

PORTSMOUTH NAVAL SHIPYARD

Purchases by Region

June 1, 1991 – May 31, 1992

IN DOLLARS

REGION	SUBMARINES CODE 530	SHIPYARD CODE 495	CODES 530+495	PERCENT OF PNSY TOTAL
MAINE	n/a	\$1,833,730	\$1,833,730	4.4%
KEYS	\$374,691	\$170,119	\$544,810	0.6%
Other S. Maine	\$232,815	\$203,460	\$436,275	0.4%
NEW HAMPSHIRE	n/a	\$6,972,493	\$6,972,493	16.8%
Portsmouth Metro	\$3,166,498	\$1,817,375	\$4,983,873	5.1%
OTHER	\$52,328,695	\$32,700,777	\$85,029,472	87.1%
GRAND TOTAL	\$56,102,699	\$41,507,000	\$97,609,699	100.0%

SOURCE: Portsmouth Naval Shipyard, 1992.

NOTE: Code 530 purchases supplies for the submarines; Code 495 purchases supplies and services for general operations and facilities. Portsmouth Metro includes Portsmouth, Newington, Dover, and Rochester, NH. The information above only indicates the contracts going to prime contractors located in the area. There may be prime contractors located outside the region who sub-contract to firms in the region, or there may be local prime contractors who farm out portions of their prime contracts to firms outside the region.

VENDORS.WK1

Chapter 4

Conclusions

4.1 The Impacts of Defense-related Employment Loss: A Review of the Literature

The literature on the impact of defense-related layoffs provides insights into the adjustment process of both workers and communities. There are some general conclusions that can be reached about the potential impact of layoffs in the defense industry:

- ♦ Clerical workers have low skill and education levels, which usually work against people when job hunting. However, because clerical skills used in a defense company are the same as clerical skills in a civilian firm, these workers do not have the problem of having skills that are only defense-related;
- ♦ The professional workers, scientists, and engineers obviously have high education and skill levels, but their reemployment prospects will depend on each person's ability to transfer skills to non-defense work. This may require retraining geared towards the industrial sectors that will have growing needs for engineers and scientists;
- ♦ Production workers, both skilled and less-skilled, face the problem of declining jobs in manufacturing nationwide. Most production occupations found in defense firms are also found in civilian manufacturing firms. However, retraining may be needed for production workers to be qualified to perform non-defense production work. Highly-skilled workers may particularly be in need of retraining that expands their skills beyond their defense specializations. Low-skilled workers may need skills upgrading, as low-skilled manufacturing jobs can be difficult to find, depending on the region.

Studies of dislocated workers from other manufacturing industries also provide insights into understanding how production workers fare when looking for reemployment. *Many of the studies find the same conclusions: minorities, women, older workers, and less educated workers have harder times finding jobs, and when they do, they make less money than they did before.*

Studies of the impact that defense cuts have on regions are also relevant to the KEYS communities. These studies have found that the impact of the defense cuts on regions depends on more than just the number of jobs being affected. The overall dependency of the region on defense-related employment exacerbates the effects of the cutbacks. In addition, the reemployability of laid-off workers, hopefully without a wage cut, rests on the health of the regional or local economy.

Studies of dislocated workers in different economic situations have concluded:

- ♦ each additional percentage point of unemployment added one to four weeks of joblessness;¹
 - ♦ male workers who are already likely to suffer large losses will be even more severely hurt if unemployment is high in their local labor market. Studies of unemployment insurance claimants and displaced steel workers show that the loss for a given year can double if unemployment is about one-third greater than the national average;²
 - ♦ older workers who lost their jobs between 1966 and 1969, a period of relatively low unemployment, generally did not experience a wage loss. However, older workers who lost their jobs in a period of higher unemployment, between 1969 and 1978, experienced an average wage loss of six percent on their next jobs;³
-

¹Task Force on Economic Adjustment and Worker Dislocation, Economic Adjustment and Worker Dislocation in a Competitive Society, (Report of the Secretary of Labor's Task Force on Economic Adjustment and Worker Dislocation, Washington, D.C., December 1986) p.15

²Louis Jacobson and Janet Thomason, Earnings Loss Due to Displacement, (The Public Research Institute, Center for Naval Analyses, Alexandria, Virginia, August 1979) p.2

³David Shapiro and Steven H. Sandell, Age Discrimination and Labor Market Problems of Displaced Older Male Workers, (Research Report Series: National Commission for Employment Policy, Washington, D.C., June 1983) p.21

- ♦ adverse economic conditions are shown to contribute significantly to permanent withdrawal from the labor market;⁴
- ♦ high area unemployment rates increase the expected duration of joblessness, particularly for blue-collar and female workers.⁵

Even in areas with low unemployment, ex-defense workers can experience hardships in finding relevant reemployment. This is particularly true if most of the available jobs are in the service, and not the manufacturing, sector. This situation would require more extensive retraining for workers and probably greater wage reductions. In many areas, defense production was offsetting the loss of other manufacturing jobs -- leaving little for ex-defense workers to move into.

Thus, to estimate the likely short- and long-term implications of the recent Naval Yard layoffs and further employment reductions in other defense-related firms and the Naval Yard, one must consider the occupational mix of those losing jobs and the regional economic conditions that the laid-off workers will be facing. According to preliminary estimates, about 87 percent of those separated in 1992 were production workers. Of these workers, 36 percent held high-skilled occupations (such as pipefitters, mechanics, electricians, and machinists) while the remaining 51 percent held semi-skilled occupations (such as technicians, maintenance personnel, and operators). Another five percent were engineers and about nine percent were in various office occupations (see Table 13).

4.2 Short-term Impacts Related to Layoffs at the Naval Yard

The layoffs implemented at the Naval Yard over the past two years have led to the loss of a total of 980 direct jobs in the region. These layoffs have taken place during a period of overall economic decline. As a result, reemployment options have been scarce, particularly for jobs that matched the skill and wage levels of those lost.

⁴Steven H. Sandell and David Shapiro, Economic Conditions, Job Loss, and Induced Retirement, (National Commission for Employment Policy, Washington, D.C., May 1987) p.2

⁵Paul Swaim and Michael Podgursky, "Displacement and Unemployment," in John Addison (ed.) Job Displacement: Consequences and Implications for Policy, (Detroit, Michigan, Wayne State University Press, 1990), Chapter 5

Employees who have lost their jobs have had to choose between moving, commuting very long distances for comparable work, being underemployed (working at jobs that are below their skill levels), participating in the informal economy (logging, fishing, or other non-reported work), starting their own business, or accepting a long period of unemployment. Very few workers can expect to find comparable jobs in the region over the short term.

In considering how the recent layoffs will impact the four KEYS towns, it is important to look at the other areas of vulnerability and opportunity in the economy and the characteristics of those that are losing their jobs.

4.2.1 Additional Vulnerabilities

In addition to the conditions at the Naval Yard, there are other areas of vulnerability in the local economy:

- ♦ other defense contractors and subcontractors in the region are likely to lose jobs with further declines in U.S. defense spending. Unless the prime contractors in the region take active steps towards diversification and market development, the region is likely to see additional job losses. In addition, as prime contractors lose their work, the tendency has been to do previously subcontracted work in-house. This is likely to lead to increased vulnerability in the subcontractors in the region;
- ♦ a few local manufacturers are unstable, and have recently announced layoffs or temporary closings. In particular, there are a number of companies that provide parts to the automotive industry, including two of the largest companies in the area -- Davidson Interior Trims and Heidelberg Harris. These companies are being affected by the poor conditions in the U.S. auto industry. In addition, there were layoffs at G.E. and talk of the restructuring of Sprague.

4.2.2 Opportunities in the Economy

There are a number of positive developments that are likely to affect the short-term economic opportunities of residents of the KEYS communities. These opportunities include:

- ♦ the region is home to Cabletron in Rochester, one of fastest growing companies in the U.S. This company provides over 1,000 quality jobs in the region and has continued expectations for expansion. It showed a 46 percent rate of profit in the last quarter and there are expectations of continued job creation.
- ♦ the retail industry in Kittery shows continued strength. Some of the retailers have ventured beyond the local market, creating "headquarter" type job opportunities in addition to retail sales jobs. Weathervane is a good example;
- ♦ Pratt and Whitney appears to be relatively stable and primarily in the commercial sector;
- ♦ immediate job opportunities are being created as a result of the Pease redevelopment. The potential location of Deutsche Airbus and other longer range plans could create jobs of comparable skills to those being lost at the Naval Yard.

4.2.3 Implications

Other than an immediate decision to locate Deutsche Airbus at Pease, the layoffs at the Naval Yard, along with further reductions at other local manufacturers, will make comparable reemployment for laid-off residents of KEYS difficult. The most dramatic indication of the lack of comparable job opportunities was the lack of any private sector participation at the recently held job fair for the laid-off workers. With reductions nationwide among defense installations, the opportunity for relocating with the Department of Defense through the Priority Placement Program is not expected to be as great as in the past when sometimes as many as one-third of laid-off workers could find new defense jobs.

In this section, and Section 4.3 to follow, we present our analysis of the economic impacts of reductions at the Portsmouth Naval Shipyard. We adopted the employment and earnings multipliers from an economic impact study of the Philadelphia Naval Base and Shipyard. The study was done in the fall of 1990 by the Pennsylvania Economy League for the commonwealth of Pennsylvania and the state of New Jersey. Multipliers show the effect that job losses from the Naval Yard have on rest of the regional economy because of the associated income that these employees no longer have to spend. The loss of this spending results in additional jobs and earnings losses, or the multiplier effect (see Appendices).

In the analysis, a distinction is made between direct, indirect, and induced jobs and earnings. Direct employment and earnings are those jobs and salaries paid by the Portsmouth Naval Shipyard. Indirect employment and earnings are those jobs and salaries associated with companies that do business with the Yard, for example as suppliers, but that are not direct PNSY employees. Finally, the decreased spending due to both direct and indirect job losses creates yet a third effect, the induced effect, on industries in the region. Each of the indirect and induced job and earnings multipliers are expressed as a coefficient. In the Philadelphia study, technical coefficients were found to be: (.16) for indirect employment, (.92) for induced employment, (.09) for indirect earnings, and (.67) induced earnings.

The figures given in our analysis of the Portsmouth Shipyard represent a high-end estimate of what job and earning losses might be. The Philadelphia multipliers probably exaggerate the backward linkages for Portsmouth, because the Philadelphia economy is larger and more diversified than Portsmouth, and because the Philadelphia model assumed that all naval yard contracting went to firms in the area. According to purchasing data provided by the Portsmouth Naval Shipyard, it appears that only 6.7 percent goes to firms in southern Maine or greater Portsmouth, New Hampshire. This figure would suggest that indirect and induced losses might be smaller than those estimated by using the Philadelphia multipliers.

Given the recent 1992 workforce reduction of 600 employees, the next two years are likely to be tough for these individuals and their families, as well as having an impact on the local economy. We estimate the impacts of the May 1992 layoffs on the KEYS communities and state of Maine to be as follows:

1. *Using the KEYS proportion of CY91 total PNSY employment, we estimate that approximately 135 of the 600 workers live in one of the four KEYS towns. Using an indirect and induced employment multiplier found in a 1990 study of the Philadelphia Naval Shipyard, another 166 (non-PNSY) jobs in KEYS towns (or a total of 301) could be affected by the 1992 workforce reduction. Estimates of wages lost due to layoffs were again based on payroll portions for KEYS towns to total CY91 PNSY payroll, and on earnings multipliers from another base closing study. Direct wage loss is estimated to be \$4.5 million, with indirect and induced wage loss another \$3.6 million for a total of \$8.1 million (see Appendix A).*

2. *As an indication of the ripple effects in the local economy, local retailers said they would feel the effects of further reductions. Nearly 10 percent of retail establishments responding to Mt. Auburn's survey expected the current cuts in PNSY workforce to impact their business a lot. Another 28 percent thought they would experience some impact.*
3. *In larger communities, the effect of 135 people joining the ranks of unemployed is not always visible in the statistics, but in KEYS communities the effect is clearly seen. In 1991, the total number of unemployed members of the workforce was 584. With the new layoffs, that number rises to 719, or a 23 percent change in number. Overall, the unemployment rate in 1991 averaged 3.1 percent. With the new layoffs, that rate could be expected to rise as high as 3.8 percent (see Appendix B).*
4. *Evidence from the Displaced Worker Survey provides insight into the percentages of workers likely to migrate, leave the workforce, the duration of unemployment, and wage loss expected from finding new employment. This survey is based on respondents to the Current Population Surveys conducted in 1984, 1986, and 1988 by the U.S. Bureau of the Census, and provides a good indication on the experiences of displaced workers. Migration out of the Kittery LMA is likely to be greater than the national average found in these studies because of the opportunities for new Department of Defense jobs through the Priority Placement Program. Out the 135, we estimate that anywhere from 20 (15 percent) to 41 (30 percent) workers might relocate. Using average household size from the 1990 Census, we estimate population loss might range from 51 to 101 persons from 1990 population levels in KEYS. One year after being laid off, the number of unemployed workers out of that 135 could range between 15 and 20 (see Appendix C).*
5. *Indirect and induced job losses due to declines in consumption tied to payroll and to business generated by Naval Yard contracts could be heavy. Using employment multipliers found in a recent study of the Philadelphia Naval Base and Shipyard, we estimate indirect job loss to be 22 and induced job loss to be 144. Total indirect and induced job losses would be 166. Similarly, indirect wage loss would be \$0.4 million and induced wage loss would be \$3.3 million for a total of \$3.7 million. The businesses that are likely to experience these layoffs the*

greatest are the restaurants, convenience stores, and other retail and service establishments located close to the Yard in Kittery (see Appendix A).

6. *Fiscal impacts on state and local revenues could be great.* Maine could lose between \$926,400 (direct employment effect in 1991 dollars) and \$1.3 million (total employment effect in 1991 dollars) in income taxes paid to the state. In addition, an estimated \$220,564 in property tax revenues collected by the four KEYS towns could be placed at risk. The likelihood of further tax delinquencies and foreclosures in a climate where those problems are already increasing raises a serious fiscal concern for KEYS communities. The state's revenue stream could receive a double blow on top of the reductions at PNSY if Loring Air Force Base is closed anytime soon (see Appendix D).
7. *At the same time, expenditures for General Assistance will increase.* Once federal and state benefits expire, workers laid off from PNSY will likely apply for GA. We estimate that expenditures for GA due to May 1992 layoffs at PNSY in these towns could increase by as much as 40 percent, or a total of nearly \$120,000. Kittery faces the greatest increase of approximately 80 percent or another \$55,000, while the other towns could expect between 15-20 percent increases (see Appendix E).
8. *Housing values could continue their recent declines.* Local realtors already indicate that real estate values are down by about 20-25 percent in KEYS communities (although less so in York) due to the recession and closing of Pease. They expressed fear that further reductions would seriously hamper the market. In addition, the rental market in Kittery has been in decline recently. Many old homes have been converted to small apartments over the years to accommodate the demand generated by Shipyard employees. In the event of closure, rental values could fall further if the demand for this type of housing substantially diminishes.

4.3. Longer-term Impacts

The most optimistic scenario puts total Naval Yard employment at 6,400 civilians over the decade. The most pessimistic assumes that the Yard will be placed on the next closure list. Some people argue there is an in-between scenario in which the Yard

shrinks to an employment level of about 5,000. Two long-term scenarios are considered below: one, employment is cut back to 5,000 employees; and, two, the Yard is totally shut down.

In the first scenario in which the workforce is reduced from its current level of about 6,400 employees to 5,000 employees (for a total loss of 1,400 civilian jobs), we assumed that layoffs occur proportionately across occupations and towns. It is possible that functions at the Yard will change such that further layoffs might affect some occupations more than others. Our baseline for determining allocation of job losses and payroll by town was the calendar year 1991 data supplied to us by the PNSY through the Seacoast Shipyard Association.

The range of impacts from downsizing at PNSY to 5,000 employees would likely include:

- ♦ *Out of a total of 1,400 civilian lost jobs, 734 would be lost to Maine residents, of which 315 would affect KEYS residents. Associated indirect and induced job losses could total another 1,718 jobs in Maine, of which 386 would occur in KEYS towns. Total job loss in KEYS associated with this reduction would total 702 jobs. Wage losses would also be substantial. In KEYS communities, we estimate \$10.5 million in direct wages would be lost, and another \$8.6 million lost from indirect and induced wages. For Maine, direct wages lost represents a total loss of \$26.2 million, and indirect and induced wage losses represents an additional loss of \$21.5 million. Based on its retail establishment survey, Mt. Auburn found that about two percent of respondents in KEYS expected to go out of business if further reductions occur. Another 21 percent expected they would have to contract and layoff employees in anticipation of decreased sales (see Appendix A).*
- ♦ *The impact of these reductions on existing local unemployment would be substantial. Assuming the worst case scenario that all of the 315 former PNSY employees living in KEYS towns did not find new jobs or leave the area, then the numbers of locally unemployed would swell from the 1991 level by nearly 54 percent (from 584 to 899 persons). The unemployment rate would rise from 3.1 percent to 4.8 percent. These numbers would be even higher if indirect and induced job losses are included. Twelve months from the date of layoff, 15-25 percent of the remaining workers actively seeking work would probably still be unemployed (see Appendix B).*

- ♦ *The average length of unemployment is likely to be 12 to 18 months, given the slow growth in new jobs in the region. Furthermore, close to half of the reemployed workers are likely to be working in different occupations from their last occupation at the Naval Yard. Nationally, the trend is for skilled trades like welding, fabrication, machining to decline in the U.S. As a result, a large proportion of these workers will need retraining.*
- ♦ *KEYS communities could lose between 118 and 236 people due to worker migration out of KEYS communities. The state of Maine might lose as many as 600 persons. The demand for a variety of government programs and services would be affected by the loss of population. In particular, KEYS towns would experience a decrease in school enrollments and be faced with supporting the school system on a smaller tax base (see Appendix C).*
- ♦ *The fiscal impacts of lost revenues and added expenditures would greatly alter the balance sheets of local towns and state government. Maine would lose between as little as \$2.2 million in income tax due to direct job losses and as much as \$3.1 million in income taxes if direct, indirect, and induced wages are counted. In KEYS communities, nearly \$518,672 in property taxes associated with direct job losses could be at risk of delinquency. That figure represents 1.7 percent of the FY91 property tax revenues (source of about 80 percent of KEYS town budgets) (see Appendix D).*
- ♦ *Expenditures for General Assistance would be expected to increase dramatically, by as much as nearly \$200,000 (or 66 percent) for all four towns. Again, Kittery would be hardest hit with increases expected of up to 125 percent. These figures could, in fact, underestimate the growth in GA expenditures because of other factors. First of all, figures were only calculated for direct job losses. Secondly, local GA administrators say that dollars expended per case could increase as well as the average duration on GA per case because of other deteriorating economic conditions (see Appendix E).*

A decision to close the Naval Yard would probably come some time in the next one to three years. If it is selected for closure, the period from the time of the decision to closure, would likely take four to five years. The workforce would shrink during

that period due to phase-out of work and attrition. The following analysis examines only the negative impacts of closure, and excludes any positive economic impacts that would result from the redevelopment of the Naval Yard. Obviously, redevelopment would offset some of the losses described.

Complete closure of the Naval Yard would likely have the following impacts on the regional economy:

- ♦ *Total job losses would be heavy. A total loss of 14,254 civilian jobs (6,400 direct, 1,024 indirect, and 6,830 induced) would occur in the region from current levels. In Maine, the numbers would be 7,470 total civilian jobs (3,354 direct, 536 indirect, and 3,580 induced). For KEYS communities, total civilian jobs lost could reach 3,207 of which 1,440 would be direct, 230 indirect, and 1,537 induced. In Mt. Auburn's survey of retail establishments, nearly 10 percent of the respondents indicated they would probably go out of business if the Naval Yard closed. Another 25 percent said that they would have to contract and lay off employees. These figures probably underestimate the indirect effects because survey respondents were heavily tourist-oriented, a side of the retail sector that we would expect to be more immune to the effects of closure than the non-tourist retail side (see Appendix A).*
- ♦ *Wage losses would be equally staggering. Total wages from direct, indirect, and induced losses would be \$446 million in the region. About \$236 million in lost wages would affect Maine residents and towns, of which about \$95 million would occur in KEYS communities. In calculating the wage losses resulting from full closure, military payroll was included on the assumption that a significant portion of military income is spent and recycled in the local economy (see Appendix A).*
- ♦ *The effect of direct job losses would place KEYS communities in a new era of double digit unemployment. Unemployment rates in KEYS communities averaged less than 3.7 percent in 1991. However, assuming the worst case scenario in which none of the laid-off workers finds replacement work, then full closure would raise the combined unemployment rate of all four towns to 10.8 percent. The impact would be heaviest on Kittery where the rate might reach as high as 17.8 percent. While these rates exaggerate the number of persons who would probably be counted as unemployed in the actual event of closure, it also excludes indirect and induced job losses that would again raise the numbers (see Appendix B).*

- ♦ *Population might decline in KEYS towns due to out-migration of workers and their families by as much as 1,080 persons. Again, Kittery would stand to lose the largest number of people (410), with the other towns losing on average about 200 people. Maine could lose as many as 2,616 people. Again, these figures were calculated using only the direct job losses (see Appendix C).*
- ♦ *The fiscal impacts of closure would be daunting for local towns considering the potential loss in revenues and increases in expenditures. An estimated \$2.4 million in property taxes could be at risk if the Yard closes. This figure represents about eight percent of all property tax revenues from KEYS FY91 budgets (ranging from a high of 9.8 percent for South Berwick to a low of 3.3 percent for York). While property taxes must be paid regardless of whether the property is occupied, the likelihood of diminishing values combined with greater delinquency would probably result in a decrease in revenues. Conversations with local realtors confirmed impressions that the housing market would be seriously crippled (see Appendix D).*
- ♦ *Water rates would likely double for local customers, as a result of losing the largest customer to the Kittery Water District (assuming no redevelopment of the Yard took place to replace that consumption). Other local fiscal impacts would hit Kittery especially hard as well. The town would stand to lose the backup fire protection service offered for free by the Naval Yard.*
- ♦ *Maine would lose \$9.9 million in personal income taxes if all 6,400 jobs were lost at the Shipyard, and \$14.1 million if the associated indirect and induced jobs are added to the calculation (this assumes that all jobs are located in Maine where Maine state income taxes are collected) (see Appendix D).*
- ♦ *The likely effect on General Assistance one year after the layoffs occurred would increase the annual average case load and expenditures for KEYS towns over FY91 levels by as much as 230 percent (or nearly \$700,000). Under the worst case scenario, each town's GA budget could reach the following levels: for Kittery, \$220,000 (up about 350 percent); for Eliot, about \$145,000 (up 230 percent); for York, about \$120,000 (up 160 percent); and for South Berwick, \$165,000 (up 170 percent). Again,*

estimates would have to be revised upward to reflect indirect and induced job losses, or to account for potential increases in average expenditures per case or duration of dependency due to a deteriorating economy (see Appendix E).

- ♦ *Local schools would be seriously impacted.* Kittery reports that 42 percent (525) of its total enrollment (1,250) is comprised of children whose parents work at the Yard. Assuming a worst case scenario in which half of the families move outside the region, then the school system could lose about 260 students (or 20 percent of total enrollment), which would probably force the school district to reduce budget and staff. The same impacts would likely be felt in the Eliot/South Berwick school system where about 20 percent (493) of total enrollment (2,465) is tied to the Naval Yard. Data on York was not available at time of this writing. There is federal impact aid for school systems hit by large defense cutbacks. Kittery is already receiving \$170,000/year in aid. However, that money runs out in 1994.

Facing the closure of a major shipyard like Portsmouth -- should it occur -- is a daunting task for any state. To confront it in a region that has just lost another major base (Pease) makes the situation in southern Maine even more challenging. However, the closure of Pease is not the only factor complicating the region's loss of defense spending. Maine could be confronted with the situation in which two of its bases might be closed: Loring Air Force Base and Portsmouth Naval Shipyard. In the unfortunate event that a dual closing were to occur, Maine would find itself overwhelmed with the challenge of meeting a huge increase in the demand for unemployment services, job training, and replacing lost jobs and revenues.

4.4 Longer-term Opportunities

In looking at the future scenarios, it is important to examine other longer-term opportunities in the regional economy. If no actions are taken, then it is likely that the layoffs and/or closing of the Shipyard will devastate the local economy. However, even in the worst case scenario, the region has time to plan. The closing will not take place overnight. There are a number of opportunities, which if fully exploited regionally, may work to mitigate the impacts of even the worst case scenario.

Regional opportunities include:

- ♦ **Local KEYS manufacturers expect to increase their level of employment by about five percent over the next three years, meaning there could be another 225 new manufacturing jobs by 1995.**
- ♦ **If expectations related to the redevelopment of Pease are realized, there could be 800-12,000 jobs in the region over the next decade.**
- ♦ **Development plans related to the Port of Portsmouth could open up economic opportunities in the region over the next decade.**
- ♦ **A plan to develop rail service between Portland and Boston could provide long-term opportunities for the Seacoast economy.**
- ♦ **While the Boston region remains in the depth of a recession, the area maintains an intellectual infrastructure that is internationally competitive. New areas of strength in supercomputing, biotechnology, advanced materials, and environment technologies can in the long run lead to related economic opportunities spreading into the southern Maine region.**
- ♦ **The workforce of the region is highly-skilled, and increasingly the key to successfully competing internationally is tied to the skills of workers. The workers who are being laid off at the Naval Yard have a full range of occupational skills relevant to high-value-added manufacturers. This could be a key marketing strength of the region.**
- ♦ **Entrepreneurial activity and interest among residents is high.**
- ♦ **Growth continues in the tourism and retail sectors of the regional economy.**

The challenge now facing the towns of Kittery, Eliot, York, and South Berwick is to initiate a process now that will lead to a more diversified economy. Whether or not the worst case scenario comes to pass, it is in the interest of the region to develop a strategy to take advantage of local opportunities and build an economic base that could withstand further reductions at the Naval Yard.

Chapter 5

Resources

5.1 Resource Needs for Economic Adjustment

The types of resources that are needed to ease the adjustment process of those laid off by the Shipyard are:

1. *Worker Assistance.* The fundamental current need is to provide direct assistance to workers and their families who have lost or may lose their jobs. This assistance includes:
 - ♦ good job search assistance resources;
 - ♦ retraining, where applicable;
 - ♦ social and human service support for long-term unemployed.
2. *Community Assistance.* The communities in the region need to plan for the future and develop and implement an adjustment process that will mitigate any potential further job losses. The types of resources needed include:
 - ♦ the willingness to work together and individually to take steps to strengthen and diversify the local economy;
 - ♦ economic development staff and institutional capacity;
 - ♦ state level economic development programs including training, infrastructure, and financing.
3. *Business Assistance.* Businesses that are dependent on the Naval Yard or on other Department of Defense funding require resources to help them adapt to the changing market. The types of resources they need include:

- ♦ financing;
- ♦ management assistance;
- ♦ technology transfer activities;
- ♦ workforce retraining.

5.2 Existing State and Local Resources

A review of current local and state resources provides the KEYS towns with information on where programs are available and where there are gaps that require further program development at the state and local levels.

Current state resources:

1. *General Economic Development Programs.* Most of the economic development programs in Maine are established and implemented by the Department of Economic and Community Development. The Department's Office of Business Development provides financial, management, production, marketing and technical assistance to Maine businesses. They operate "Business Answers," an information service for business. The Office of Community Development operates the Small Cities CDBG Program, the Community Industrial Building Program (funds for municipalities for building and marketing speculative industrial buildings), the Job Opportunity Zone Program (a demonstration project that responds to disparities in economic opportunities by targeting resources and additional incentives to businesses located in four designated zones), and the Economic Corridors Action Grants Program (provides infrastructure grants to stimulate private investment along specific corridors of economic significance). Development Opportunity Funds provide gap financing to business.
2. *State Training Programs.* The state operates a number of training and retraining programs, primarily using Federal JTPA funds. These activities include: The Enterprise Job Fund, which trains potential employees with customized, industry, or company-specific programs;

ASPIRE, which provides additional support for people in retraining and education and is geared to the AFDC-dependent population; the STAR program, which is strategic training for accelerated reemployment and provides unemployed and displaced workers with training and retraining opportunities; the Rapid Employment and Training Initiative Team (RETI), which helps businesses upgrade their workforce because of technological change and helps workers in their transition.

3. *Defense Diversification Programs.* Recognizing the importance that the defense industry plays in the Maine economy, the Governor's Task Force on Defense and the Maine Economy was created. Research related to this effort is being undertaken by the Maine State Planning Office. It was through this project that the current KEYS effort was funded. Along with KEYS, other defense-dependent regions in Maine have received grants for developing adjustment strategies. Two members of this Task Force come from Southern Maine.

A first phase report of the statewide effort has been completed. A second phase of the project will lead to specific program recommendations for specific state programs to address the diversification and adjustment process.

4. *State Business Financing Programs.* The state of Maine has a comprehensive set of business financing tools available to companies looking for a full range of financing. These include:

- ♦ Finance Authority of Maine (FAME). FAME is a quasi-public authority whose mission is to assist business development and create new employment opportunities throughout Maine. FAME operates a variety of business financing programs that meet a broad range of financing needs. It also operates programs for agricultural and higher education finance.
- ♦ The Maine Capital Network. The purpose of the Maine Capital Network is to match potential investors with Maine businesses. FAME maintains a confidential data base of investors and business investment opportunities and matches them based on stated interests and requirements.

- ♦ **Pine Tree Partnership Grant Program.** Operated by FAME, the program provides grants to small businesses for research and development activities and the introduction of advanced technology and services.
 - ♦ **Maine Capital Corporation.** Maine Capital Corporation is an SBA-licensed Small Business Investment Company (SBIC), capitalized by private investors who received a 50 percent state tax credit against personal and corporate income taxes. The corporation provides equity and convertible debt to all Maine-based small businesses, including both startups and existing businesses; preference for producers of manufactured and agricultural products, service providers, and innovative distributors of goods and services.
 - ♦ **Fame provides Pre-Export and Post-Export Working Capital Insurance.** This program is underwritten by the Export-Import Bank of the United States and administered by FAME.
 - ♦ **The Maine Job Start Program.** The Maine Job Start Program provides very small loans to entrepreneurs who have an annual gross household income at or below 80 percent of the area median income.
 - ♦ **Office of Community Development, Department of Economic and Community Development.** The Office of Community Development administers CDBG Small Cities funds for the state. It operates two business financing programs that use CDBG funds. It makes grants to local communities for business financing projects, which in turn lend the funds to the businesses. Projects must be located in non-entitlement communities (those with populations under 50,000 that do not receive CDBG funds directly from the federal government). Typically, a majority of jobs created and retained must go to low- and moderate-income workers.
5. ***Innovation and Technology Policy.*** The Maine Science and Technology Commission is in the process of developing an R&D Strategy for Maine. The Commission was responsible for the creation of the Center for Innovation Program. CFIs are programs managed by a consortia of private business, public and private nonprofit research institutions,

and government to improve the Maine economy by enhancing the competitive advantage of existing and new businesses through technology.

Three CFIs have been funded: Center for Innovation in Biomedical Technology, the Maine Aquaculture Innovation Center, and the Center for Technology Transfer (CTT). Of most relevance is the CTT, which is a partnership between the metals and electronics industries of Maine, the Maine Science and Technology Commission, the University of Maine, the University of Southern Maine, and the Maine Technical College System. CTT facilitates and encourages the adoption of new manufacturing and management technologies, stimulates production improvements, disseminates technology-based information, brokers industry needs to appropriate public service, and provides and facilitates joint ventures and strategic partnerships.

Current sub-state (regional/local) resources:

1. *The Workers Assistance Center (WAC) in Kittery, Maine is an invaluable resource in the adjustment process. The Center was founded through the joint efforts of the New Hampshire Job Training Council, the Maine Department of Labor, and Naval Yard Unions and receives funding from the U.S. Department of Labor. Displaced workers living in both Maine and New Hampshire may use the Center. Among the services available at WAC are:*
 - ♦ a four-day core seminar to expose workers to the full range of career opportunities;
 - ♦ individual counseling on retraining and job search assistance;
 - ♦ funding for specific training by vendors or on-the-job at local companies. Funding is available to pay for one year of schooling for each laid off worker. Clients may use that tuition subsidy while continuing to receive other unemployment benefits, thus removing the burden of working while attending school.
2. *Other job training and placement information is available at the Maine Job Service offices in Biddeford and Sanford. A division of the Bureau of Employment and Security within the Maine Department of Labor,*

it tries to match people with jobs. Its services are broad, including job referrals, job training, resume preparation assistance, computerized job data banks, tax credit vouchers, and other support service referrals. Some retraining is provided by Southern York County Adult Education that offers GED courses, remedial math and English, as well as computers.

3. *There are a number of private volunteer support groups for unemployed workers in both Southern Maine and New Hampshire.* For example, the Seacoast Networking Support Group in Portsmouth maintains a statewide job link data base. It networks with local chambers of commerce, radio stations, newspapers, and individual businesses to provide job leads and support to job seekers. Other unemployment support groups include the Seacoast Mental Health; Rockingham Counseling Center; Counseling Service, Inc.; HCA Portsmouth Pavilion; New Hampshire Catholic Charities; Stafford Guidance Center; and Seacoast Resource Association. Several resume services also exist in the area: Individual Employment Services, Apollo, and Dover Secretarial Services.
4. *Needed human services are available through the York, Stafford, and Rockingham County Community Action Programs offering several support programs.* Among the programs they offer are Fuel Assistance, Women's, Infant, and Children's Program (WIC), the Crisis Assistance Program, and other programs that offer help to women in transition.
5. *Health care is available in the area at a number of federally-funded medical clinics that charge fees on a sliding scale according to personal income.* These include the Lamprey Health Care Center, Planned Parenthood, the New Hampshire and Maine Visiting Nurses Association, and the York Hospital. The Maine Department of Human Services and New Hampshire Division of Human Services have information on both Medicaid and the Food Stamp Programs.
6. *A number of the individual towns have formed informal or volunteer economic development organizations, but they have limited staff capacity and two are not currently meeting.*

♦ **York Economic Development Council.** Established out of the comprehensive planning process, the Economic Development Council was charged with promoting economic development that was

consistent with its small town Seacoast character. The purpose of the Council is to inventory and analyze commercial and industrial opportunities in the town, including activities related to the redevelopment of Pease. The York Development Authority is a nonprofit economic development organization that can get involved in economic development real estate efforts.

- ♦ Kittery Economic Development Commission. Although not currently active, its mission was to increase the range of employment opportunities to employ more Kittery residents, ensure that non-residential development is resilient and stable in a variety of economic climates and is appropriate with Kittery's existing residential character, address residents' needs, and provide alternative employment opportunities.
 - ♦ Eliot Regional Development Authority. Responsible for monitoring the activities of PDA, the closure of the Shipyard, and the lack of a long-range strategy. The role of the RDA, which grew out of the comprehensive planning process, is to act as a liaison between the board of selectmen and local, state, and federal economic development officials.
 - ♦ Eliot Business Development Commission. This commission has been dormant over the last four years, but was established by the town to promote a healthy business environment. It has had resources allocated to it that have not been expended. It could be reactivated for involvement in a regional economic development effort.
7. *The Small Business Development Center at the Southern Maine Regional Planning Commission offers one-on-one counseling to small businesses on management, finance, accounting, loan packaging, and marketing.*
 8. *Coastal Enterprises, Inc. in Wiscasset is a private, nonprofit community development corporation that does entrepreneurship training and can make business loans to help finance small businesses. For example, it provided financial support to U.S. Felt in Sanford when the company wanted to diversify away from defense markets and into private markets.*

9. *Officials in York and Cumberland counties have applied to the Economic Development Administration in the U.S. Department of Commerce to create an Economic Development District (EDD) in the region. If chosen for the designation, it will create the opportunity for the region to get more federal economic development monies.*

5.3 Gaps in Resources

While Maine and KEYS communities support a number of excellent public and private resources and organizations, several gaps exist to help local communities adjust to future reductions at the Naval Shipyard. These gaps deserve the serious attention of the members of the KEYS communities and their regional and state counterparts concerned with economic diversification.

First of all, the area lacks a regional economic development entity to orchestrate the adjustment process and spearhead regional job creation and retention activities. Ideally, such an entity would allow towns on both sides of the river to cooperate in developing a joint strategy. The advantage of a bi-state effort would recognize the interdependence of local towns and employers, as well as enhance clout with businesses and state leaders needing marketing power for business attraction. It would provide an opportunity to make efficient use of limited resources and would work to prevent duplication and conflict among different planning entities. The efforts currently underway to form Economic Development Districts in Southern Maine and across the river in Rockingham County (New Hampshire) could provide a vehicle for bi-state regional cooperation. The stakes for towns affected by the Shipyard in the Seacoast region are high, and joint cooperation typically attracts more attention and funding from higher levels of government.

Secondly, although training placement resources exist now, they are inadequate to handle the demand that would be created by further substantial downsizing or closing of the Shipyard. Furthermore, the situation could get worse if both Loring and the Portsmouth Naval Shipyard close at or near the same time. In addition, there is no substantial training facility located in the KEYS region. The state estimates that only one in six Maine workers who are eligible for retraining services receive support today. If the Yard continues downsizing or even closes, many more will likely fall through the cracks. Fortunately, the state realizes this danger and is exploring steps to take to enhance job training resources statewide.

Finally, there is only limited state assistance for business retention activities. While most states offer a variety of business attraction programs ranging from tax incentives to site finding assistance, fewer states target existing businesses for help. Maine needs to get as aggressive about retaining its current employers as it is about attracting new employers. In Mt. Auburn's survey of manufacturers in Southern Maine, the most frequently mentioned step firms said the state could take to help them was to expand and improve education and training. Also frequently mentioned was their desire to see a more pro-business tax system that provided tax incentives and addressed complaints about worker's compensation.

Gaps clearly exist at both the state and local levels to mount a successful defense adjustment and economic development strategy. Significant resources, financial and technical, are needed to redevelop and market a closed base. The need for resources and expertise could double should the state find itself confronted with the worst case scenario in which both Loring Air Force Base and the Portsmouth Naval Shipyard were closed. Local and state leaders must address the need for regional cooperation in order to successfully plan for the region's economic diversification and revitalization.

Chapter 6

Next Steps

While the future of the Portsmouth Naval Shipyard is uncertain, it is likely that at least over the next five years the Naval Yard will continue to be the dominant employer in the KEYS region. Thus, the KEYS communities have at least five years to design and implement an adjustment strategy that will make its residents less vulnerable to whatever decision is made in Washington concerning the future of the Naval Yard. This time horizon is far greater than communities often have in adjusting to other major economic dislocations in the private sector.

In developing an adjustment strategy the KEYS communities and the state of Maine must recognize that every defense-dependent community is different. Some are dependent on a few, large private contractors, some on defense installations, and some on subcontractors. The response of each community must match the characteristics of its defense sector.

In the KEYS region, most of the dependence is on one facility -- the Naval Yard. In some ways, the potential impacts of its closing is far greater than in either cases of base closure or in cases of dependence on a large number of private prime and subcontractors for two reasons:

1. *Unlike most military base closures, most of the job losses at the Naval Yard will be civilian government workers. As noted in the assessment of the Pease closing, base closures, while devastating to a community, would have a smaller overall multiplier impact because a lot of consumption takes place on the base, many of the jobs are held by spouses who will move with the military reassignments, and procurement is less likely to be local.*
2. *Unlike most private sector closings, there is limited incentive for the owners, in this case the U.S. government, to diversify the product or markets and seek to develop new uses for the facility. Developing reuse*

options for the facilities if the government owns the property is extremely difficult. Moreover, efforts to diversify into commercial markets would require Congressional action.

The KEYS communities have already made a commitment to the next step -- developing a long-term adjustment strategy. Given the findings of this project, we suggest the following goals to guide the next phase of the process:

1. *Make the case for the continued operation of the Naval Yard.* The KEYS communities are now in a strong position to provide further evidence on the importance of the Shipyard to the local economy. This report should be used, in conjunction with the continuing efforts of the Save the Shipyard Organization, to make as strong a case as possible on why the Shipyard should be maintained. In addition, assuming the Yard remains a viable operation in the future, local leaders should consider ways to help local businesses capture a greater share of PNSY contracts since they currently capture only a small portion.
2. *Promote the use of existing Naval Yard capacity for new public and private sector work.* The facilities and the workforce at the Naval Yard are an enormous resource to the region. The type of machinery available has many potential applications. Moreover, the skills of its workforce could be adapted to a wide range of manufacturing activities. According to people in and out of the Shipyard, the facilities of the Shipyard and its workforce are well-suited for a wide variety of work in the private sector or for other government work. Efforts should be made to encourage the government to allow the Naval Yard to do other contracting work with other federal agencies and with private companies. The KEYS towns should work with others in the region to lobby for the ability of the Naval Yard to do other contracting work. In addition, as part of the second phase of the project, the adjustment strategy should consider other potential uses for the facilities.
3. *Promote further economic diversification through new enterprise development.* In the current economic environment, self-employment is an important option for dislocated Naval Yard workers to consider. The region already has a strong entrepreneurial base with a high level of self-employment. Moreover, close to 50 percent of the laid-off

Naval Yard workers reported interest in starting their own businesses. Not only does self-employment represent an option for re-employment, it could add to the diversity of the regional economy.

The region is fortunate in that there are a number of market opportunities for those interested in starting their own business. For example:

- ♦ with the strong tourism industry and the retail draw represented by the Kittery Malls, there are opportunities for starting enterprises that capture more of these markets;
 - ♦ many Naval Yard workers are highly skilled in areas where there are self-employment opportunities.
4. *Market the highly-skilled workers to new companies interested in locating in the region.* The skills of the workers in the area is one of the greatest competitive advantages that the community has. Increasingly in the global economy, all factors of production are mobile. A skilled work force is one of the factors that is not easily moved. The challenge will be to identify the specific industries that need the types of skilled workers currently living in the KEYS towns.
 5. *Identify specific retraining requirements to help laid off workers in KEYS take advantage of job opportunities related to Pease redevelopment.* There are already some potential new jobs in the region that have resulted from the redevelopment of Pease. If the decision is made to locate Duetsche Airbus at Pease, there will be a large number of skilled jobs created. The challenge in the region will be to identify the precise retraining requirements needed to meet the needs of new employers and design programs aimed at the dislocated Naval Yard workforce. In addition, communities should consider the long-term infrastructure needs for maintaining a well-trained workforce. A proposal to establish a technical college in York County is being studied at present. The establishment of a technical college would be an important asset to a larger regional economic development strategy for the region.
 6. *Develop a new KEYS economic development organization that will oversee the adjustment activities.* Currently, the four KEYS towns have very limited economic development capacity. Whatever economic

development initiatives were undertaken have mostly been done through volunteer commissions. If the towns wish to develop an adjustment strategy, they need to consider at the outset who will be responsible for implementation once the strategy is developed.

7. *Promote increased cooperation amongst all of the communities that are impacted by Naval Yard.* The economic impacts of the Naval Yard go well beyond that of the four towns of Kittery, Eliot, York, and South Berwick. New Hampshire towns such as Portsmouth, Dover, and Rochester are also heavily impacted by any layoffs at the Naval Yard. There are two models of the region working together. Most of the towns in the area, recognizing the danger facing the Naval Yard, have banded together to work with the Save the Shipyard Organization. Second, the states of Maine and New Hampshire are working cooperatively in the design and management of the Workers Assistance Center in Kittery. It is now time that the communities in the region start working together in thinking about an economic adjustment strategy.

Given these goals, we would recommend the following next steps for the KEYS Coalition in the design of an economic adjustment strategy:

Undertake Additional Research Related to a Diversification Strategy

1. *Detailed analysis of the competitive strengths and weaknesses in the economy.* This project made a first step in identifying the concerns of businesses and the key competitive strengths and weakness in the regional economy. Developing a targeted strategic plan will require some further analysis including:
 - ♦ *Regional assets and barriers to job creation.* The results of the Mt. Auburn survey of Seacoast manufacturers provide some information on how businesses perceive the current business climate in the state (see Appendix H). Clearly, the most positive aspects of working in the region involved the quality of life in the communities and its workforce. On the negative side, firms were very concerned about workers compensation, energy costs, and the overall environment related to growth. As the next stage of analysis, the region needs to look in more depth at the assets and liabilities and understand the implications for different types of industry.

- ♦ **Regional resources.** More work needs to be done to understand the key economic resources in the community. For example, more information is needed on the education and training infrastructure and the technology infrastructure. Efforts should be made to identify resources related to institutions of higher education including the University of Southern Maine and the University of New Hampshire.
 - ♦ **Inventory all of the industrial and commercial space available for development in the four towns and the development barriers associated with the sites.**
2. *Further research potential industrial opportunities in the region.* From Mt. Auburn's preliminary work, we would suggest further research in the following potential target industries. This work should identify opportunities for development in the region and a very specific implementation plan:
- ♦ **space/satellites;**
 - ♦ **advanced materials;**
 - ♦ **environmental technologies;**
 - ♦ **telecommunications;**
 - ♦ **natural resource-related development -- fishing and forestry;**
 - ♦ **tourism.**

Implementation Activities

1. *Initiate work on a enterprise development strategy.* Given the interest of laid-off Shipyard workers in starting their own business, efforts should be taken as soon as possible to put together an effective entrepreneurial training program. This would require identifying the appropriate resources in the region (i.e., Coastal Enterprises) and putting together a proposal to fund an actual enterprise development center.

2. *Initiate feasibility of developing a training/retraining center with the Naval Yard.* Efforts can be made to work with the training personnel at the Shipyard to see if their skills can be transferred to retraining activities.
3. *Using the KEYS Coalition as a starting point, build a new regional economic development effort in the four towns.* The KEYS Coalition could be formalized and expanded to include representation from the business community and the Naval Yard workers. The Coalition could oversee the economic development activities that evolve from the strategic planning effort.
4. *Initiate work with other communities in the region on a more regional effort.* The KEYS Coalition could start making contact with other cities and towns in the Seacoast to build a coalition around some of its activities that require broader support.
5. *Initiate work with some local defense contractors/subcontractors on diversification work.* Based upon Mt. Auburn's interviews with defense-dependent firms, there might be some immediate opportunities for working with local companies on efforts to develop new markets and new products. The KEYS Coalition can act as a bridge between the companies and other state and federal resources.

APPENDICES

APPENDIX A

JOBS & WAGES LOST

By Reduction or Closing of Portsmouth Naval Shipyard

SCENARIOS	DIRECT JOBS	INDIRECT JOBS	INDUCED JOBS	TOTAL JOBS	DIRECT WAGE LOSS	INDIRECT WAGE LOSS	INDUCED WAGE LOSS	TOTAL WAGE LOSS
May 1992 Layoffs								
Kittery	51	8	54	114	\$1,018,490	\$145,664	\$1,181,983	\$2,946,137
Eliot	28	4	30	62	\$968,655	\$87,179	\$707,409	\$1,763,243
York	25	4	27	56	\$908,770	\$81,789	\$663,675	\$1,654,234
S.Berwick	30	5	32	67	\$993,619	\$89,426	\$725,640	\$1,808,685
KEYS TOTAL	135	22	144	301	\$4,489,534	\$404,058	\$3,278,707	\$8,172,299
Other Maine	179	29	191	399	\$6,732,061	\$605,885	\$4,916,424	\$12,254,371
Non-Maine	286	46	305	637	\$9,939,608	\$894,565	\$7,258,896	\$18,093,068
GRAND TOTAL	600	96	640	1,336	\$21,161,202	\$1,904,508	\$15,454,026	\$38,519,736
DOWNSIZING								
Kittery	120	19	128	267	\$3,776,477	\$339,883	\$2,757,961	\$6,874,321
Eliot	66	11	70	147	\$2,260,194	\$203,417	\$1,650,620	\$4,114,231
York	59	9	63	131	\$2,120,464	\$190,842	\$1,548,575	\$3,859,881
S.Berwick	70	11	75	156	\$2,318,444	\$208,660	\$1,693,160	\$4,220,264
KEYS TOTAL	315	50	336	702	\$10,485,669	\$943,710	\$7,657,684	\$19,087,063
Other Maine	419	67	447	933	\$15,708,142	\$1,413,733	\$11,471,656	\$28,593,531
Non-Maine	667	107	712	1,486	\$23,513,700	\$2,116,233	\$17,172,055	\$42,801,988
GRAND TOTAL	1,400	224	1,494	3,118	\$49,707,510	\$4,473,676	\$36,301,395	\$90,482,580
FULL CLOSURE								
Kittery	547	88	584	1218	\$18,812,583	\$1,693,132	\$13,738,829	\$34,244,545
Eliot	300	48	320	668	\$11,178,692	\$1,006,082	\$8,163,799	\$20,348,573
York	271	43	289	604	\$10,449,883	\$940,489	\$7,631,550	\$19,021,922
S.Berwick	320	51	342	713	\$11,499,000	\$1,034,910	\$8,397,720	\$20,931,630
KEYS TOTAL	1,440	230	1,537	3,207	\$51,986,287	\$4,678,766	\$37,965,585	\$94,630,638
Other Maine	1,914	306	2,043	4,263	\$77,193,039	\$6,947,374	\$56,374,076	\$140,514,489
Non-Maine	3,048	488	3,253	6,789	\$116,063,007	\$10,445,671	\$84,760,814	\$211,269,492
GRAND TOTAL	6,400	1,024	6,830	14,254	\$245,242,333	\$22,071,810	\$179,100,476	\$446,414,619

SOURCES: Employment and payroll data supplied by Essex Shipyard Association, calendar 1991 data used. Multipliers based on analysis of employment and wage impacts of Philadelphia Naval Base and Shipyard (1990). All job impacts examine only civilian jobs losses, and all wage impacts reflect civilian wage losses EXCEPT under full closure scenario, in which case military payroll was included in the analysis. These figures represent a high estimate of impacts.

NOTE: Numbers may vary slightly due to rounding.

WAGELOS.WK1

EMPLOYMENT & UNEMPLOYMENT: LOCAL IMPACTS

Estimates of Current and Future Reductions

Effect of Reductions

Scenarios	Direct Job Losses	Number of Unemployed (1991)	No. Unemployed After Layoffs	Unemployment Rate (1991)	Unemployment Rate after Losses	Percent Increase in No. Unemployed
MAY 1992 LAYOFFS						
Kittery	51	98	149	2.7%	4.1%	52.0%
Eliot	28	162	190	3.2%	3.8%	17.3%
York	25	130	155	3.7%	4.4%	19.2%
S.Berwick	30	194	224	3.0%	3.5%	15.5%
TOTAL KEYS	135	584	719	3.1%	3.8%	23.1%
DOWNSIZING						
Kittery	120	98	218	2.7%	6.0%	122.4%
Eliot	66	162	228	3.2%	4.5%	40.7%
York	59	130	189	3.7%	5.4%	45.4%
S.Berwick	70	194	264	3.0%	4.1%	36.1%
TOTAL KEYS	315	584	699	3.1%	4.8%	53.9%
FULL CLOSURE						
Kittery	547	98	645	2.7%	17.8%	558.2%
Eliot	300	162	462	3.2%	9.1%	185.2%
York	271	130	401	3.7%	11.4%	208.5%
S.Berwick	320	194	514	3.0%	7.9%	164.9%
TOTAL KEYS	1,440	584	2024	3.1%	10.8%	246.6%

SOURCES: Maine Department of Labor and Seacoast Shipyard Association.

NOTE: Only direct job losses were used to calculate these estimates. Figures would be higher if indirect and induced job losses were added.

JOBLOSS.WK1

POPULATION AND WORKFORCE CHANGES

Estimates of Current and Future Reductions

Likely Effect of Reductions

Scenarios	(1) Direct Loss	(2a) Labor Migration Outside the Kittery LMA		(2b) Population Loss		(3) Workforce Attrition		(4) Workforce Retention		(5) 12 Months Later: Estimate of Employed (FT or PT)		(6) 12 Months Later: Estimate of Unemployed	
	(100%)	(15% of 1)	(30% of 1)	(15% of 1)	(30% of 1)	(10% of 1)	(15% of 1)	(55% of 1)	(75% of 1)	(75% of 4)	(85% of 4)	(25% of 4)	(15% of 4)
MAY 1992 LAYOFFS													
Kittery	51	8	15	10	38	5	8	28	38	21	33	7	8
Ellis	28	4	8	11	21	3	4	15	21	12	18	4	3
York	25	4	8	9	19	3	4	14	19	10	16	3	3
S. Berwick	30	5	9	11	23	3	5	17	23	12	19	4	3
TOTAL KEYS	135	20	41	51	101	14	20	74	101	56	86	19	15
MAINE	179	27	54	70	140	18	27	98	134	74	114	25	20
DOWNSIZING													
Kittery	120	18	36	45	90	12	18	66	90	50	77	17	14
Ellis	69	10	20	25	50	7	10	38	50	27	42	9	7
York	59	9	18	22	44	6	9	32	44	24	38	8	7
S. Berwick	70	11	21	26	53	7	11	39	53	29	45	10	8
TOTAL KEYS	315	47	95	118	236	32	47	173	236	130	201	43	35
MAINE	734	110	220	286	573	73	110	404	551	303	468	101	83
FULL CLOSURE													
Kittery	547	82	164	205	410	55	82	301	410	228	349	75	62
Ellis	300	45	90	113	225	30	45	185	225	124	191	41	34
York	271	41	81	102	203	27	41	149	203	112	173	37	30
S. Berwick	320	48	96	120	240	32	48	176	240	132	204	44	36
TOTAL KEYS	1,440	216	432	540	1,080	144	216	792	1,080	594	918	198	162
MAINE	3,354	503	1,006	1,308	2,616	335	503	1,845	2,518	1,384	2,138	481	377

SOURCES: Estimates on migration, attrition, and unemployment taken from the Displaced Worker Survey (1984, -6, -8). Employment data from SSA, and demographics from 1990 US Census.

NOTE: Slight errors are due to rounding.

POPLOSS.WK1

POTENTIAL STATE & LOCAL FISCAL IMPACTS ON REVENUES

By Downsizing or Closing of Portsmouth Naval Shipyard

SCENARIOS	IMPACT ON STATE INCOME TAXES		IMPACT ON LOCAL PROPERTY TAXES				
	Potential State Fiscal Impacts Resulting from loss of		Town Property	Tax Risk as % FY91 Property	Total FY91 Budget	Tax Risk as % of Total FY91	FY91 Budget
	Direct Jobs	All Jobs	Tax at Risk	Tax Revenues		Revenues	After Impact
MAY 1992 LAYOFFS							
Kittery	\$78,744	\$111,914	\$96,798	1.1%	\$11,518,808	0.8%	\$11,422,010
Ellot	\$43,232	\$61,422	\$33,796	0.9%	\$4,683,194	0.7%	\$4,649,398
York	\$38,600	\$55,185	\$49,500	0.4%	\$16,254,825	0.3%	\$16,205,325
S.Berwick	\$46,320	\$66,115	\$40,470	1.2%	\$4,417,930	0.9%	\$4,377,460
KEYS TOTAL	\$208,440	\$297,250	\$220,564	0.7%	\$36,874,757	0.6%	\$36,654,193
Grand Total (Maine receipts)	\$926,400	\$1,320,160					
DOWNSIZING							
Kittery	\$185,280	\$263,925	\$227,760	2.7%	\$11,518,808	2.0%	\$11,291,048
Ellot	\$101,904	\$145,239	\$79,662	2.1%	\$4,683,194	1.7%	\$4,603,532
York	\$91,096	\$129,616	\$116,820	0.8%	\$16,254,825	0.7%	\$16,138,005
S.Berwick	\$108,080	\$154,090	\$94,430	2.8%	\$4,417,930	2.1%	\$4,323,500
KEYS TOTAL	\$486,360	\$693,405	\$518,672	1.7%	\$36,874,757	1.4%	\$36,356,085
Grand Total (Maine receipts)	\$2,161,600	\$3,080,730					
FULL CLOSURE							
Kittery	\$844,568	\$1,203,553	\$1,038,206	12.1%	\$11,518,808	9.0%	\$10,480,602
Ellot	\$463,200	\$660,080	\$362,100	9.7%	\$4,683,194	7.7%	\$4,321,094
York	\$418,424	\$596,579	\$536,580	3.8%	\$16,254,825	3.3%	\$15,718,245
S.Berwick	\$494,080	\$704,335	\$431,680	12.7%	\$4,417,930	9.8%	\$3,986,250
KEYS TOTAL	\$2,223,360	\$3,168,705	\$2,368,566	8.0%	\$36,874,757	6.4%	\$34,506,191
Grand Total (Maine receipts)	\$9,881,600	\$14,083,490					

SOURCES: Maine Department of Revenue, Department of Labor, & Town Assessors.

NOTES:

GRAND TOTAL = Income tax collected by Maine for all employees associated with PNSY regardless of the state in which they live.

DIRECT JOB LOSSES = assumes 1991 PNY employee distribution by town, average PNY employee salary of \$35,268, and estimated income tax of \$1,544.

ALL JOBS = tax from DIRECT JOBS plus estimated tax (\$535) on the average wage (\$20,492) for a Maine worker in 1991.

Property tax estimates = average appraised value in 1992 supplied by town Assessors (Kittery = \$130,000, Ellot/S.Berwick = \$95,000, York = \$150,000) multiplied by town tax rates.

FISCALIMPACT.WK1

FISCAL IMPACTS ON EXPENDITURES

Due to Increases in General Assistance
because of PNY Reduction/Closing

Potential Impacts of Layoffs on General Assistance

SCENARIOS	Average #GA Cases CY1991	Estimates of Future G.A. Caseload 12 Months After Layoffs (Scenario 1) (Scenario 2)	% Increase in Number of Cases (Scenario 1) (Scenario 2)	Average \$ Cost Per Case/Month CY1991	Projected Total Annual GA Expenditures w/increases (Scenario 1) (Scenario 2)	Current FY91 Welfare Expenditures	\$ Increase in Expenditures w/Higher GA Caseload (Scenario 1) (Scenario 2)	% Increase in Expenditures w/Higher GA Caseload (Scenario 1) (Scenario 2)
MAY 1992 LAYOFFS								
Wrentham	42	48	14.3%	\$202	\$118,352	\$118,778	\$426	0.4%
Ellettsville	18	21	16.7%	\$281	\$50,580	\$57,824	\$7,244	14.3%
York	24	27	12.5%	\$265	\$63,600	\$68,880	\$5,280	8.3%
S. Berwick	28	31	10.7%	\$303	\$84,840	\$92,910	\$8,070	9.5%
KEYS TOTAL	112	127	13.4%	\$265	\$404,241	\$449,372	\$45,131	11.2%
DOWNSIZING								
Wrentham	42	58	38.1%	\$202	\$118,352	\$143,618	\$25,266	21.3%
Ellettsville	18	25	38.9%	\$281	\$50,580	\$84,284	\$33,704	66.6%
York	24	31	29.2%	\$265	\$63,600	\$101,760	\$38,160	60.0%
S. Berwick	28	38	35.7%	\$303	\$84,840	\$136,188	\$51,348	60.4%
KEYS TOTAL	112	147	31.3%	\$265	\$404,241	\$663,850	\$259,609	64.2%
FULL CLOSURE								
Wrentham	42	104	147.6%	\$202	\$118,352	\$209,608	\$91,256	76.8%
Ellettsville	18	52	188.9%	\$281	\$50,580	\$146,028	\$95,448	188.8%
York	24	61	154.2%	\$265	\$63,600	\$163,980	\$100,380	157.8%
S. Berwick	28	72	157.1%	\$303	\$84,840	\$219,792	\$134,952	159.0%
KEYS TOTAL	112	274	144.6%	\$265	\$404,241	\$1,039,388	\$635,147	157.0%

SOURCE: Maine Department of Human Services and KEYS towns.

NOTE: Scenario 1 assumes that 15% (and Scenario 2, 25%) of PNY reductions by town are collecting GA for a full year starting 12 months after being laid off. CY91 is from 1.1.91 to 12.31.91, and FY91 is from 7.1.90 to 6.30.91. While these two periods do not coincide, they still provide a fair estimate of the impacts.

EXPIMPACT.WK1

K.E.Y.S. TOWN DATA (1980-90)

DEMOGRAPHICS	Kittery			Ellis			York			South Berwick			TOTAL KEYS				% Change
	1980	1990	80-90	1980	1990	80-90	1980	1990	80-90	1980	1990	80-90	1980	1990	80-90	80-90	
TOTAL LAND AREA (sq. miles)	18	18	n/a	20	20	n/a	55	55	n/a	32	32	n/a	125	125	0	0.0%	
POPULATION																	
Total Population	8,314	9,372	0.6%	4,948	5,329	7.7%	8,405	9,818	18.0%	4,048	5,877	45.3%	20,773	30,304	3,633	13.6%	
Number of Households	3,258	3,607	10.6%	1,800	1,933	14.4%	3,152	3,788	20.2%	1,380	2,104	52.9%	9,478	11,432	1,954	20.6%	
Average Household Size	2.61	2.47	-5.2%	2.93	2.78	-5.7%	2.65	2.57	-3.0%	2.86	2.78	-2.9%	2.72	2.61	-0.11	-3.6%	
% 65 Years and Over	12.2%	13.1%	7.4%	9.3%	10.9%	17.5%	14.0%	14.6%	4.2%	11.7%	8.8%	-24.9%	12.2%	12.4%	0.2%	n/a	
Median Age	30.5	33.2	8.9%	30.7	34.8	13.4%	33.6	38.0	13.1%	30.6	31.8	3.9%	n/a	n/a	n/a	n/a	
HOUSING																	
Total Units	3,538	3,908	9.8%	1,827	2,038	11.5%	5,824	6,504	11.7%	1,487	2,202	52.1%	12,097	14,712	2,615	15.9%	
Year Round Vacant Units	231	301	30.3%	85	105	23.5%	421	2,718	545.1%	87	158	81.0%	824	3,280	2,456	298.1%	
Seasonal Units	72	94	30.6%	52	30	-25.0%	2,251	2,247	-0.2%	20	30	50.0%	2,305	2,410	16	0.6%	
Vacancy Rate (Year Round Hig)	6.6%	7.9%	1.3%	4.8%	5.3%	0.5%	11.8%	63.8%	52.0%	5.9%	7.1%	1.1%	8.0%	28.7%	18.7%	n/a	
Owner Occupied Units	2,221	2,348	5.6%	1,413	1,611	14.0%	2,440	3,019	23.3%	985	1,800	82.4%	7,088	8,578	1,508	21.3%	
Median Value (Current)	\$45,500	\$132,300	n/a	\$50,900	\$138,000	n/a	\$58,800	\$182,800	n/a	\$41,700	\$121,200	n/a	n/a	n/a	n/a	n/a	
Median Value (1991\$)	\$84,322	\$135,553	60.8%	\$94,329	\$141,393	49.9%	\$108,599	\$188,803	53.8%	\$77,279	\$124,180	60.7%	n/a	n/a	n/a	n/a	
Renter Occupied Units	1,288	1,488	18.0%	329	322	-2.1%	2,954	769	-74.0%	415	504	21.4%	4,964	8,003	(1,901)	-38.3%	
Median Value (Current)	\$208	\$503	n/a	\$221	\$541	n/a	\$222	\$533	n/a	\$201	\$474	n/a	n/a	n/a	n/a	n/a	
Median Value (1991\$)	\$385	\$515	33.7%	\$410	\$554	35.3%	\$411	\$548	32.7%	\$372	\$488	30.4%	n/a	n/a	n/a	n/a	
INCOME	(1979)	(1989)		(1979)	(1989)		(1979)	(1989)		(1979)	(1989)						
Median Hahld Income (Current \$)	\$17,175	\$33,793	n/a	\$18,130	\$38,280	n/a	\$18,020	\$39,088	n/a	\$18,637	\$37,770	n/a	n/a	n/a	n/a	n/a	
Median Hahld Income (1991 \$)	\$31,069	\$37,123	17.2%	\$33,430	\$42,052	25.8%	\$33,227	\$42,939	29.2%	\$30,877	\$41,401	35.3%	n/a	n/a	n/a	n/a	
Per Capita Income (Current \$)	\$7,548	\$15,712	n/a	\$7,170	\$14,918	n/a	\$7,748	\$18,119	n/a	\$8,138	\$15,091	n/a	n/a	n/a	n/a	n/a	
Per Capita Income (1991 \$)	\$13,918	\$17,260	24.0%	\$13,221	\$18,388	24.0%	\$14,263	\$19,904	39.4%	\$11,318	\$18,578	46.5%	\$13,511	\$17,829	4,318	32.0%	
% Pop. Below Poverty Level	6.1%	3.5%	-2.6%	6.3%	4.5%	-1.8%	8.0%	3.4%	-4.6%	10.7%	3.4%	-7.3%	7.2%	3.5%	-3.6%	n/a	
Number People Below Poverty Level	523	313	-210	308	239	-69	667	328	-341	420	199	-221	1,918	1,077	-841	-43.8%	
EDUCATIONAL ATTAINMENT (Persons 25 years +)																	
% Completing High School	75.4%	85.5%	10.1%	77.3%	87.7%	10.4%	86.7%	89.8%	2.9%	68.8%	87.2%	20.8%					
% Completing 4 Years of College	15.9%	22.7%	6.8%	18.0%	20.3%	4.3%	23.4%	31.8%	8.5%	14.8%	26.7%	12.1%					

SOURCE: SNAFPC, the US Bureau of the Census, 1980-90. Bureau of Economic Administration, Implicit price deflators used.

KEYSPOP.WK1

DEMOGRAPHIC OVERVIEW: U.S., MAINE, K.E.Y.S.

	1980				1990				Change 1980-90			
	U.S. (000s)	Maine	York Co.	K.E.Y.S.	U.S. (000s)	Maine	York Co.	K.E.Y.S.	U.S.	Maine	York Co.	K.E.Y.S.
POPULATION												
Total Population	226,548	1,125,000	139,666	26,773	248,710	1,227,928	164,587	30,306	9.8%	9.2%	17.8%	13.5%
Number of Households	80,776	395,184	49,649	9,478	93,347	465,312	61,848	11,432	15.6%	17.7%	24.6%	20.6%
Average Household Size	2.75	2.75	2.81	2.72	2.63	2.56	2.63	2.61	-4.4%	-8.9%	-8.4%	-4.0%
% 65 Years and Over	11.3%	12.5%	12.7%	12.2%	12.5%	13.3%	12.6%	12.4%	1.2%	0.8%	-0.1%	0.2%
Median Age	30.0	30.4	30.9	n/a	32.6	33.9	33.7	n/a	8.7%	11.5%	9.1%	n/a
HOUSING												
Total Units	86,759	501,093	66,900	12,697	102,264	587,045	79,941	14,712	17.9%	17.2%	19.5%	15.9%
Occupied Units		395,184	49,649	9,478		465,312	61,848	11,432		17.7%	24.6%	20.6%
Year Round Vacant Units		32,193	3,773	824		121,733	18,093	3,260		278.1%	379.5%	298.1%
Seasonal Units		n/a	13,350	2,395		88,039	12,839	2,410		n/a	-3.1%	0.6%
Owner Occupied Units		280,377	35,847	7,068		327,888	44,313	8,576		16.9%	23.6%	21.3%
Median Value (Current \$)	\$40,300	\$37,900	\$42,800	n/a	\$79,100	\$87,400	\$115,200	n/a				
Median Value (1991 \$)	\$74,685	\$70,237	\$79,318		\$81,045	\$89,549	\$118,033		8.5%	27.5%	48.8%	n/a
Rent for Occupied Units		114,807	27,280	4,805		137,424	17,535	2,656		19.7%	-35.7%	-40.6%
Median Contract Rent (Current \$)	\$141	\$172	\$176	n/a	\$374	\$358	\$429	n/a				
Median Contract Rent (1991 \$)	\$281	\$319	\$328		\$363	\$367	\$440		48.6%	15.1%	34.6%	
INCOME												
			(1979)									
Median Hshld Income (current \$)	\$16,841	\$13,816	\$15,377	n/a	\$28,906	\$27,854	\$32,432	n/a	n/a	n/a	n/a	n/a
Median Hshld Income (1991 \$)	\$31,053	\$25,475	\$28,354		\$31,754	\$30,596	\$35,827	n/a	2.3%	20.1%	25.7%	n/a
Per Capita Income (current \$)	\$10,380	\$5,768	\$6,212		\$14,056	\$12,957	\$14,131	n/a	n/a	n/a	n/a	n/a
Per Capita Income (1991 \$)	\$19,140	\$10,636	\$11,454	\$13,511	\$15,441	\$14,234	\$15,523	\$17,829	-19.3%	33.8%	35.5%	32.0%
% Pop. Below Poverty Level	9.6%	9.6%	9.8%	7.2%	n/a	10.8%	8.8%	3.5%	n/a	1.0%	-3.0%	-3.6%
EDUCATIONAL ATTAINMENT												
					(1989)							
(persons 25 years +)												
% Completing High School	84.5%		87.9%	n/a	85.5%	78.8%	79.5%	n/a	1.0%		11.6%	n/a
% Completing 4 Years of College or More	22.1%	14.4%	14.4%	n/a	23.4%	18.8%	19.0%	n/a	1.3%	4.4%	4.6%	n/a

SOURCE: SMRPC, the US Bureau of the Census, 1980-1990, & the Statistical Abstract of the US, 1991. Bureau of Economic Administration Implicit Price Deflators used.

KEYSPOP.WK1

APPENDIX H

SEACOAST MANUFACTURER'S SURVEY 1992 (N=42)

Business Perceptions of Economic Environment in Southern Maine

	Positive	Neutral	Negative
Quality of Life	81.8%	15.8%	2.6%
Highway Access	71.1%	13.2%	10.5%
Productivity of Labor	61.5%	28.2%	5.1%
Skills of Workforce	55.3%	34.2%	5.3%
Access to Suppliers	47.4%	36.8%	13.2%
Access to Higher Ed.	47.4%	31.6%	10.5%
Cost of Labor	44.7%	34.2%	13.2%
Availability of Land/Bldgs.	36.8%	36.8%	13.2%
Access to Markets	36.8%	44.7%	13.2%
Air Transportation	31.6%	31.6%	15.8%
Utilities	26.3%	31.6%	36.8%
Availability of Bank Loans	24.3%	21.6%	37.8%
Income Taxes	21.6%	21.6%	51.4%
Zoning	21.1%	44.7%	15.8%
Sales Taxes	18.9%	37.8%	27.0%
Housing Costs	18.4%	55.3%	18.4%
Business Taxes	13.5%	40.5%	37.8%
Economic Development Resources	13.5%	48.6%	29.7%
Availability of Risk Capital	11.1%	40.7%	37.0%
Rail Service	7.9%	21.1%	18.4%
Property Taxes	5.3%	31.6%	60.5%
Worker's Comp	2.6%	5.3%	92.1%

SOURCE: Mt. Auburn Associates, 1992.

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APPENDIX 5

**A Defense Dependency Analysis
for the
Greater Bath, Brunswick and Topsham Area**

August 1992

Produced by the Capital Coastal Council of Governments

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1. EXECUTIVE SUMMARY

Introduction

As a part of the State Planning Office's (SPO) effort to analyze defense dependency in the state, the Office contracted with organizations in the York County area, in the greater Bath-Brunswick area, and in the Lewiston-Auburn area. SPO contracted with Capital Coastal Council of Governments (CCCCOG) in the Bath-Brunswick area to conduct the regional defense dependency analysis. CCCCCOG started their work in April 1992. This report summarizes the results of that analysis at the regional level.

Defense activities dominate the economy in the greater Bath, Brunswick and Topsham area. Brunswick Naval Air Station (BNAS), located in Brunswick, employs approximately 800 civilians and has approximately 3,200 military personnel assigned to the base. The majority of those individuals reside in the Bath-Brunswick Labor Market Area (BBLMA). (*The Bath-Brunswick Labor Market Area is defined in Appendix A.*) Bath Iron Works (BIW), the largest employer in the State of Maine, has its main facility and corporate headquarters in Bath. BIW employs over 9,000 in the Bath-Brunswick Labor Market Area; over half of those workers live in the BBLMA.

The payroll for BIW equals over \$295,500,000 (1991 figures), while the company does \$183,400,000 in contracts with Maine firms (FY 1992). BNAS has a total payroll of \$78,000,000 (\$18M civilian payroll; \$60M military payroll in 1990-91 figures) and does over \$44,700,000 in contracts with Maine firms.

While decisions at the national level will probably lead to continued defense reductions that will adversely impact the Bath-Brunswick Labor Market Area, the businesses and the municipalities within this area must begin to look at economic diversification and conversion now in order to ameliorate these negative impacts.

This report attempts to assess the nature of the defense dependency at the regional level and includes strategic recommendations to address the potential disruption in the economy and the dislocation of workers.

Goal

The long-term recommendation for the Bath-Brunswick-Topsham area can be stated simply: The area needs to have the development strategy and infrastructure in place to attract new business and to retain and expand existing business to minimize the impact of the proposed and pending defense cuts.

Currently, neither the resources nor the institutions are in place to position the region to pro-actively encourage economic diversification. The strategic recommendations

outlined below require the commitment of capital investment on the part of the municipalities, the state and the federal government at a time when capital expenditures are being reduced, not expanded. If the area is successful in implementing these strategies, it will be positioned to be pro-active prior to any reduction/elimination of BNAS and/or BIW.

Economic And Community Development Issues

As this report demonstrates the Bath-Brunswick Labor Market Area (BBLMA) is heavily dependent upon the defense industry. The area's two largest employers are Brunswick Naval Air Station (BNAS) and Bath Iron Works (BIW). The economic base beyond these two employers is predominantly retail and services.

Therefore, the loss or reduction of BNAS and/or BIW will have a disproportionate impact on the area. In addition, the increased demand for community and municipal services will occur precisely at a time when the funding support for services is severely limited. Given this, what steps can be taken to ameliorate the impacts of a potential shut-down or reduction?

The area identified in this analysis has historically not been served by the traditional community and economic development mechanisms that exist in other regions in the state. The region is not covered by any Economic Development District (as defined and authorized by the federal Economic Development Administration). This has meant that the municipalities in the area have been unable to access EDA's Public Works funds that support major development infrastructure initiatives, such as airport expansions, industrial development parks, etc. as well as targeted programs that serve an area when a "Sudden and Severe Economic Dislocation" (SSED) occurs.

Although business membership and community civic groups have organized to work on economic conversion and development issues (the Topsham Economic Development Committee, the Brunswick Economic Conversion Task Force, the Bath Economic Development Task Force), the area has no multi-municipal or regional development corporation whose primary function is to develop a strategy to retain and expand businesses in the area as well as to promote the area to businesses outside the region and the state. Nor does the region have access to the resources of a Metropolitan Planning Organization for transportation planning issues, which are critical underpinnings for any development activities in a region.

The lack of an overall economic and community development strategy and organization was not a particular issue during the "boom" years of the 1980's. However, since the recession in late 1989-90 and with the impending defense cuts looming, the lack of a cohesive economic and community development strategy and entity has arisen as a much greater concern.

A major assumption of this report is that the area's best response to potential defense cuts is to diversify its economic base as significantly as possible prior to major defense cuts occurring. Given the fact that BIW has work at approximately its current level of production until 1997 and that BNAS may be on the base closing list in 1993 or in 1995, the region has between two and five years to be pro-active on its own behalf.

Priorities

CCCOG worked with an Oversight Committee throughout the development of this report. (See Appendix B. for membership list.) The Committee saw several of the recommendations outlined in the Strategy Recommendations section (see Page #25) as priorities. (A flow-chart outlining the process to implement these priorities is included below.)

These priorities are summarized as follows:

1. Establish an Interim Development Committee, modeled on the Oversight Committee, with representation from the public and private sectors from Bath, Brunswick and Topsham. The Interim Development Committee would have the responsibility for: (a) working with the State's Defense Task Force; and (b) for implementing the recommendations outlined in this report. (NOTE: Two of the representatives from the existing Oversight Committee have been appointed to the State Task Force: Wanda Plummer, Brunswick Chamber Director, and David Gleason, Gleason Real Estate in Brunswick and Chair of the Brunswick Economic Conversion Task Force.) The Interim Development Committee would need at least one full-time staff person, initially funded by EDA pass-through funds to SPO and then to the Committee;
2. The Interim Development Committee would develop a long-term development strategy for the area. This development strategy would provide the context within which services (business finance and counseling, development planning, business technical assistance such as marketing, and municipal infrastructure projects to support business development) would be provided to municipalities and businesses for economic diversification within the area; and,
3. The Interim Development Committee would work to ensure the designation of the area as an Economic Development District, under the Economic Development Administration, and the creation of a multi-municipal development corporation. The creation of the corporation and the designation of a district would provide the resources (staffing and funding) to implement the long-term development strategy.

While the Oversight Committee established these three items as priorities, it must be emphasized that all of the recommendations, outlined in Section 4, are critical to the area's successful response to defense reductions and to the goal of economic diversification. The human capital issues and recommendations, as well as the other community and economic development recommendations, are all part of a comprehensive effort to prepare the area for continued economic well-being.

FLOW-CHART



Conclusion

Finally, this report focuses primarily on the public sector initiatives that can impact the economy. The assumptions behind this focus are two-fold: first, it is the public sector (e.g. the Department of Defense) which in large part has generated the contracts which now are being reduced. And, in response to the disruption of local and regional economies due to defense reductions, it is the public sector that will be dedicating funds to avert or ameliorate these economic disruptions; and, second, while business drives the economy, the public sector can impact the business environment with its policies and programs. This report assumes that the public sector can develop policies and programs which can enhance the business environment -- allowing businesses to relocate, to grow, and to diversify.

Therefore, the references to the private sector (business and industry) are indirect. The strategy recommendations are all targeted to enhancing the economy through public sector approaches to business growth and diversification. Recommendations for education and training, for example, focus on the systems which provide those services with the full knowledge that the individuals whose skills are improved then go to work in the private sector. Recommendations for development activities also assume that if the necessary and relevant public infrastructure (roads, sewer, water, etc.) is in place, businesses are more likely to view an area positively.

No one initiative will "solve" the defense dependency problem in this area; many coordinated activities can go a long way to making the Bath-Brunswick-Topsham area a good place to live and work now and in the foreseeable future.

2. DEFENSE DEPENDENCY IN MAINE: A STATE PERSPECTIVE

(NOTE: This report, produced by CCCOG for the Bath-Brunswick-Topsham area, was developed as a part of the State Planning Office's state-wide defense dependency analysis. Included in this section are portions of SPO's Interim Report released in March 1992; these excerpts provide a state-wide context for the discussion of defense dependency in the greater Bath-Brunswick-Topsham area. Employment at BNAS and BIW continues to decline; thus, the numbers reported in the SPO Interim Report of March 1992 are slightly higher than in the CCCOG report.)

Introduction

In July of 1990, recognizing the prominence of defense activities in Maine and anticipating the potential effects of defense spending cuts, Governor John R. McKernan, Jr. established by Executive Order, the Governor's Task Force on Defense and the Maine Economy. Governor McKernan initiated the Task Force to develop a strategy to guide Maine's private and public sector efforts to cope with the potential dislocations, and capitalize on the opportunities associated with reduced defense spending in Maine. Such an effort was designed to help Maine workers, businesses and communities to buffer the economic consequences of shrinking defense spending. (The 115th Legislature institutionalized this effort by creating the Task Force on Defense Realignment and the Economy, which will report to the Legislature on an annual basis. SPO is providing the staff support for both initiatives.)

(The State Planning Office issued a report in March 1992 that) presented the preliminary findings of the Governor's Task Force and outlined a strategy to reduce Maine's defense-dependency. Defense-related enterprises in Maine span the spectrum of defense activities and stretch across the breadth of the State. They include military installations such as Portsmouth Naval Shipyard and Brunswick Naval Air Station in southern Maine, and Loring Air Force Base in rural northern Maine, as well as a number of smaller installations. They include a number of private firms which are largely dependent upon primary or secondary defense contracts, including Bath Iron Works (Maine's largest private employer), Saco Defense and others. Hundreds of Maine businesses and thousands of jobs serve these defense facilities, contractors and their employees as suppliers, subcontractors, retailers and service providers.

Maine communities, businesses and workers have already felt the harmful effects of reductions in defense spending. Loring Air Force Base has been slated for closure by the middle of 1994. Pease Air Force Base in neighboring New Hampshire closed in 1991. Portsmouth Naval Shipyard in Kittery Maine eliminated 1,400 jobs in 1991 and will reduce its workforce by an additional 600 in early 1992. Bath Iron Works is in the midst of a reduction in employment of up to 2,500 prompted by a reduction in the naval shipbuilding program. The Over-the-Horizon Backscatter radar installation in Bangor has been reduced from an active force of 530 to a skeleton crew of 40, and several other Maine firms have lost jobs to defense spending reductions.

Summary of Findings

A significant share of Maine's economy is defense dependent.

Defense dollars support some level of activity in virtually every part of Maine. While defense-related activity in Maine is widespread, it is most concentrated in three regions--York County (Portsmouth Naval Shipyard, Pease Air Force Base, Saco Defense, Fiber Materials, Inc.), Bath-Brunswick (Bath Iron Works and Brunswick Naval Air Station), and Central Aroostook County (Loring Air Force Base). In addition, a number of smaller military installations and primary and secondary defense suppliers are scattered around the State.

The Bath/Brunswick area hosts not only Bath Iron Works, Maine's largest employer, at 11,400 workers (state-wide), but is also the locale of Brunswick Naval Air Station, employing over 900 civilian and 3,300 military personnel. These two defense facilities, located within several miles of each other, support nearly \$700 million in earnings. This represents 3% of all Maine income, and more than one-half of all Maine defense-dependent earnings.

Maine's defense-dependent employment is concentrated in shipbuilding and related enterprises.

Maine's two biggest defense-related enterprises, from an economic perspective, are Bath Iron Works and Portsmouth Naval Shipyard. Combined they provide some 15,000 Maine residents with some of the highest paid employment in the State. Consequently, the State's defense dependency is concentrated in shipbuilding and related activities. In an environment of defense cut-backs and with the dominance of small and medium-sized firms, Maine's economy will be hard pressed to replace a significant number of shipbuilding jobs lost to defense cuts, with jobs of similar skill types or wage levels. The remainder of Maine's defense-dependent jobs are distributed across industries ranging from machinery, metal products and electronics to retail and wholesale trade, medical services and construction.

Defense reductions have already had an impact on Maine and future reductions will pose significant challenge to Maine businesses, workers and communities.

Many Maine workers and communities have already been adversely affected by cutbacks in defense spending. Twenty-five percent of the job losses associated with the closure of Pease Air Force Base in 1992 were felt in Southern York County. Brunswick Naval Air Station has recently reduced its military personnel by 300. The U. S. Air Force has essentially shut down the Over-the-Horizon Backscatter Radar Facility at Bangor, eliminating nearly 500 jobs in the Bangor area.

Even larger reductions face Maine employers and workers in the next several months and years. Bath Iron Works continues an announced work force reduction totaling 2,500 through mid-1992. The Portsmouth Naval Shipyard has implemented a reduction-in-force that will reduce its 8,000 person work force by 1,500 by April of 1992. Finally, Loring Air Force Base has been slated for closure by September 1994, taking with it 8,500 jobs in Aroostook County.

By the end of 1991, Maine had lost 5,000 jobs added by the defense build up. This is accounted for by the loss of 2,500 jobs at BIW since 1990 and losses at other defense contractors. In addition to the losses associated with the build-up, Maine has lost another 2,000 direct and indirect defense jobs associated with downsizing of military facilities. By 1994, with the closure of Loring AFB, Maine will have lost 20% of its peak defense-dependent employment of 63,000 in 1989.

In the present economic environment any job losses associated with defense cuts are difficult, if not impossible to absorb. Over the longer term, the Maine economy will be able to absorb modest defense cuts. However, significant reductions in any one of Maine's major defense enterprises will impose a severe burden on the State's economy.

These job losses, painful at any time, come in the midst of a State and regional economic downturn. Since 1989, the Maine economy has experienced a steady decline in employment across all sectors. Between 1989 and 1991 the State's unemployment rate has nearly doubled as 33,000 jobs have been lost. Employment conditions in neighboring New England states are even more severe. Current forecasts indicate that Maine will not recoup these losses before 1995.

Over the longer term, economic growth in Maine is expected to resume at a pace much slower than was experienced in the decade of the 1980's. In this environment, additional large and/or precipitous cutbacks at any of Maine's larger private or public defense facilities will place Maine's long-term economic health at serious risk. Maine firms have begun to take steps to broaden their market base beyond defense-related customers.

Some Maine communities have begun the process of responding to defense reductions.

In response to current or potential defense spending cuts, citizens in some Maine communities have begun the process of planning for defense realignment. Elliot, Kittery, York and South Berwick have established the KEYES Coalition to respond to the closure and reuse of Pease Air Force Base in nearby Newington/Portsmouth, New Hampshire. The Brunswick Area Conversion Task Force has begun to examine the potential joint use and/or reuse of Brunswick Naval Air Station. Business people in the

Bliddeford-Saco area have begun to strategize a response to declining defense contracts to area businesses. Individuals in the mid-coast area have taken the initiative to examine defense issues and their implications for their regional economy, and the Maine Peace Economy Project is working to help communities and businesses across the state to recognize their defense dependency and work to reduce it.

The communities around Loring Air Force Base have joined with the County and State governments to create the Loring Readjustment Committee. This group will develop reuse options for Loring upon its closure in 1994 and negotiate the terms of transfer of the facilities at Loring to civilian use.

The Governor's Defense Task Force, through its EDA Title IX grant, is supporting multi-jurisdictional defense planning efforts in York County, the Bath/Brunswick region and the Androscoggin Valley region.

The nature of defense realignment over the next few years may offer some opportunities for Maine.

While their negative impacts will be severe for several years, some aspects of defense realignment offer some opportunities for the Maine economy. Reductions in the number of armed forces personnel will accelerate the re-patriation of workers to the Maine labor force with excellent training and G.I. Bill benefits. Federal commitment to cleaning up environmental hazards at closing military bases offers an opportunity to expand Maine's environmental industries and redirect the skills of Maine's suffering construction industries. Finally, the potential and real impacts of defense cuts has begun to serve as a catalyst for joint community development initiatives among Maine towns and an impetus for new product and market development for Maine's firms.

The State of Maine can adopt an array of strategies to address the challenges and opportunities associated with defense realignment.

A comprehensive State strategy should help communities build development capacity, maximize the possibility of re-employment of defense-dependent workers, and assist Maine firms reduce their defense dependency.

The Governor's Defense Task Force will develop program proposals designed to encourage and assist development capacity building in at-risk regions. Such programs could incorporate multi-jurisdictional community and economic development planning; assist in identifying economic development infrastructure needs, and avenues of assistance; and facilitate contingency DOD facility re-use planning.

Strategies to maximize the possibility of re-employment of at-risk workers in advance of actual cut-backs must recognize that most at-risk workers have relatively high level of skills and education. Thus, they will need either a new employer in a similar industry, the ability to start their own business, or the ability to move into a new occupation with comparable pay. Such strategies should be designed to broaden the educational level of at-risk workers; encourage and assist the expansion of Maine firms utilizing the skills of defense-dependent workers, and the services of other defense-dependent firms.

Finally, harmful impacts of defense cutbacks can be best mitigated by helping Maine firms reduce their reliance on military spending. The Task Force will examine ways to tailor existing programs to address the special needs of defense-dependent firms. In addition, new mechanisms will be explored to help Maine firms acquire the technology, training and financing required to undertake effective conversion strategies.

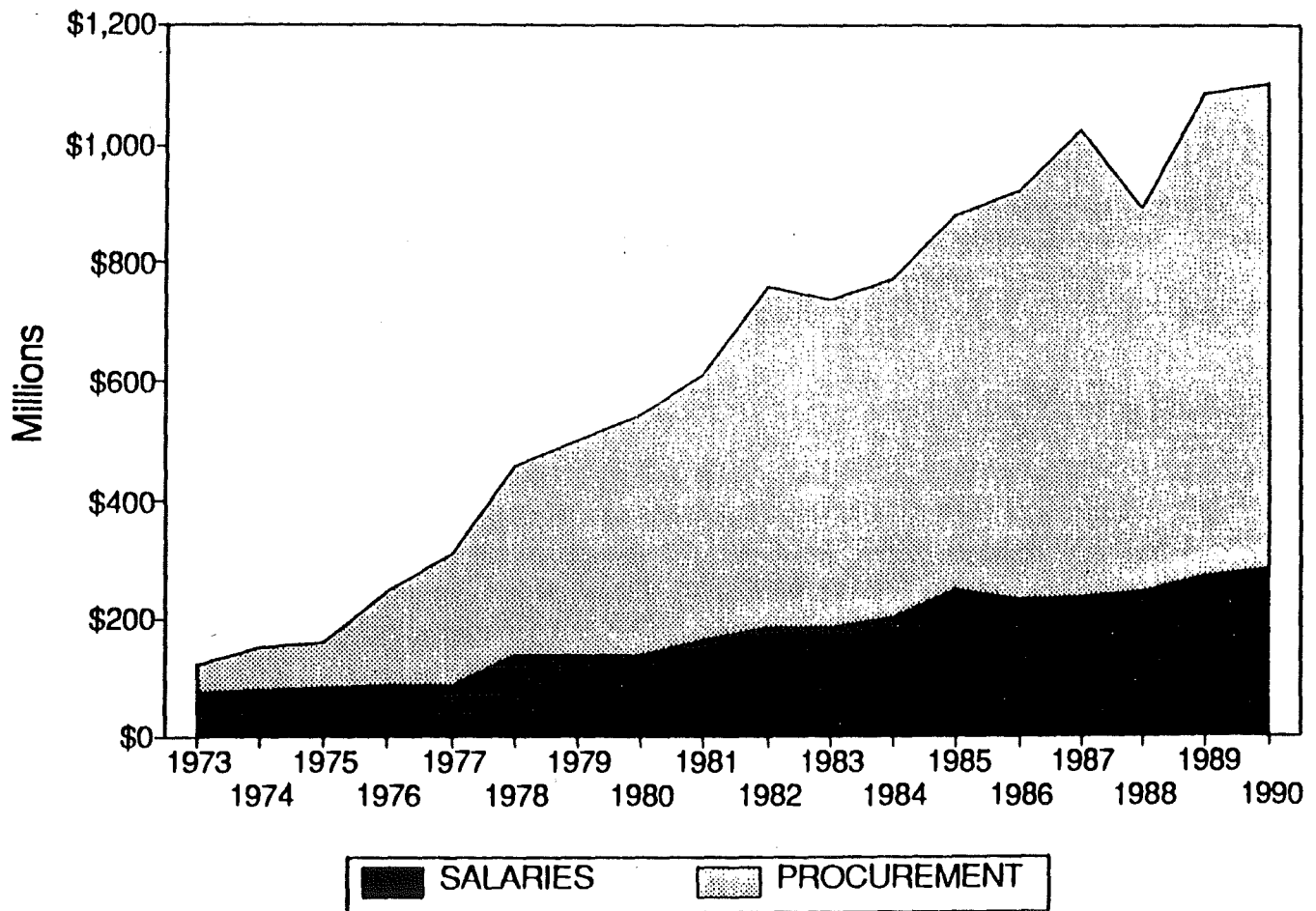
Maine's Defense Dependency

During the 1980's, the flow of federal defense-related dollars became an increasingly important component of the Maine economy. In fact, direct Defense Department spending in Maine rose from only 3% of gross state product in the early 1970's (averaging \$146 million annually), to nearly 7% by the end of the 1980's (an average of nearly \$1 billion per year). Virtually all of this growth, 81%, is attributable to defense procurement, of which Bath Iron Works has accounted for over 90% (see Figure 1).

Gauging the contribution of defense spending to the Maine economy is a complex task. A traditional input/output approach to economic impact analysis (estimating the direct and indirect jobs needed to fulfill a given level of defense demand) suggests that 62,885 jobs and \$1.3 billion in earnings in Maine were directly or indirectly supported by defense-related activities in 1989. By this measure, fully 8% of all Maine jobs and 10% of total earnings are dependent, either directly or indirectly, upon meeting the defense needs of the United States. The larger share attributable to defense-related earnings in Maine reflects the relatively high wages provided many defense-dependent workers in the State. (Table 1 offers an estimate of the employment and earnings contributions of defense spending in Maine at its peak in 1989.)

In fact, these estimates under-represent the level of economic activity in Maine supported by defense spending. Each of the major defense facilities are the predominant factor in Maine's relatively small and fragile rural economies. Consequently, their loss would not only eliminate the majority of well-paying jobs in their regions, but would undermine the critical mass of the regional economies they support. (See Table 2.)

DEFENSE SPENDING IN MAINE BY COMPONENTS



Source: Maine State Planning Office

FIGURE 1

TABLE 1

ECONOMIC IMPACT OF DEFENSE SPENDING IN MAINE: 1989
(Source: Maine State Planning Office)

FACILITY	DIRECT EMPLOYMENT		INDIRECT EMPLOYMENT	EARNINGS	
	CIVILIAN	MILITARY		TOTAL	(MIL)
BRUNSWICK NAS	900	3,000	1,700	5,600	\$ 160
LORING AFB	900	3,300	3,600	7,800	\$ 168
PORTSMOUTH NSY#	8,000	**	3,300	11,300	\$ 206
NATIONAL GUARD*	525	3,900	885	5,440	\$ 86
OTHER DoD	300	4,800	1,610	6,710	\$ 138
BIW	11,400	**	7,700	19,100	\$ 524
OTHR PRIV FIRMS	3,800	0	3,265	7,065	\$ 166
TOTAL	25,825	15,000	22,060	62,885	\$1,307
Percent of Maine Total				8%	10%

4,500 Maine residents. Earnings exclude those of non-Maine workers.

* 300 full-time, 3,600 part-time.

** Military included under Other DoD.

TABLE 2

RECENT AND IMPENDING DIRECT DEFENSE-RELATED JOB LOSSES (AS OF 11/91)
(Source: Maine State Planning Office)

Activity	Civilian Jobs	Military Jobs
BIW	2,500 (by mid-'92)	
Loring AFB	1,000 (by Sept. '94)	3,300 (by Sept. '94)
Portsmouth NSY	600 (by March '92)	
National Semiconductor	200	
Fiber Materials, Inc.	150	
Digital	100	
Saco Defense	100	
OTH-B	70	300
Brunswick NAS	50	310
Mid-State Machine	30	0
TOTAL	4,750	3,910

Maine's long tradition of participating in this nation's defense has been based largely upon its coastal locations and its reputation for shipbuilding. In fact, shipbuilder Bath Iron Works, Portsmouth Naval Shipyard, Brunswick Naval Air Station and Loring Air Force Base account for 26,000 defense jobs, representing over 64% of all the direct defense employment in Maine. Maine has also been home to a small but growing number of largely high-technology defense-related firms. **Figure 2** displays the location of military facilities and defense contractors in Maine. **Tables 3 and 4** identify selected Defense Department prime contractors in Maine and principal military facilities.

TABLE 3

SELECTED DEFENSE PRIME CONTRACTORS IN MAINE
(Source: Maine State Planning Office)

<u>COMPANY</u>	<u>LOCATION</u>	<u>TYPICAL ANNUAL CONTRACT</u>
Bath Iron Works	Bath	\$730 million
Saco Defense	Saco	\$ 35 million
Fiber Materials, Inc.	Biddeford	\$ 30 million
Howell Laboratories	Bridgton	\$ 7.9 million
E.C. Jordan	Brunswick	\$ 5.3 million
H.E. Sargent	Old Town	\$ 4.2 million
Frank J. O'Hara	Rockland	\$ 2.4 million
Andrew Crowe & Sons	Warren	\$ 1.9 million
Mid-State Machine	Winslow	\$ 0.5 million

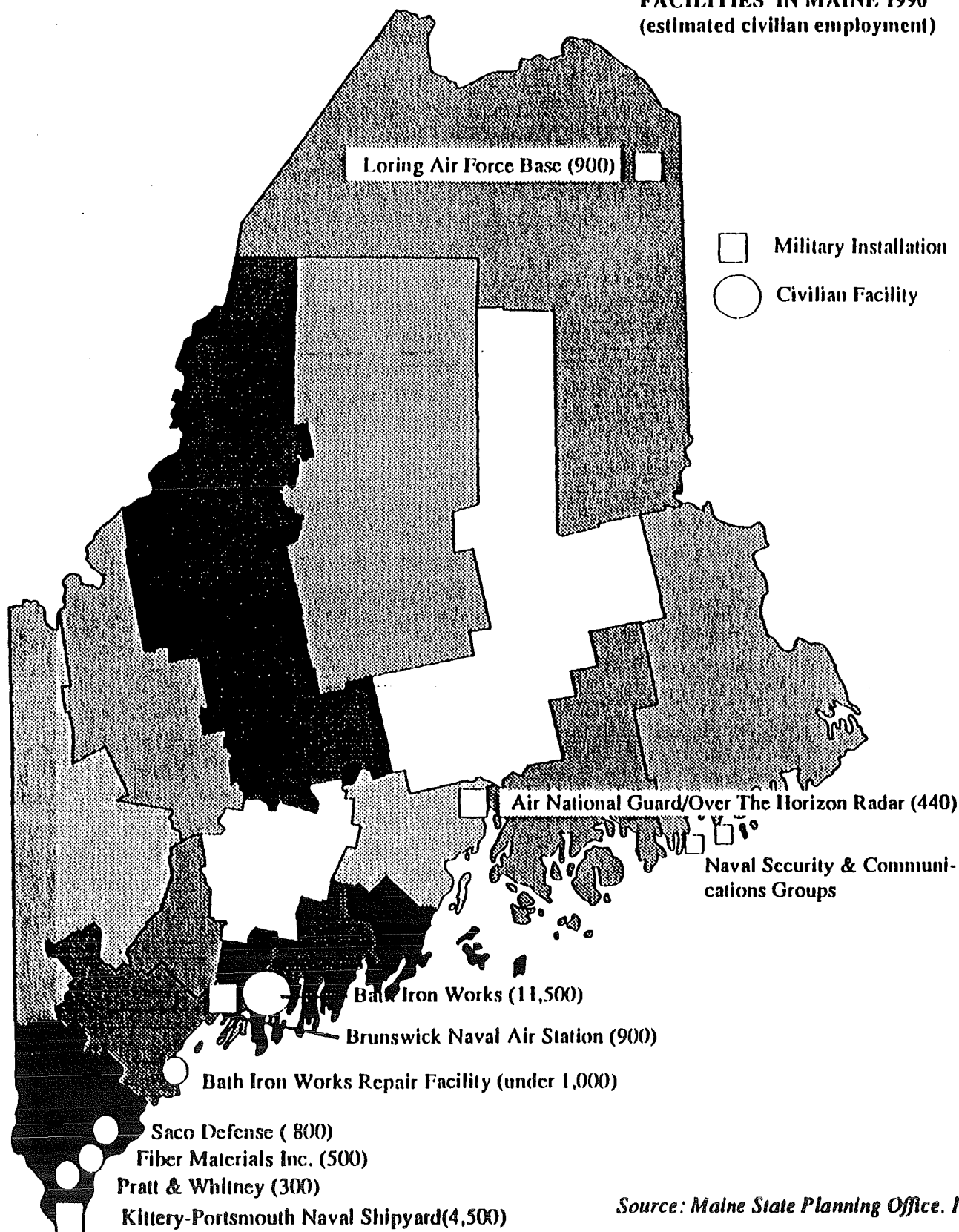
TABLE 4

PRINCIPAL MILITARY INSTALLATIONS IN MAINE
(Source: Maine State Planning Office)

<u>FACILITY</u>	<u>LOCATION</u>	<u>ANNUAL SPENDING</u>
Portsmouth Naval Shipyard	Kittery	\$170 Million*
Loring Air Force Base	Limestone	\$130 Million
Brunswick Naval Air Station	Brunswick	\$108 Million
Maine Air National Guard	Bangor	\$ 33 Million

* Estimate of amount spent in Maine. Total spending in 1989 was \$357 million.

**SELECTED DEFENSE-RELATED
FACILITIES IN MAINE 1990**
(estimated civilian employment)



Source: Maine State Planning Office, 1990.

FIGURE 2

By varying degrees, Maine's economic defense dependency cuts across all Maine industries. However, the State's direct dependency is concentrated in a small number of facilities and firms, and three regions of the State. In fact, 17,700 or nearly 80% of all direct defense-related civilian jobs are with BIW, Loring AFB, NAS Brunswick and Portsmouth Naval Shipyard. However, these represent only 42% of all defense-dependent jobs. The majority of Maine's defense-dependent jobs are spread among a large number of businesses that serve both civilian and military-related markets.

Not surprisingly, the geographic concentration of Maine's defense dependency is in the three regions of the State that host large defense establishments. The Bath-Brunswick Region is host to both Bath Iron Works and Brunswick Naval Air Station. These two facilities alone support over \$1 billion in earnings, fully 8% of the State total. In fact, significant economic impacts of BIW extend west into Androscoggin County and south into Cumberland County.

The local and regional impact of defense spending reductions will be very substantial. In a state dominated by small and medium-sized businesses, defense related activities become the principal economic actor in each of the regions in which they are located. Moreover, the diversity of Maine's defense-dependency suggests that some, if not all, segments of its defense economy is likely to be affected by the restructuring of national spending priorities for several years.

The Capacity of the Maine Economy to Absorb Reductions in Defense Spending

While Maine has long hosted significant defense activity, the defense build-up of the 1980's added additional jobs to the Maine economy. Direct and indirect jobs associated with the military build up totaled 18,000 by 1989. Most were associated with the naval build up supported by Bath Iron Works. This largest of Maine employers added 7,400 jobs during the 1980's. Additional jobs were created at prime and secondary defense contractors, largely in southern Maine.

By the end of 1991, Maine lost 5,000 jobs added by the defense build up. This is accounted for by the loss of 2,000 jobs at BIW, since 1990, and losses at other defense contractors. In addition to the losses associated with the build-up, Maine has lost another 2,000 direct and indirect defense jobs associated with downsizing of military facilities. By 1994, with the closure of Loring AFB, Maine will have lost 20% of its peak defense-dependent employment of 63,000 in 1989.

Unfortunately, defense cutbacks are not the only negative forces impinging upon the Maine economy today. The demographic surge that fueled rapid household formation, consumer spending and strong job growth in the last decade has slowed, and will continue to do so over the next ten years. The New England economic renaissance driven by the defense build-up and the computer and finance industries

has dissolved into a quagmire of business declines and over-built real estate. Thus, in addition to the reversal of the defense build-up, Maine is experiencing the end of a construction and retail boom, as illustrated in Figure 3. A national recession has further exacerbated regional weakness, and recovery is expected to be exceptionally slow. Consequently, defense cuts are hitting Maine in the midst of its worse economic downturn since the early 1980's, a downturn that is unlikely to be followed by vibrant recovery.

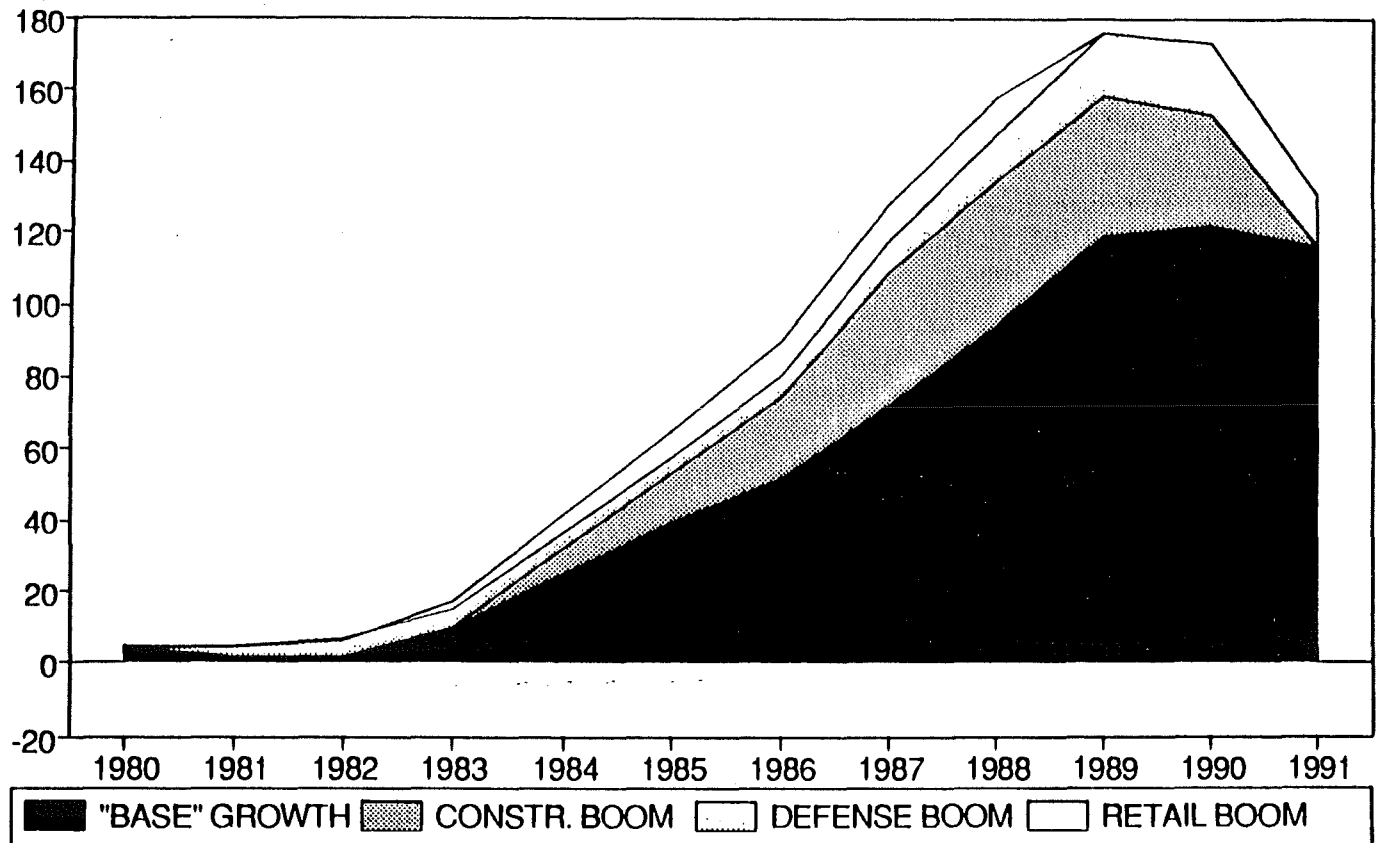
It will be exceptionally difficult for the Maine economy to replace defense-dependent jobs. During 1990 and 1991 Maine employment will have declined by 6%. Most recent job losses have been in construction, manufacturing and retail trade. Defense cutbacks have also contributed to this weakening in Maine's employment levels. By early 1992, over 4,000 Maine defense-related jobs will have been lost to spending cuts (about half of these will have come from BIW).

Despite current economic difficulties, the Maine economy has experienced a qualitative improvement over the last 15 years. The economy that is carrying Maine into the 1990's, is the culmination of a fundamental restructuring of the State's industrial base. This transformation has been characterized by the formation of new manufacturing industries, as well as the revitalization of some of Maine's traditional industries. Maine's service sector, too, has gradually moved from a supplier of basic essentials to an array of activities servicing businesses and consumers in and outside the State.

Economic growth in Maine during the 1990's is expected to be more moderate than that experienced during the 1980's. The State Planning Office (SPO) predicts that over the decade, job growth in Maine will slow to an average of about 1% per year, down from the 2.6% annual growth experienced during the 1980's. Significant additional defense cutbacks in Maine, such as the closure of another major facility, could dramatically alter even this modest growth forecast.

Beyond their statewide effects, the impact of defense spending cuts on individual workers, firms and communities will be severe. Like past industrial restructuring, the shift away from defense will be painful. The nature of job growth in Maine over the next several years will not necessarily occur in the occupations or locations held by current defense-dependent workers. Communities dependent upon defense workers, firms and facilities will be hard pressed to replace the tax base and level of service presently supported by defense spending. Firms that have long relied on the steady flow of defense dollars will find themselves seeking new customers in an increasingly competitive market place.

ANATOMY OF THE 1983-89 BOOM COMPONENTS OF MAINE EMPLOYMENT GROWTH



Source: Maine State Planning Office

FIGURE 3

3. ECONOMIC OVERVIEW (FOR THE BATH-BRUNSWICK LABOR MARKET AREA)

A. Introduction

The Bath-Brunswick-Topsham region saw a tremendous increase in its labor force during the 1980's. The driving force behind this growth was Bath Iron Works (BIW). BIW's employment climbed from 5,800, the 1980 annual average, to peak of 11,923 in June 1990. The 1980's were also a decade of increased tourist activity in the state and a time of major construction, especially new housing starts. The labor force for the Bath-Brunswick Labor Market Area (BBLMA) increased by 9,443 employees between 1979 and 1989 (from 22,725 to 32,168). The majority of that increase is attributable to increased BIW employment and other defense related contracts.

The total population of the BBLMA grew by 20% during the 1980's, as compared to 9.1% for the state during this period. The fifteen municipalities of the BBLMA also experienced significant population growth as indicated by the large number of these towns that were involved in the first two rounds of the growth management planning process.

Many of these municipalities increased their facilities and services in response to citizen demand and state mandated requirements. The population of these municipalities must now maintain these new services through taxes and user fees (tipping fees, etc.).

The BBLMA is driven by BIW, a large manufacturing company that is also the major defense contractor in the state. Analysis of the BIW contribution to this economy indicates that the basic raw materials and major components are imported from out of the state. BIW is able to fabricate the majority of its other manufacturing needs in BIW facilities.

Total contract awards from BIW to businesses in the state totals \$183,400,000 (in 1991). The BIW payroll represents an annual injection into the state of \$295,500,000. The employment payroll represents the major dependence factor to the BBLMA and the State of Maine, although the impact of its direct contracts with other Maine businesses should not be underestimated.

The estimated share of BIW's contract activity with other businesses in the BBLMA is \$18,600,000 (approximately 10% of BIW's total contract activity in the state). Again, the biggest direct impact to the LMA will be the lost wages (estimated at over \$102 million in the LMA) and the indirect impact to the secondary and tertiary economies that are driven by these wages.

Brunswick Naval Air Station affects the LMA primarily through the payroll (\$78,000,000) from both the civilian employees and the military personnel. The contracts coming out of BNAS in FY 1992 equaled \$44,700,000 and though smaller than BIW's annual contract activities (\$183,400,000) are still significant to the state and the LMA economy. Other contracts coming directly from the Department of Defense (DOD) into the LMA also affect the economy.

B. General Demographic Trends

The Bath-Brunswick Labor Market Area (BBLMA) grew by 20% between 1980 and 1990 (adding 10,993 new residents), while Maine had a growth rate for the same period of only 9.1% and the U.S. averaged nearly 10%.

The growth rates for the individual municipalities for the 1980 to 1990 period ranged from a low of -4% for the City of Bath to a high of 63% for Arrowsic. The median municipal growth rate was 24% for Georgetown and the mode was 35% for Bowdoin and Topsham.

The average population in both the BBLMA and Maine is older than that of the U.S. The national trend shows the population aging in the past two decades, and both the state and the LMA reflect this trend. The median age in the U.S. increased from 30.0 years in 1979 to 32.6 in 1989. In Maine, the median age increased from 30.4 to 33.9 years, and in the BBLMA from 30.2 to 33.9 years, between 1980 and 1990, respectively.

The median age within the individual municipalities (within BBLMA), based on the 1990 U.S. Census, ranged from a low of 30.6 years for Bowdoin to a high of 37.9 years for Harpswell.

C. Employment

A major indicator of growth in the BBLMA has been the increase in the labor force. The number of residents in the civilian labor force for the BBLMA increased from 22,725 in 1979 to 32,168 in 1989. This represents a 41% increase in the civilian work force, as compared to a 20% increase in population.

A major portion of this LMA's labor force is employed by BIW. BIW has increased employment from an annual average in 1980 of 5,817 to a peak of 11,923 in 1990. An additional historic note: the average BIW employment during the 1970's was 3,661. The present employment levels are being reduced to an anticipated total of 8,500 in the next few years. While all of these workers don't live in the LMA, the vast majority work in the LMA (with the exception of a comparatively small portion working in Portland and other areas). Almost 4,000 employees do live within the LMA. Therefore BIW is the major employment driver for this LMA.

Another major portion of the labor force is working at BNAS. Though the military personnel (3,200) are not counted in the overall work force, they do represent an 9.7% equivalent share of the civilian labor force. They do make significant contributions to the secondary and tertiary economies of the LMA. The civilian work force of BNAS (800) represents 2.4% of the LMA labor force, with over 500 of the total civilian work force living in the LMA.

The BBLMA unemployment rate has been low as compared to surrounding Labor Market Areas' unemployment rates in the last five years (1988 to the present). The recession has brought the unemployment rate closer to the Boothbay Harbor-Wiscasset and Portland MSA Labor Market Areas and the state as a whole. (This represents a shift from a 3.8% unemployment level statewide in 1988 to a 7.5% level in 1991, with the corresponding unemployment level for the Bath-Brunswick LMA of 2.4% in 1988 to 5.3% in 1991).

The potential unemployment contribution from BIW and BNAS indicates the significance of the LMA's dependence on these facilities. The BIW employment working in the BBLMA (9,097) represents 28% of the LMA work force, and the portion of BIW employment living within the LMA (3,958) represents 12% of the total work force. BNAS employs 789 civilians and has 3,184 military personnel assigned to the base. Of those totals, 540 civilians and 2,708 military personnel live within the BBLMA. The civilian work force represents 2.5% of the LMA work force, and 1.7% of the LMA work force living within the LMA. The total military employment represents an equivalent to 9.9% of the LMA work force.

D. Income and Poverty

The residents of the BBLMA as a whole generally had a higher per capita income than that of the state in both the 1980 and 1990 Census.

Median household income in BBLMA municipalities was generally higher than the median household income for the state. The amount of increase was most significant for Arrowsic with \$14,688 in 1979 dollars (1979 State average \$13,816) up to \$36,250 for 1989 (1989 State average \$27,854).

The percentage of persons below the poverty level fell for all of the municipalities and was well below the state average for most of the municipalities.

The demand for general assistance has increased for all of the municipalities in the last five years. These amounts have been impacted by the state's provision of a 50% reimbursement after 1989.

E. Education

Residents in the BBLMA generally have a higher percentage of high school graduates than the state average, with many of the municipalities showing a greater increase in the percentage of graduates between 1980 and 1990.

The educational attainment level of BBLMA residents is higher among the 1989 population than among the 1979 population. The biggest change was in Dresden, where the percentage of persons 25 years and older who completed high school was 62.5% in 1979, but increased to 80.9% by 1989.

F. Economic Structure of the Bath-Brunswick Labor Market Area

The Bath-Brunswick Labor Market Area includes 15 municipalities in 4 counties. Sagadahoc has all of its municipalities except Richmond within this LMA (including Arrowsic, Bath, Bowdoin, Bowdoinham, Georgetown, Phippsburg, Topsham, West Bath and Woolwich). The remaining municipalities within the LMA include: Durham within Androscoggin County; Dresden within Lincoln County; and, Brunswick, Harpswell, New Gloucester and Pownal within Cumberland County.

The BBLMA has experienced phenomenal job growth over the past decade. Between 1980 and 1990 the total number of jobs located in the region grew by 41%, an increase of almost 10,000 jobs. The state's job growth during the same period was only 14%.

While the growth can be attributed to defense-related industry, retail services and tourism, BIW is the major growth contributor. Additional factors include the vendors and subcontractors which service BIW and BNAS. The CCCOG business survey returns indicate that as a result of the recession and earlier BIW cutbacks, many firms have already reduced their employment and are seeking to develop alternative products and services.

Little future growth is anticipated in the large manufacturing firms (employment over 200), in the labor market area. Other sectors of the BBLMA economy including retail sales and services (such as restaurants, motels, etc.) and construction appear, at this early stage of an economic recovery, to have very little growth potential unless there is another major economic upswing.

G. Larger Economic Region and the State

The BIW employment picture has larger implications for the surrounding LMAs and the entire state. BIW employs people from every county in the state and has major facilities in Bath, Brunswick and Portland. BIW has been cutting back employees during the early 1990's and appears to be targeting a new employment level of only

8,500 employees. The planned cutback in employment is occurring during the recession and will continue into the recovery period.

Most of the workers at BIW are in specialized skill positions with little hope of finding comparable employment in other LMAs around the state. The only comparable employer is the Portsmouth Navy Ship Yard, which may be in the same or worse situation than BIW in the next few years. Some workers may possess cross-over skills, which are transferable to "peace industries", but very few such positions are available currently in this LMA or in other parts of the state.

H. Bath Iron Works

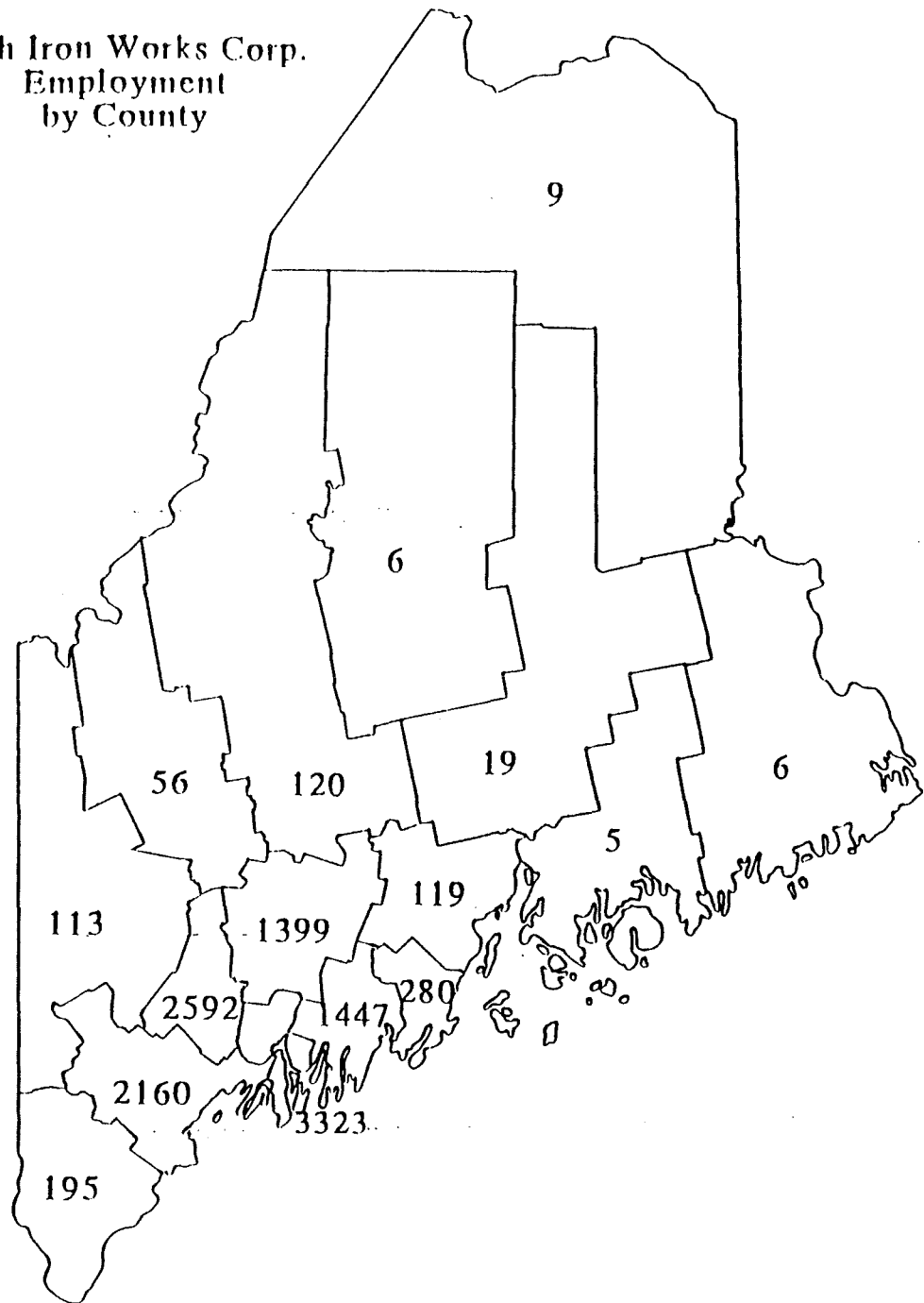
Bath Iron Works (BIW) is Maine's single largest defense activity, and its largest private employer. BIW's 10,000 workers earn wages close to the national industry average, and more than the State average wage. Currently the lead shipyard in the Navy's AEGIS destroyer program, BIW has seen extraordinary growth since the late 1970's, adding over 7,000 jobs in Maine during the 1980's.

A major component of the State and regional economy, BIW provides an annual payroll of over \$300 million to workers largely from communities in Sagadahoc, Androscoggin, Cumberland, Lincoln and Kennebec Counties, as shown in **Figure 4**. In addition, BIW purchases approximately \$60 million worth of goods and services annually from Maine firms. As a result, the defense work at BIW supports an additional 7,700 jobs across the state and generates \$524 million in personal income.

While significant, these estimates underestimate the role that BIW plays in supporting the economic and public infrastructure of mid-coast Maine. As a large purchaser of electricity from Central Maine Power, for example, its absence from the customer base would dramatically increase the cost of electricity to all other users. Similarly, the availability and cost of health, education and other public services to residents of the mid-coast region are directly affected, as well, by the presence of BIW in the Bath-Brunswick area.

BIW reached a peace time employment peak of 11,950 in 1990, driven by the U.S. naval build-up and a confluence of contract work during the last years of the 1980's. The outlook, however, is for a much lower level of defense work over the coming decade. Original procurement plans for five ships per year have been revised downward. Consequently, BIW has announced that it will reduce its work force by up to 2,500 jobs over the next 2 years. The future of BIW, as a defense contractor, rests with decisions by the Department of Defense regarding the character of U.S. national security posture, and the size and composition of America's naval fleet needed to accommodate it.

Bath Iron Works Corp.
Employment
by County



Source: Bath Iron Works Corp.

FIGURE 4

Officials at BIW have concluded that they must build at least two ships per year to remain commercially viable. At present, BIW's position as lead builder of the AEGIS destroyer, and the inclusion of 3 vessels in the Bush Administration FY 1993 budget bode well for the shipbuilder in the short term. However, longer-term prospects rely mightily upon either the continuation of the commitment to a class of warship built by BIW, or the success of the firm in diversifying into commercial markets. Strong international competition in commercial vessel production and foreign subsidies present serious challenges to U.S. commercial shipbuilding. However, a strengthening in future demand for commercial vessels, and expansion into alternative products offers prospects for long term viability of Bath Iron Works.

I. Brunswick Naval Air Station

Brunswick Naval Air Station (NAS Brunswick), located in Brunswick, Sagadahoc County, Maine is home of Patrol Wing FIVE, one of two Patrol Wings on the Atlantic Coast. Reactivated in 1951 in response to a growing Soviet submarine threat, Brunswick's principle task is anti-submarine warfare. They have also been called upon to perform anti-submarine surveillance, mine warfare, search and rescue, and other missions.

NAS Brunswick employs 3,200 military and 800 civilian personnel. In 1989, NAS Brunswick funnelled over \$130 million into the local economy. This included \$118 million in payroll, \$11 million in construction contracts, and \$13.5 million in the purchase of goods and services from local businesses. Through its activities, it supports an additional 1,700 jobs in the Bath-Brunswick area. In addition, the activities and personnel associated with NAS Brunswick are an integral part of the quality of life of the surrounding communities.

NAS Brunswick faces two more rounds of base closure and realignment assessments, in 1993 and 1995. NAS Brunswick is expected to gain an additional squadron in 1993 as a result of the closure of a west coast Naval Air Station. However, the shape and pace of change in superpower relationships remain nebulous, as do America's evolving national security priorities. Consequently, it is difficult to assess how BNAS Brunswick will fare in this process in the coming years. Efforts are underway, by businesses and communities surrounding the Base, to examine the economic importance of BNAS Brunswick to the local economy, explore joint use options, and to prepare for future base closure proceedings.

J. Conclusions

The resistance that the Bath-Brunswick Labor Market Area has shown to rising unemployment rates through most the 1980's has been neutralized recently by the combination of the recession and the BIW cutbacks. The BBLMA unemployment rate has been low as compared to surrounding Labor Market Areas' unemployment rates in the last five years (1988 to the present). The recession has brought the

4. STRATEGY RECOMMENDATIONS

(FOR THE BATH-BRUNSWICK LABOR MARKET AREA)

The Bath, Brunswick and Topsham Labor Market Area (LMA) is heavily dependent upon the defense industry. The area's two largest employers are Brunswick Naval Air Station (BNAS) and Bath Iron Works (BIW). The economic base beyond these two employers consists predominantly of retail sales and services.

Therefore, the loss or reduction of BNAS and/or BIW will have a significant impact on the area. In addition, the increased demand for community and municipal services will occur precisely at a time when the funding support for services is severely limited. Given this, what steps can be taken to ameliorate the impacts of a potential shut-down or reduction?

The following recommendations focus on short-term (one to five years) actions. In addition, the recommendations are broken into two major subheadings: human capital issues and community and economic development issues.

Economic And Community Development Issues

The area identified in this analysis has historically not been served by the traditional community and economic development mechanisms that exist in other regions in the state. The region is not covered by any Economic Development District (as defined and authorized by the federal Economic Development Administration). This has meant that the municipalities in the area have been unable to access EDA's Public Works funds that support major development infrastructure initiatives, such as airport expansions, industrial development parks, etc. as well as targeted programs that serve an area when a "Sudden and Severe Economic Dislocation" (SSED) occurs.

Although business membership and community civic groups have organized to work on economic conversion and development issues (the Topsham Economic Development Committee, the Brunswick Economic Conversion Task Force, the Bath Economic Development Task Force), the area has no multi-municipal development corporation whose primary function is to develop a strategy to retain and expand businesses in the area as well as to promote the area to businesses outside the region and the state. Nor does the region have access to the resources of a Metropolitan Planning Organization for transportation planning issues, which are critical underpinnings for any development activities in a region.

The lack of an overall economic and community development strategy and organization was not a particular issue during the "boom" years of the 1980's. However, since the recession in late 1989-90 and with the impending defense cuts looming, the lack of a cohesive economic and community development strategy and entity has arisen as a much greater concern.

A major assumption of this report is that the area's best response to potential defense cuts is to diversify its economic base as significantly as possible prior to major defense cuts occurring.

Given the fact that BIW has work at approximately its current level of production until 1997 and that BNAS may be on the base closing list in 1993 or in 1995, the region has between two and five years to be pro-active on its own behalf. Given that in 1992, it is impossible to predict the exact nature of the defense reduction that will impact the area, the majority of the recommendations in this section focus on short-term initiatives.

A. DEVELOPMENT ACTIVITIES

A.1. INTERIM DEVELOPMENT COMMITTEE: *The development activities outlined below assume that federal, state and local dollars will be dedicated to the establishment of institutional entities (in development and transportation planning). However, as these recommendations are being implemented, the municipalities and businesses within the region should continue to meet as an Oversight Committee to ensure that these initiatives move ahead.*

RECOMMENDATION: Funding should be sought on a matching basis, from the federal, state, and local governments as well as from the business community to provide staffing support to this on-going Oversight Committee (see Development Planning recommendation below).

A.2. DEVELOPMENT CORPORATION(S): *The area needs to establish a mechanism to promote and enhance community and economic development.*

RECOMMENDATION: The municipalities within the area should create a regional development corporation, serving at least the major three municipalities (Bath, Brunswick and Topsham) in the area and ideally serving as many contiguous communities as are willing to support its functions. (NOTE: A regional or multi-municipal development corporation in no way precludes the establishment of a local development corporation.) This development corporation would be responsible for the creation of a regional development strategy, including: a business retention and expansion component; a business recruitment component; and, coordinating general development activities within the region.

A.3. DEVELOPMENT DISTRICT: *The area municipalities and businesses need access to the federal Economic Development Administration's (EDA) programs.*

RECOMMENDATION: The state and the regional representative for EDA should work to ensure that this region is covered by a development district within the next 18 months.

A.4. EXISTING FINANCING AND SMALL BUSINESS DEVELOPMENT COUNSELING: *Coastal Enterprises, Inc. (CEI) currently provides a range of development-oriented services within the greater portion of the LMA. CEI focuses on "enterprise development in three phases: technical services (such as small business development counseling); financial services (loans, loan guarantees, general financial "packaging"); and, general development services (researching natural resources opportunities, exploring housing needs and opportunities in the midcoast area, etc.).*

RECOMMENDATION: If the municipalities establish a development corporation, the new entity should work with CEI to leverage existing and innovative resources. CEI should be also be encouraged to coordinate its delivery of services through or with the corporation.

A.5. DEVELOPMENT FINANCING: *Public financing options need to be created at the local and regional level.*

RECOMMENDATION: Federal, state and municipal resources should be committed to the creation of public financing mechanisms within the corporation and development district area. The State Planning Office's report to the Task Force includes a recommendation for the establishment of a "defense diversification revolving loan fund", which should be considered for this area. This initiative should be closely linked to the existing local financial institutions (private: banks and credit unions; public: Coastal Enterprises, Inc.).

(NOTE: Some small development corporations in the state have gotten a start on establishing revolving loan funds through the initial donation of properties, which were subsequently sold or leased to prospective new businesses. The funds generated through the sale or lease of property were then put into a local revolving loan pool to be re-used for other prospective business deals.)

A.6. DEVELOPMENT PLANNING: *This short-term study and report has only begun to identify the characteristics of businesses and workers at risk under a defense reduction scenario. It has preliminarily identified some of the consequences of increased demands and reduced resources on the community and municipal services in the area. However, planning and analysis activities should continue concurrent with the development activities outlined above.*

RECOMMENDATION: The State Planning Office should provide "challenge" funding (match for municipal, federal and business funding) for an on-going planning position to staff the Oversight Committee to continue: (a) to analyze the dynamics of the defense situation in the area; and, (b) to assist the Oversight Committee in implementing the initiatives outlined in this report.

A.7. TRANSPORTATION PLANNING: *Transportation modes and corridors are critical to development initiatives. Currently, no transportation regional planning mechanism, which is authorized and funded by state and/or federal transportation department monies, exists in the area.*

RECOMMENDATION: Through the new federal initiative IS-TEA and the new state transportation policies, this area should be designated for regional planning activities, including staff and technology support.

A.8. TRANSPORTATION ALTERNATIVES: *As a part of the transportation planning effort, alternative transportation modes need to be explored and put in place.*

RECOMMENDATION: As a part of the new federal initiative IS-TEA and the new state transportation policies, the Department of Transportation needs to work with the local and regional planning entities to develop and implement alternative transportation modes, such as increased public transportation options (rail, bus, "ride-share", etc.).

B. BRUNSWICK NAVAL AIR STATION

B.1. JOINT USE OF BNAS: *The State Planning Office's report to the Task Force includes a recommendation to conduct a feasibility assessment or implementation of public works improvement to support the joint use of BNAS.*

RECOMMENDATION: The Oversight Committee should work in conjunction with SPO, BNAS and the Economic Conversion Task Force (or a subcommittee of the Oversight Committee) to support this feasibility assessment. A major component of this feasibility study should examine the issue of "fair-market" value and how it will impact the state/municipalities ability to access the facility.

B.2. ENVIRONMENTAL CONCERNS: *A major issue facing many of the other bases that are closing (including Loring) is the degree of environmental clean-up necessary before the facility can be used for other purposes.*

RECOMMENDATION: The state and municipalities should look at the impact of any environmental clean-up on a economic conversion scenario. (NOTE: One positive side-effect may be that Maine businesses will be competitive for the environmental clean-up contracts.)

C. BATH IRON WORKS

C.1. STRATEGIC PLANNING: *The State Planning Office's report to the Task Force includes a recommendation to provide state/federal assistance to the company in its strategic planning process to identify new business opportunities.*

RECOMMENDATION: Any community-driven development strategy should reflect the results of this strategic planning process, including efforts to recruit relevant suppliers, implementing necessary municipal infrastructure improvements and/or enhancements, etc.

C.2. RENTAL/PURCHASE ARRANGEMENTS: *As BIW downsizes, rental and purchase space will become available within the area.*

RECOMMENDATION: The municipalities should work closely with BIW to determine what space will be freed by any downsizing and to develop strategies to recruit alternative business activity to take advantage of these resources.

LONG-TERM

The long-term recommendation can be stated simply: The area needs to have the development infrastructure and strategy in place to attract new business and to retain and expand existing business to minimize the impact of the proposed and pending defense cuts.

Currently, neither the resources nor the institutions are in place to position the region to be pro-actively encouraging economic diversification. And, the strategic recommendations outlined above require the commitment of capital investment on the part of the municipalities, the state and the federal government at a time when capital expenditures are being reduced not expanded. If the area is successful in implementing these short-term strategies, it will be positioned to be pro-active prior to any reduction/elimination of BNAS and/or BIW.

II. HUMAN CAPITAL ISSUES

The major human capital systems (education, training, welfare, housing, etc.) have had difficulty meeting the area's needs during the current recession. The anticipated defense reductions would exceed the impact of the current recession. Therefore, it is reasonable to assume that these systems would be unable to meet the area's citizens needs should BNAS or BIW reduce significantly or close entirely.

***A. UNIVERSITY CENTER:** The area is served by a Bath/Brunswick University Center out of the University of Augusta. This Center currently has several ITV (Interactive Television) classrooms that allow it to serve over 450 students per semester. (It has served approximately this number of students since the ITV capacity came on line in 1989.) The majority of these students are 'non-traditional' students, who attend part-time while working or handling other commitments. In addition, the Center currently offers basic career counseling services to any community member, whether s/he take any University courses or not. The Center staff saw several issues arising should BNAS or BIW significantly reduce their presence or shut-down. These issues included:*

A.1. A need for more financial aid to area residents, since many of their students are currently employed by BIW/BNAS or related to someone employed by BIW/BNAS.

RECOMMENDATION: Should BIW/BNAS reduce their employment or shut-down, the State/Federal government should establish a special financial aid mechanism for affected residents/students in the area.

A.2. A need for more ITV Centers to increase access. (The Bath/Brunswick Center is designed to serve a large portion of the upper Cumberland, Sagadahoc and Lincoln communities. It is often difficult for individuals in these communities to get to the Bath/Brunswick Center.)

RECOMMENDATION: The State should establish more ITV Centers in communities throughout the area. Estimated (one-time) installation costs per center: Up to \$10,000 for the communications tower; up to \$3,500 for the VCRs, phone system, general equipment. Estimated (on-going) operations costs: Between \$15,000 and \$35,000, depending on full-time or shared staffing.

A.3. A need for increased career counseling services. If the demand for career counseling from the general community increased, the University Center could not meet this demand. They would probably be forced to limit their career counseling services only to registered students.

RECOMMENDATION: Establish a career counseling mechanism to meet the increased demand (see Rapid Employment Transition Initiative (RETI) Team recommendations, under Human Capital section).

A.4. RELATED ISSUES: The Center staff saw two additional needs that would affect their service population. They anticipated the need for:

- **remedial education opportunities** (see Secondary Education recommendations, under Human Capital section) and,
- **transportation services** (see Transportation recommendations, under Community and Economic Development section) for individuals even to access the University Center(s).

B. SECONDARY EDUCATION: *The University Center as well as the area's employment and training service provider, Coastal Economic Development Corporation (CED), mentioned the need for the locally based high school systems to become more active in providing adult education opportunities (remedial education as well as introductory technical training) to the communities' residents. The adult education component in Topsham at Mt. Ararat was mentioned as a good model several times.*

B.1. RECOMMENDATION: The area municipalities should establish, expand, promote and coordinate the offering of adult education opportunities to area residents.

C. VOCATIONAL EDUCATION: *The area is currently served through the State's Vocational Technical Colleges, which are all outside the area (CMVTC in Auburn, SMVTC in South Portland and KVVTC in Fairfield). There is currently a significant waiting list at all of these facilities for the majority of their technical courses.*

C.1. RECOMMENDATION: The State Vocational Technical System should continue to coordinate the delivery of targeted vocational training programs through the secondary school facilities or through BNAS or BIW facilities, if appropriate. (NOTE: Research would need to be conducted at the time that the services would be offered to determine which training programs would result in alternative employment opportunities.)

D. COASTAL ECONOMIC DEVELOPMENT CORPORATION (CED): CED is the service delivery mechanism for employment and training services in the LMA. (NOTE: CED's service area covers upper Cumberland, Sagadahoc, Lincoln, Knox and Waldo; however, not all their services are available throughout this service area. For example, upper Cumberland receives its employment and training services through a similar agency based in Portland, the Training Resource Center.) CED provides employment and training services, weatherization services, fuel assistance services, housing services and Headstart services. The majority of the individuals and families receiving these services are low-income.

CED staff saw the demand for their general services increasing dramatically should a BNAS/BIW reduction or shut-down occur. There would be, at a minimum, an increased demand for employment/training services, emergency housing assistance, and fuel assistance.

D.1. RECOMMENDATION: CED should continue to work with BIW on the employment and training issues facing BIW workers laid-off in this transitional period. (NOTE: CED currently receives funding to work with this population; they anticipate those funds being sufficient through summer of 1993.)

D.2. RECOMMENDATION: CED should continue to work with the BNAS military staff displaced by current defense reductions through the TAPS program. (See Job Service recommendations below for details on the TAPS program.)

D.3. RECOMMENDATION: CED should continue to work with the state and federal Departments of Labor to bring employment and training funds into the area as the need occurs.

E. MAINE JOB SERVICE: The Job Service helps individuals seeking employment. They interview individuals to assess their skills and try to link them with available job openings. They also work with employers to identify available employment opportunities. The Bath/Brunswick office, which serves the entire LMA, has four staff. This year they saw over 6,000 individuals and listed over 900 jobs. The Job Service staff saw a number of issues related to a BIW/BNAS reduction or closure.

E.1. A need to develop a more balanced base of employment in the area. The Job Service Office often sees very high pay, high skill positions or low pay, low skills positions, but there are very few middle level (skills and wages) positions in the area.

RECOMMENDATION: Work to expand the area's economic base; offer incentives to do business in the state and the region. (See also economic and community development section.)

E.2. A need to continue and/or expand the TAPS program. TAPS (Transition Assistance Program) is a pilot program between the federal Department of Labor (DOL) and the Department of Defense (DOD) designed to "furnish employment and training information and services to members of the Armed Services within 180 days before such members are separated from the Armed Services". This pilot program is currently being offered at BNAS and utilizes staff from BNAS, Job Service and CED.

RECOMMENDATION: The state should advocate that this federal pilot program be institutionalized in the case of base closures. Resources (funding and staff) should be provided to underwrite the TAPS activities. (Currently, services are provided through existing Job Service staff.)

E.3. A need for career counseling. Currently, the Job Service Office does not have a career counselor on staff, although the staff in the office have experience providing basic career counseling.

RECOMMENDATION: Establish a career counseling mechanism to meet the increased demand (see Rapid Employment and Training Initiative (RETI) Team recommendations, under Human Capital section).

E.4. A need for increased staffing should BIW/BNAS reduce/close. The Office staff can serve between 5,000 and 7,000 applicants in a year. They would anticipate a much greater demand under the BIW/BNAS reduction/closure scenario. Although they are implementing new approaches (such as "touch screen" technology, where an individual, once interviewed, receives a card with a bar code that matches his/her skills to existing job opportunities without staff assistance), they would still be tremendously stressed. At the state level, DOL is instituting "floating staff" positions that could be available to local offices to cover local staff absences (such as extended sick leave or vacation) and might be available on a "crisis" basis.

RECOMMENDATION: The state should expand the Bath/Brunswick staff levels, if necessary to respond to the increased demand. (NOTE: The Training Resource Center, which provides employment and training services in Cumberland County, has just received funds to base a job counselor at the Maine Job Service Office in Brunswick three days a week. The job counselor will work primarily with individuals laid off at BNAS and Pineland Institution.)

F. 'RETI TEAM' MODEL: Nationally and in the state, the Department of Labor (DOL) has developed a Rapid Employment and Training Initiative to meet the needs of the workers displaced by business closures. This model brings together vocational training, remedial education, employment training, welfare assistance, unemployment services, and other human resources institutions at the community and state level to work as a team to meet the needs of the displaced worker. This model serves to coordinate the delivery of these diverse services to the displaced worker in a timely and efficient manner.

F.1. The area needs a mechanism to coordinate the delivery of human resources services to displaced workers.

RECOMMENDATION: A standing "human resources" Committee for the area should be established. This Committee should have a representative from every organization that serves individual clients in the human services area. This Committee should have at least two members to serve on the parallel Oversight Committee (see Community and Economic Development section). The purpose of the Committee should be to enhance the delivery of services through the coordination of those services. (NOTE: United Way, in conjunction with the Cooperative Extension Service, has recently initiated a meeting to explore the feasibility of establishing such an on-going communications/coordination vehicle.)

F.2. The area needs to consolidate the delivery of human resources services.

RECOMMENDATION: The human services delivery organizations should strive to develop a "one-stop" shop for individuals and families needing their services. Everything from employment and training to career counseling to health and welfare assistance should be available through this "one-stop" shop. (NOTE: There has been some discussion of using the Bath hospital site when vacated to serve as the "one-stop" site.)

F.3. The State Planning Office's report includes a recommendation that defense adjustment career centers be established in defense-dependent areas to provide one-stop service brokering for defense workers.

RECOMMENDATION: The Bath, Brunswick and Topsham area should support the establishment of these centers and one of these centers should be located in this area.

F.4. It appears that the needs of the "displaced" worker are different from the "disadvantaged" worker. The characteristics available on the workers laid off from BIW (that sought services through an employment and training center) indicated that the majority (over 93%) had a high school degree or better; were typically (over 83%) between the ages of 22 and 44; and, were male (over 82%). These characteristics preliminarily would suggest that the programs to meet their needs be designed and implemented differently from traditional training programs.

Also, there is a need to track the information from a "company" perspective as well as from an "agency" perspective. For example, of the ± 800 workers laid off from BIW over the past year or more, only 120 received services from CED. CED can only "track" the individuals who work with their agency. Consequently, there is no integrated mechanism for "tracking" what happens to all the individuals laid-off, nor for ensuring that these workers are receiving the assistance that they need to find new employment.

RECOMMENDATION: Whatever long-term approach is developed to address the needs of the dislocated worker, the approach should reflect a consistency of response on a company basis as well as on an individual worker basis.

LONG-TERM

Unlike the community and economic development situation in the area, the human capital institutions are in place. The major issues are additional resources (funding and staffing) and coordination of those resources.

At a time when the demand for human services resources will be significantly increased, the ability to fund those services will be reduced. For example, the MidCoast United Way, which funds over 40 organizations from daycare to counseling, receives almost 50% of its funds from BNAS and BIW contributions (corporate and employee). Without the infusion of significant state and federal funds, the region will not be able to respond to the human capital needs created by a major defense reduction.

5. CONCLUSION

This report represents only a first step in a complex process to assess the impact of defense spending on the Bath, Brunswick and Topsham region and to recommend initial action steps to address that impact. As the strategy recommendations indicate, economic diversification in an area that has traditionally been focused on one or two major businesses and/or facilities will require the commitment and participation of a number of actors: federal, state and local government; human services organizations; community and economic development organizations; and, last but most certainly not least, the businesses in the region.

Any crisis also implies an opportunity. There is an opportunity for the municipalities and the businesses in the region to work together in new ways to achieve economic prosperity. But the opportunity depends on the area's ability to stay on top of the changes in federal defense policy and its impact on the area; on local and state governments' ability to clearly identify their objectives and to coordinate the delivery of limited resources; and, on businesses' ability to create and maintain competitive niches in the area, in the state as a whole, and in an increasingly national and global business environment.

This is no small task, but the initial efforts of the citizens, municipal officials and business leaders are a strong start to addressing the challenge of keeping the Bath, Brunswick and Topsham area a good place to live, work and do business.

6. APPENDIX

A. Bath-Brunswick Labor Market Area

B. Oversight Committee Membership List

C. Defense Reduction Scenarios

D. Business Survey Summary

APPENDIX A.

Bath-Brunswick Labor Market Area (BBLMA)

Androscoggin County

- Durham

Cumberland County

- Brunswick
- Harpswell
- New Gloucester
- Pownal

Lincoln County

- Dresden

Sagadahoc County

- Arrowsic
- Bath
- Bowdoin
- Bowdoinham
- Georgetown
- Philpsburg
- Topsham
- West Bath
- Woolwich

APPENDIX B.

Bath-Brunswick-Topsham Oversight Committee

Duncan Ballantyne, City Manager, Bath

David Brown, Business Representative, Topsham

Dan Calderwood, Town Councillor, Brunswick

Herbert Caverly III, City Councillor, Bath

Larry Cilley, Town Manager, Topsham

Charles Crosby, Board of Selectmen, Topsham

Keith Citrine, Greater Bath Chamber of Commerce, Bath

Mathew Eddy, City Planner, Bath

Frank Flori, Town Planner, Topsham

Karla Gagnon, Business Representative, Bath

Donald Gerrish, Town Manager, Brunswick

David Gleason, Business Representative, Brunswick

Don McKissock, Business Representative, Topsham

Amy Naylor, Town Planner, Brunswick

Julie Phillips, BIW Representative, Bath

Ron Phillips, CEI Representative, Wiscasset

Wanda Plummer, Greater Brunswick Chamber of Commerce, Brunswick

Arthur Shean, Board of Selectmen, Topsham

Dana Totman, CED Representative, Bath

Charles Tibbetts, City Councillor, Bath

Charles Wiercinski, Town Councillor, Brunswick

H. Michael Wilson, BNAS Representative, Brunswick

APPENDIX C.

DEFENSE REDUCTION SCENARIOS

Assumptions

BIW

- The research and data collection from this project indicates that the BIW employment profile is unique in its importance to the labor market area as well as the state.
- Given the specialized job classifications within BIW, it must be assumed that in a total lay-off situation, only 20% of the work force could be assimilated into other comparable jobs in Maine.
- The majority of BIW "raw" material needs (sheet metal, engines and other major components) come from outside the state.
- The estimated total contract revenues from BIW to businesses in the state represents \$183,439,917 (in 1991). The BIW payroll represents an annual injection into the state of \$259 million. The employment payroll represents the major dependence factor to the BBLMA and the State of Maine, although the impact of its direct contracts with other Maine businesses can not be underestimated.
- The estimated share of BIW's contract activity with other businesses in the BBLMA is \$18,656,750. Again, the biggest direct impact to the LMA will be the lost wages (estimated at over \$102 million in the LMA) and the indirect impact to the secondary and tertiary economies that are driven by these wages.
- The Bath-Brunswick business survey returns and follow-up contacts indicate that some of the BIW contract activities have been on hold for the last few months to a year, due to BIW's waiting on contract announcements and other internal situations. Many of these businesses have been forced to find other contracts to supplement their revenue needs. The BIW contract revenues to area suppliers and/or vendors do not appear to represent a major portion of most individual businesses revenues, although a couple of the contracts do represent a significant majority of the individual business' total revenues.

- The effect of the lost BIW wages on the secondary and tertiary economies within the LMA was determined by a base multiplier for the BIW employees living in the LMA and a modified (reduced) multiplier for the BIW employees working in the LMA, but living elsewhere, who purchase services and retail commodities in the LMA. These scenarios use a theoretical base multiplier of 1.74, as a surrogate economic base factor. BIW is an industry that manufactures a product, U.S. Navy ships, that are for a market outside the BBLMA. The multiplier, 1.74, means that for every single worker in a basic industry (like BIW) an equivalent .74% of a worker in a non-basic sector is required to support that basic activity.

BNAS

- The naval air station has 789 civilian employees (540 or 68% living within the LMA) and 3,184 military personnel (2,709 or 85% living in the LMA).
- The civilian employee portion of the facility represents 2.4% of the BBLMA work force. The major problem associated with their displacement from BNAS is the increase in employment supply over demand in the event of a severe layoff or base closure.
- The BNAS military personnel represents a employed work force equivalent of 3,184 workers or a 9.7% income flow into the BBLMA economy for purchases of food, shelter and other goods and services. Their removal, combined with the civilian employment dislocation, would create a very serious impact.
- The BNAS has an annual payroll of \$78,000,000 and pays out almost \$45,000,000 annually for other goods and services to support the facility and its operations.
- The housing factors are significant to the BBLMA as 85% of the military personnel live within the LMA. Those living on-base include 575 individuals in enlisted personnel quarters and an estimated 826 personnel and families on-base. The remainder of the military personnel rent or own homes in the LMA.
- There are additional factors involving other support services that retired personnel depend on for base services. Some of these factors would net positive gains in outside employment (off-base) gains, if the retired individuals and families did not relocate to another area or state, near another military base.
- The BNAS property has potential alternative uses in the event of a base closure. The base has three main components, including the housing areas. The main base portion, with its runway and other major facilities, represents a significant

amount of land area in the Town of Brunswick. These facilities could provide for significant future industrial and commercial options in this area. The runway also gives Brunswick some options for a regional airport facility in the future.

- A theoretical base multiplier for this study is based on Federal Government (Military and Civilian) multipliers and equals 1.51 and 1.50, respectively. (A reminder that these multipliers for BIW and for BNAS are surrogates from other areas and studies and serve only for theoretical comparisons to provide some magnitude of employment displacement.)

Scenario 1: BIW closes down and BNAS maintains its present status

Under a BIW shut-down scenario, there would be approximately 8,500 employee layoffs involved, based on the short-term employment level BIW should reach in the next two years. Of that total number, approximately 3,350 will live within the BBLMA.

The direct impact to the BBLMA of a BIW closure would represent a 26.4% unemployment rate. This rate estimates only the direct impacts of BIW workers being laid-off and is based on the 1990 BBLMA labor force participation rates. Estimates show some of the municipalities in the LMA with unemployment levels as high as 33% (Bowdoinham) to several other towns, such as Dresden, West Bath and Woolwich, with unemployment rates in the low 20%.

If the theoretic multiplier effect, for the 8,500 BIW workers, were added to the direct impacts, then an additional 6,289 workers would be displaced in other secondary and tertiary sectors throughout the state. The secondary and tertiary impact factors within the BBLMA would be shared with the rest of the State, since 60% of the workers live outside of the BBLMA.

The BBLMA share of these factors would be at least 2,478 displaced workers, but there would be additional impacts for those service and other sectors supporting the remainder of the workers living outside the LMA. The BBLMA has probably provided the majority of the industry support requirements and other BIW employees' needs for "after hours" goods and services. A conservative estimate of these impacts within the LMA might be 4,000 secondary and tertiary employees in other sectors displaced by the BIW closure within the BBLMA.

The combined impacts of the BIW employees (8,500) being laid off and the additional secondary and tertiary employment losses (4,000) provides for a total unemployment figure of 12,500 jobs, or 38.8% for the BBLMA, added to the unemployment rate of that period.

An estimate of the secondary and tertiary effects of such an event would mean a reduction of at least 25% of total business revenues for all or most of the retail and

service sectors in the BBLMA, based on the returns of this study's business survey. Some of these returns may be thought of as underestimating the support of BIW workers and dependents and other economic factors of BIW's operation to the BBLMA economy.

Scenario 2: BNAS closes down and BIW maintains a Level of 8,500 Employees

Under this scenario, BIW maintains its current projected employment level of 8,500 workers while BNAS closes down. The impact of the direct civilian lay-offs would generate a BBLMA unemployment level of 2.4%. The displacement of the military personnel would not directly affect the BBLMA unemployment rate, but the multiplier effect would impact other civilian workers.

The effect to secondary and tertiary employment from the 789 civilian employees laid off would be an additional 395 employees laid off in the state. Again, as outlined in Scenario 1 above, since 68% live in the BBLMA, most but not all of those impacts would be within the LMA.

The effect to secondary and tertiary employment from the displacement of the 3,184 military personnel would be an additional 1,624 civilian workers laid-off in the state. Since 85% live in the BBLMA, most of these impacts would be within the LMA.

If a conservative approach were applied to this theoretical impact where only the secondary and tertiary impacts were computed for both civilian and military living in the BBLMA, then the total unemployment from a BNAS closure would be as follows: Direct displacement of 789 civilian employees, plus an additional 269 civilian employees (civilian employee multiplier effect), and an additional 1,380 civilian employees (military multiplier effect). This would mean a total civilian unemployment level of 2,438 employees, or 7.6%.

Scenario 2 would probably allow more of lead time to adjust to its ultimate effect and there are (currently) more federal programs to mitigate the impacts of a military base closure. A longer phasing out process (five years or more) and the nature of the physical location of the component parts of the BNAS allows for more options for reuse than Scenario 1 or the BIW properties allow.

Another factor is that the Cook's Corner area of Brunswick is a burgeoning regional retail and commercial center and that area is now somewhat restricted due to its close proximity to BNAS. There may be some more immediate commercial development options in that area. An additional factor is the new Topsham bridge, which will be located with an entrance ramp on to Old U.S. Route #1 that could also serve as a new entry point to the BNAS property, if the base were to be used as a regional airport or for other commercial/industrial activities.

The BNAS housing areas in Brunswick and Topsham might provide the opportunity to convert military housing into low and moderate income housing. BIW may be able to use some of the properties depending on their future outlook at that time.

Scenario 3: Both BNAS and BIW close

This scenario combines the impacts of both Scenario 1 and 2. This scenario's combined unemployment would involve the displacement of 9,289 civilian employees from the BBLMA and the removal of 3,184 military personnel from their contributions to the LMA's economy.

The effect of these employment factors on the secondary and tertiary economies would cause an additional 6,195 civilian employees to be unemployed. These numbers assume the same theoretical conditions as outlined in Scenarios 1 and 2. The combined direct and secondary and tertiary unemployment would represent a 48% unemployment rate.

All of the separate impacts stated in the above Scenarios 1 and 2 would apply to this scenario.

Scenario 4: BIW reduces their workforce to 6,000 workers with BNAS maintaining its current status.

This variation assumes a viable commercial shipbuilding alternative to supplement any severe cuts in military contracts, but not the complete elimination of military contracts. This BIW employment figure is between the currently projected 8,500 employment level and the lower employment levels of the 1970's (approximately 3,600). This scenario assumes an additional reduction in the BIW work force of 2,500 employees. A workforce reduction of 29% might also require a reduction in the number and type of facilities that BIW now operates.

BIW has laid off 826 workers in the last two years. Using information on these employees and their place of residence as a basis for this scenario, it could be assumed that 30.5% or 762 of the 2,500 additional laid-off workers will be residents of the BBLMA. The simple application of the multiplier used in the above scenarios would indicate another 564 employees displaced in the secondary and tertiary economies of the BBLMA. This would have an impact on the unemployment rate for the BBLMA of an additional 4.4% (or a total of 1,426 workers laid off), beyond whatever the base level was at that time.

The timing of this reduction, and the possibility of having a longer period of time to reduce the employment levels through early retirement and other means, would mitigate these impacts.

APPENDIX D.

Defense Dependency Business Survey Summary

The business survey, conducted in conjunction with the Bath and Brunswick Chambers of Commerce, was the major data collection activity in addition to compiling existing state and local data. The business survey was mailed to 691 firms, primarily the members of the Bath and Brunswick Area Chambers of Commerce. This mailing was augmented by the addition of the 38 major contractors and/or suppliers to BIW, if the businesses were not members of either of the Chambers. The survey was also published in the Coastal Journal, on June 9 & 10, 1992 (in the both Brunswick-Topsham and Bath-Waldoboro Issues):

There were 141 total respondents from both mailed surveys and the survey published in the Journal. 128 of these respondents were returned from the mailed surveys, an 18.5% return.

Overview

(Please refer to the sample questionnaire for the specific questions.)

1. **(BUSINESS TYPE)** The 141 respondents represented a wide variety of business types with retail operations being the highest percent of return (23.3%). Other areas of general business returns included Professional Services, Hotel/Motels, Real Estate, Medical Services, Restaurants, Construction, Insurance, Personal Services and Miscellaneous Repair, and Auto Repair.

The Industrial (manufacturing) respondents numbered 16 total, with the most returns (6 responses) from SIC code 51 (Wholesale Trade-Nondurable Goods). Other Industrial product categories included Food, Textile, Furniture and Fixtures, Printing and Publishing, Chemicals, Fabricated Metal, Industrial and Commercial Machinery, Electronic and Other Electrical Equipment.

2. **(DIRECT CONTRACTS; Question #1)** Sixty-six percent of the respondents had some type of direct contract with BIW, BNAS or other federal government agency contracts (Postal Service, federal medical subsidies, etc.). These business contracts were almost evenly split between BIW (41.6%) and BNAS (38.6%), with other federal contracts getting the remaining 19.8%.

3. **(PERCENT REVENUES; Question #2)** The question concerning the percent of total revenues from direct contracts had responses from 96 (68.1%) of the total businesses. 88.5% of the respondents had less than 25% of their total revenues derived from direct contracts to BIW, BNAS or other federal agencies or programs. The individual

responses reported included 64 (66.6%) with revenues of between 0 and 10%; 21 (21.9%) respondents with revenues between 11 and 25%; and, the remaining 11.5% were reported with more than 26% revenues derived from federal contracts and were sparsely spread out between the remaining categories: 5 responses for 26-50%, 4 responses for 51-75% and 2 responses for over 75.5%.

4. **(INDIRECT CONTRACTS; Question #3)** There were 82 (58.2%) respondents answering the question concerning indirect defense contracts or business through other direct contracts. Of that total, 35 (42.7%) were indirect contracts related to BIW, 26 (31.7%) related to BNAS and 21 (25.6%) related to other federal contracts.

5. **(PERCENT REVENUES; Question #4)** The percent of revenues derived from these indirect contracts had a high correspondence to that of direct contracts: 87% of the respondents had revenues from indirect contracts representing less than or equal to 25% of total revenues. Again, the highest category was 0 to 10%, with 61 (70.9%) respondents; 16 (18.6%) of the respondents in the 11 to 25% category; and, the remaining 10.5% for the next three categories.

6. **(SERVICE TO BIW/BNAS EMPLOYEES/DEPENDENTS; Question #5)** 137 (97.3%) respondents answered the question related to serving BIW and/or BNAS employees or dependents. The array of categories was again weighted to the lower percentage categories, but not as heavily in the preceding questions. The responses were: 57 (41.6%) at 0 to 10%; 37 (27%) at 11 to 25%; 30 (21.9%) at 26 to 50%; 11 (8%) at 51 to 75%; and 2 (1.5%) for more than 75%. The business activity related to services to the employees or dependents of BIW and/or BNAS represented a fairly high per cent of the respondents total business activity and shows a higher percentage than many of the direct or indirect contract sources, above.

7. **(NUMBER OF EMPLOYEES; Question #6)** The size of the companies responding to the survey weighted to the smaller companies, with 69 responses (48.9%) with less than 5 employees and 31 responses (22%) with between 6 and 15 employees. Over 70% of the respondents had 15 employees or less. Only 16 responses (11.3%) indicated having more than 50 employees. In the remaining categories, 8 responses (5.7%) indicated 16 to 25 employees and 17 responses (12.1%) indicated 26 to 50 employees.

8. **(TYPE OF WORKER MIX; Question #7)** The responses to the question about the worker mix in the business reported a worker mix of: 27.1% -- "Minimally skilled"; 43% "Semi-skilled"; and, 29.9% "Highly skilled". The responses to this question suggest some confusion since the terms minimally, semi-skilled and highly skilled were not defined.

9. **(HIRING TRAINED WORKERS; Question #8)** 114 responses (89.1%) indicated that they were able to hire the trained workers the business needed.

10. **(GROSS ANNUAL REVENUES; Question #10)** Two-thirds of the respondents (94 responses/66.7%) completed this question. 63 of the number responding (67%), had gross annual revenues over \$250,000; 40 responses (42.6%) indicated revenues over \$500,000; and 26 responses (27.7%) indicated revenues of over \$1,000,000.

11. **(PERCENT TOTAL REVENUES; Question #11)** Thirty-six respondents (25.5%) reported on the percentage of their total revenues related to direct contracts, with 83.3% of those reporting direct contracts as 25% or less of their total revenues. Thirty-six respondents (25.5%) reported on the percentage of their total revenues related to indirect contracts, with 75% of those reporting indicating indirect contracts as 10% or less of their total revenues. Eighty-six respondents (61%) reported on the percentage of their total revenues related to service to BIW/BNAS employees and dependents, with 81.4% indicating service to BIW/BNAS employees and dependents as 50% or less of their total revenues. These results indicate a heavier reliance among the respondents on serving BIW/BNAS employees and dependents, than on direct or indirect contracts to BIW or BNAS.

12. **(EMPLOYEE GROWTH; Question #12)** 128 (90.8%) respondents answered the question regarding projected employee growth over the three years. 68 respondents (53.1%) saw no change in their employment level. 58 respondents (45.3%) projected an increase in their employment level. Only 2 respondents (1.6%) indicated a decrease in employment level.

13. **(NEW PRODUCTS/SERVICES; Question #13)** In response to the question on whether the business is developing new products or services to reduce their reliance on defense industries, 116 (82.3%) responded in the negative and 39 (33.6%) responded in the affirmative.

14. **(ALTERNATIVES; Question #14)** The next question referred as to what a business would need to pursue a product or service alternative. Of the 39 responses (some had multiple responses), 21 needed "additional financing"; 13 had "new equipment" needs; 13 had "employee training" needs and the remaining 19 responses fell into the "other" category. The most often repeated "Other" listed was marketing, with 11 respondents.

15. **(PROBLEMS; Question #15)** The next question inquired as to any problems that might be expected in getting the alternative supporting requirements (referencing Question #14 above), 27 responses indicated they did not anticipate a problem and 13 did anticipate a problem.

16. **(FOLLOW-UP; Question #16)** The final question asked if the respondent would be interested in a follow-up call or visit for more information, and only 15 (12.9%) were interested in any follow-up.

Survey Conclusions

While the survey was not comprehensive in the extent of the businesses in the area nor in the number of surveys returned, the return was as high or higher than previous business surveys conducted in the area. There appeared to be some discernable trends in the results.

- Not surprisingly, 66% of the businesses surveyed had a direct dependence and 58.2% had an indirect dependence on BIW, BNAS or other federal contracts. What is perhaps more surprising is that the majority of these respondents (over 88% direct and over 89% indirect) reported less than 25% of their total annual revenues dependent on these sources.
- The majority of the firms that responded (70.9%) had 15 or less employees, which reflects the state-wide trend of approximately 85% of the businesses in the state having 20 or less employees.
- The skill levels of the respondent's businesses and their general lack of problems in finding suitable employees was surprising, although the questions' wording may have caused some problems.
- Another surprising answer was that 98.4% of the businesses responding indicated that they saw no change or an increase in employment in the near future (next three years).
- The business "mix" of the survey respondents had the greatest majority 130 responses (92.2%) in the non-manufacturing sectors. Although follow-up calls were made to manufacturing businesses, this ratio does not accurately reflect the business mix in the area.

(Business survey sample and charts follow.)

Defense Dependency Survey

All Information provided in the following survey will be kept entirely confidential.

The purpose of the survey is (1) to determine the economic impact of federal defense budget cuts in the greater Bath, Brunswick, and Topsham area as well as in Sagadahoc/Kennebec counties, and (2) to identify the needs of employers and employees that are dependent on defense dollars. Local, regional and statewide strategies will be developed to assist those affected by proposed defense industry cuts. Data from this survey will be collated, processed and presented in a document to the Maine State Planning Office and the U.S. Economic Development Administration. A copy of a final report on this analysis will be made available to anyone responding to the survey (by late summer).

Firm Name: _____ Date: _____

Contact Person : _____ Phone Number: _____

Address: _____ City/Town _____ Zip: _____

Type of Business: _____

1. Is any part of your business a result of direct contracts with: *(Check all that apply)*

____ BIW ____ BNAS ____ other federal government contracts

2. What percentage of your total business revenues are related to these contracts. *(Check one)*

____ 0-10% ____ 11-25% ____ 26-50% ____ 51-75% ____ over 75%

3. Is any part of your business a result of indirect defense contracts (through another business):

____ BIW ____ BNAS ____ other federal government contracts

4. What percentage of your total business revenues are related to these contracts.

____ 0-10% ____ 11-25% ____ 26-50% ____ 51-75% ____ over 75%

5. What percentage of your business serves BIW and/or BNAS employees or dependents?

____ 0-10% ____ 11-25% ____ 26-50% ____ 51-75% ____ over 75%

6. How many employees are currently employed in your company (all locations)?

____ under 5 ____ 6-15 ____ 16-25 ____ 26-50 ____ over 50

7. What type of worker mix does your business require?

____ % Minimally skilled employees (minimum education or training).

____ % Semi-skilled employees (some education or specialized training).

____ % Highly skilled employees (highly technical skills or advanced degrees).

8. Are you able to hire the trained workers you need?

____ Yes

____ No

9. Please list the types of employees your business employs (secretary, sales rep, welder, etc.).

a. _____
b. _____
c. _____

d. _____
e. _____
f. _____

10. Please indicate your business' gross annual revenues (OPTIONAL).

____ \$25-75,000

____ \$75-150,000

____ \$150-250,000

____ \$250-500,000

____ \$500-1 million

____ over \$1 million

11. Please indicate what percentage of your total revenues are related to:

____ direct contracts with BIW, BNAS, or other federal contracts

____ indirect contracts with BIW, BNAS, or other federal contracts

____ serving BIW, BNAS employees or dependents

12. What are the projected total number of employees (all locations) in the near future?

____ 1993

____ 1994

____ 1995

13. Are you developing new products or services to reduce your business reliance on defense related contracts?

____ Yes

____ No

14. Will the alternatives require (Check all that apply):

____ additional financing

new equipment

____ employee retraining

other; list: _____

15. Do you expect any problems addressing the steps outlined in Question 14? Please explain.

16. Would you be interested in a follow-up call or visit to provide more information on reducing defense dependency in your business?

____ Yes

____ No

THANK YOU!! If you have any questions or concerns about this survey, please contact:
David Allender at (207) 622-7146.

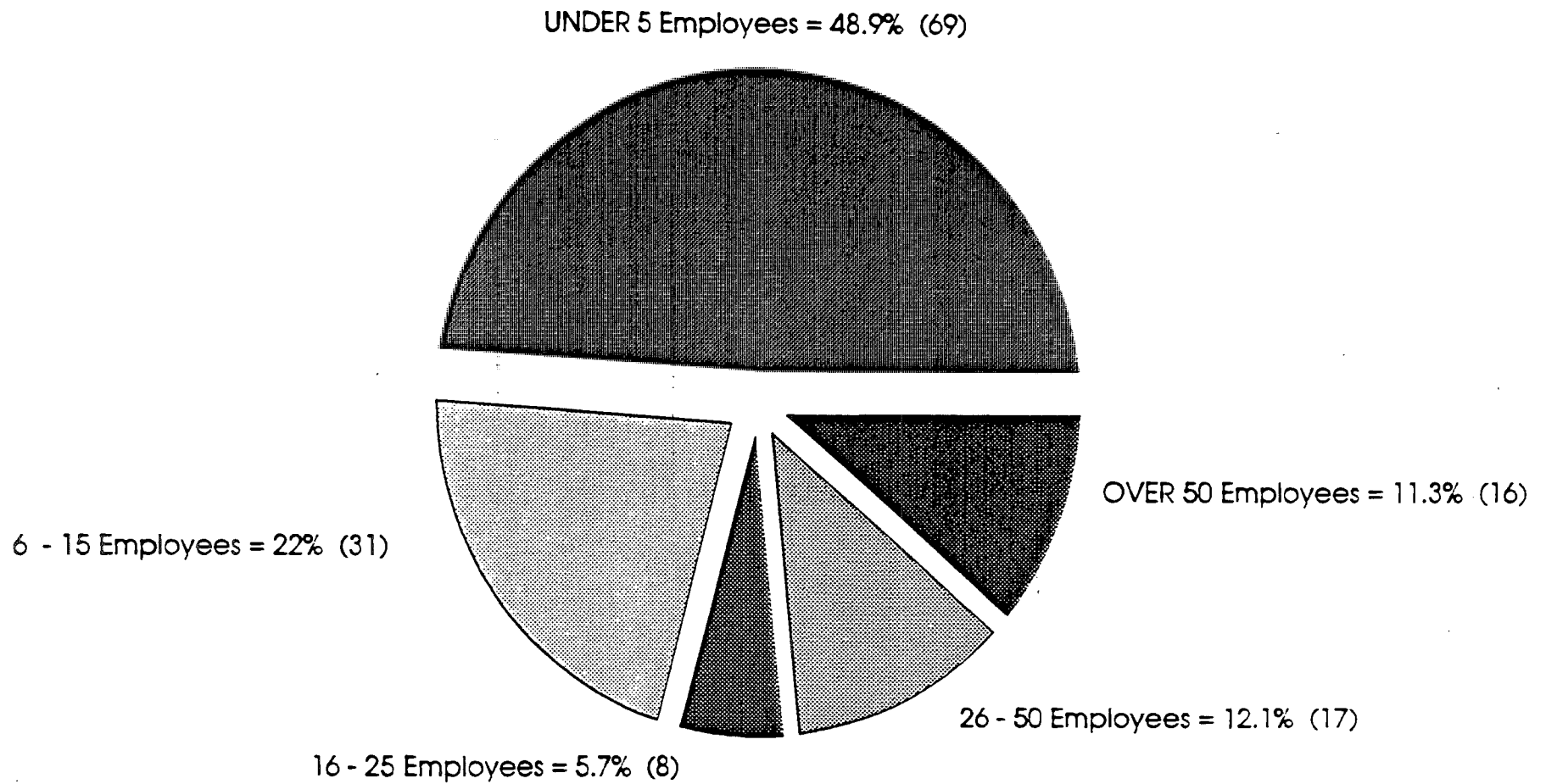
Return survey to:

Capital Coastal Council of Governments

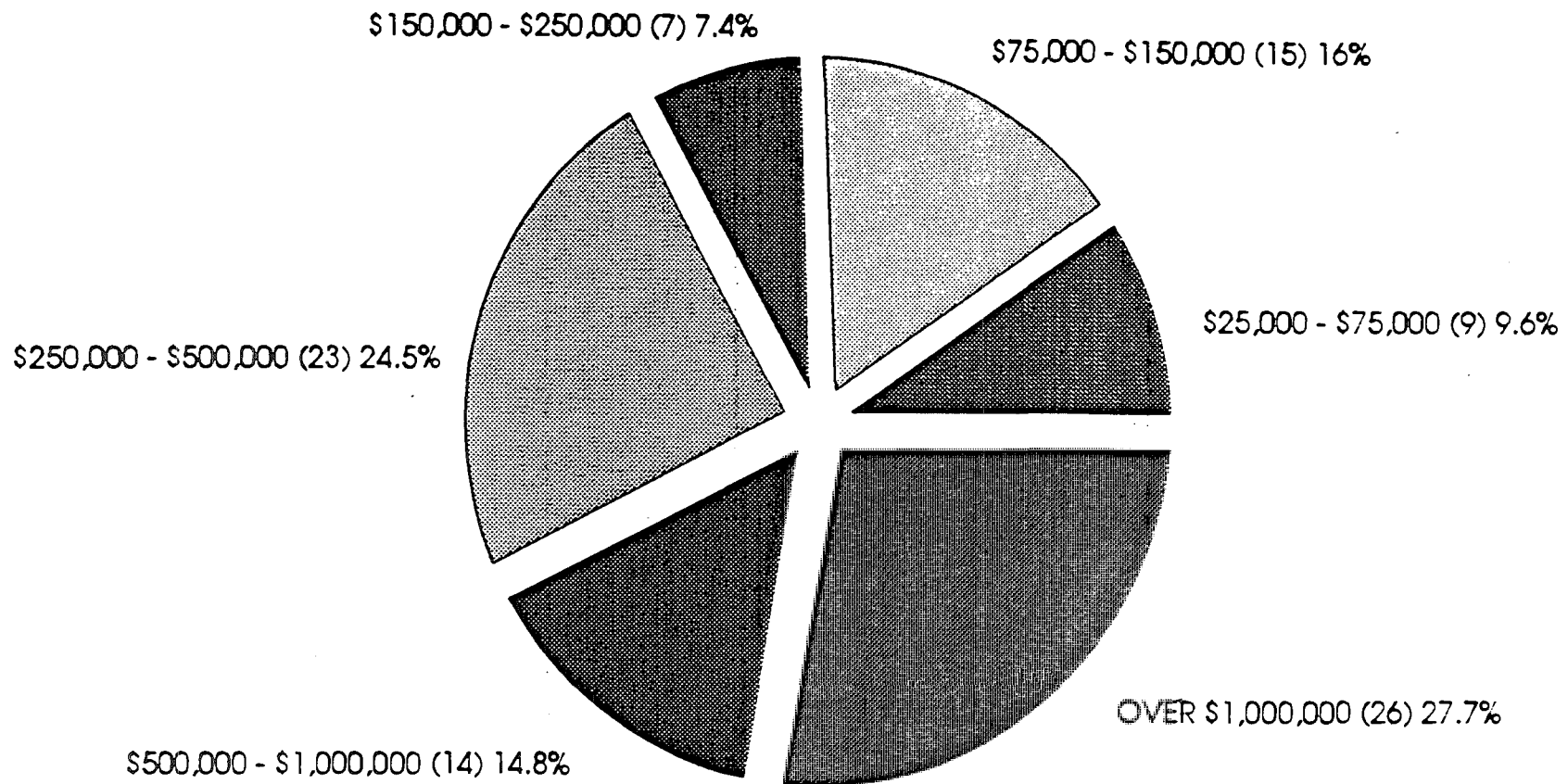
89 Western Avenue

Augusta, ME 04330

Defense Dependency Analysis for the Bath, Brunswick, Topsham Area
Number of Employees of Business Survey Respondents



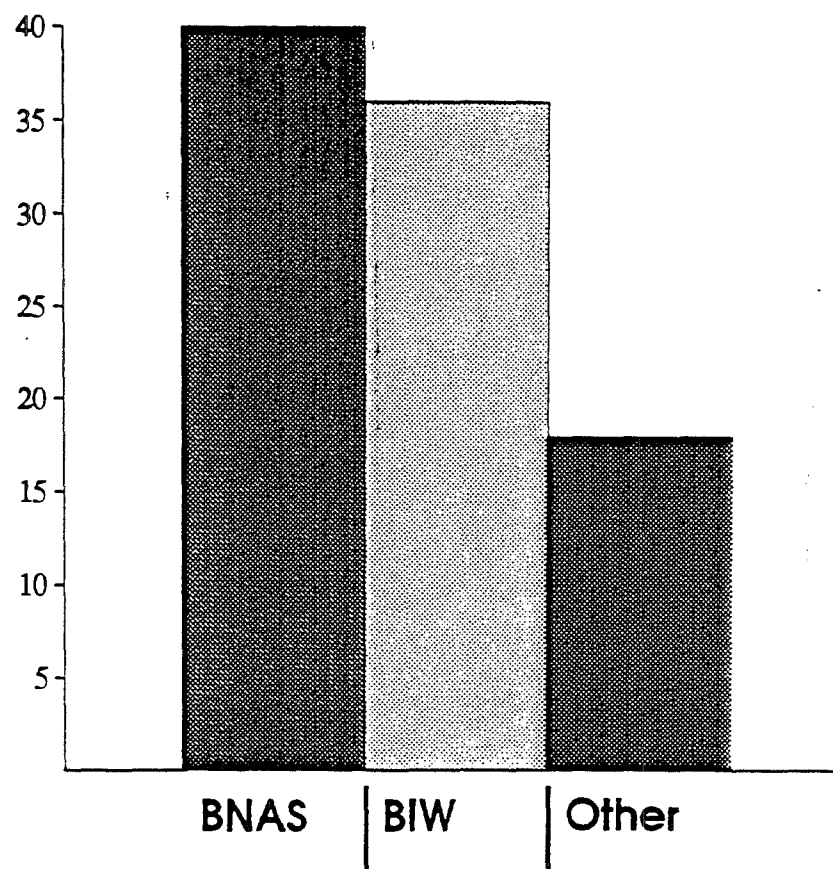
Defense Dependency Analysis for the Bath, Brunswick, Topsham Area
Total Annual Revenues of Business Survey Respondents



NOTE: 141 respondents; 66.7% (94) provided revenue information; 33.3% (47) did not.

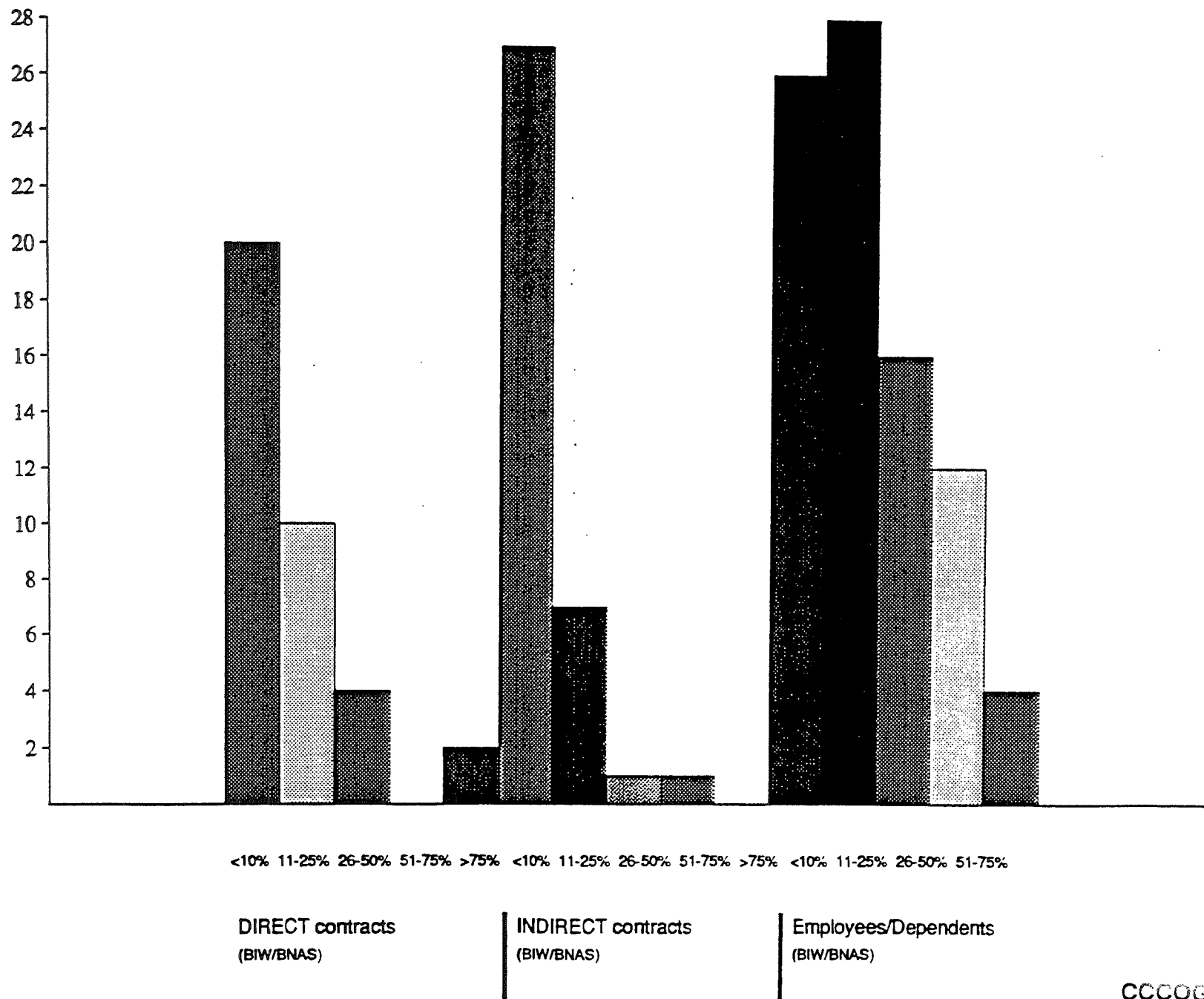
Defense Dependency Analysis for the greater Bath, Brunswick, Topsham Area

Number of Business Survey Respondents with Direct Defense Subcontracts



NOTE: 141 respondents; 94 (66.7%) responded to this question

Defense Dependency Analysis for the greater Bath, Brunswick, Topsham Area
Defense Related Activities of Business Survey Respondents



APPENDIX 6

DEFENSE DEPENDENCY ANALYSIS
FOR ANDROSCOGGIN, FRANKLIN, OXFORD COUNTIES
WITH RECOMMENDATIONS FOR LOCAL, REGIONAL,
MULTI-REGIONAL AND STATEWIDE IMPLEMENTATION

Prepared for:
The Maine State Planning Office

Prepared by:
The Androscoggin Valley Council of Governments
Auburn, ME

August, 1992

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Appendix A.Defense Survey

Appendix B.Committee Membership List

 -Overall Economic Development Program/Subregional Policy Advisory
 Committee

 -Workers in Transition Committee

Appendix C.Newspaper Articles

1. EXECUTIVE SUMMARY

This report offers an assessment of the Androscoggin Valley Council of Governments territory defense dependency. The State Planning Office asked the Androscoggin Valley Council of Governments (AVCOG) to conduct this regional defense dependency so that the results may be incorporated into a State-wide study currently underway. The State-wide study will provide an assessment of Maine's defense dependency.

Although, the AVCOG territory does not include any major military or defense facilities, two facilities located outside the AVCOG territory are recognized to have profound impacts on the western Maine economy. These two facilities include the Brunswick Naval Air Station (BNAS) and Bath Iron Works (BIW) located along the coast of Maine in the communities of Brunswick and Bath, Maine respectively.

Defense dependency for the AVCOG region was analyzed in the following three ways:

1. impacts to employment (defense related facility workers),
2. impacts to businesses involved in defense work and
3. impacts to communities where defense dependent businesses and workers reside.

Significant findings of this analysis include:

- Defense dependency of workers, businesses and communities is limited to Androscoggin County.
- Over 2,000 Bath Iron Works (BIW) and over 200 Brunswick Naval Air Station (BNAS) employees reside in Androscoggin County.
- The highest concentrations of defense dependent workers (individuals employed directly by BIW or BNAS) reside in four communities – Auburn, Lewiston, Lisbon, Sabattus.
- Coincidentally as traditional industries located in Androscoggin County declined, during the 1980's, BIW and the BNAS increased their demand for goods and services due to increased defense expenditures.
- Over 250 businesses involved in defense work are located within the entire AVCOG region. Two hundred of those businesses are located in Auburn, Lewiston, Lisbon and Sabattus. Over eighty percent of the businesses located in the four communities contract directly with BIW or BNAS.

- The type of businesses involved in defense work is varied from the service sector to wholesale distributors and manufacturing businesses.
- In general, AVCOG region business dependence is low (less than twenty percent of total sales)
- It is estimated that there are over 460 jobs associated with local businesses that are dependent upon future defense work.
- Summing the number of local residents employed directly at BIW or BNAS (2,200), this figure total approximately 2,700 individuals whose jobs are dependent upon defense work.

The above findings provide startling information about the reliance of Androscoggin County workers, businesses and communities to one military installation (BNAS) and one private corporation (BIW) located outside the AVCOG region. The extent of impacts to workers, businesses and communities depends greatly upon the fate of the defense industry in Maine, the capability of the businesses involved in defense work to reduce their dependency and the preparedness of communities to actively assist in this transitional economic period.

This analysis recommends mechanisms for multi-jurisdiction defense adjustment activities. The mechanisms are presented in the form of "recommendations" for local, regional, multi-jurisdictional and state implementation.

**DEFENSE DEPENDENCY ANALYSIS
SURVEY OF SUPPLIERS
ANDROSCOGGIN, FRANKLIN, OXFORD COUNTIES**

conducted by the Androscoggin Valley Council of Governments, Auburn, Maine

All information provided in the following survey will be kept entirely confidential. The purpose of the survey is to determine the economic impact of federal defense budget cuts in Maine and to identify needs of employers and employees dependent on defense dollars. Local, regional and statewide strategies will be developed to assist those affected by the cuts. Data will be aggregated, processed and presented in a document to the Maine State Planning Office and the U.S. Economic Development Administration. A copy of the AVCOG region defense dependency analysis report will be made available to you upon completion of the project (this summer). We understand that some of the questions we ask may be difficult to answer; but, please try and provide estimates where possible.

1. Name of business: _____

2. Contact name: _____

3. Mailing address: _____

4. Daytime phone: _____

5a. Type of business: _____

5b. Standard Industrial Classification (please provide 4 digit code, if known. If not, please provide 2 digit code from list below): _____

Manufacturing

20 Food, etc.
22-23 Textiles, apparel
24 Lumber and wood products
25 Furniture and fixtures
26 Paper, etc.
27 Printing, publishing
28 Chemicals and allied products
 (drugs, soap, paints etc.)
29 Petroleum and coal products
30 Rubber and misc. plastics
31 Leather and leather products
32 Stone, clay, glass products
33 Primary metal industries
34 Fabricated metal products
35 Industrial machinery and equip
36 Electronic, etc.
37 Transportation equip
38 Instruments and related products
39 Misc manuf (jewelry, toys,
 office supplies, signs. etc.)

Non-Manufacturing

07-09 Agriculture, Forestry, Fishing
10-14 Mining
15-17 Construction
42 Trucking and warehousing
48 Communication
49 Electric, gas and sanitary services
50 Wholesale Trade
52 Retail: Building materials, garden supplies
53-59 Other Retail:
60-67 Finance, Insurance, Real Estate
73 Business Services
80-83 Health, Legal, Educational,
 Social Services

6a. Have you, in the past 3 years, had sales/contracts with the Department of Defense, and/or any other defense related industries (BIW, Brunswick Naval Air Station, or indirectly through other business, subcontracts, etc.)?

☐ yes, please specify _____
☐ no

6b. What approximate percentage of your total business sales/contracts have been with defense related industry during each of these years:

☐ 1989 ☐ 1991
☐ 1990 ☐ 1992 (first 6 months)

7. Approximate number of full-time equivalent employees (40 hours/week) as of June for each of the following years:

	'89	'90	'91	'92	est. '93	est. '94
Total Employment:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Defense-related Employment:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

8. What are the occupations, number of employees per occupation, skill level and income ranges of defense-related employees -- currently and projected?

# emp. 1992	# emp. 1993	# emp. 1994	Occupation/Job Title	Skill Level *	Income Range **
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

* H highly skilled

S semi skilled

M minimally skilled

** a \$0 - \$14,999

b \$15,000 - \$24,999

c \$25,000 - \$34,999

d \$35,000 - \$49,999

e \$50,000+

9. Where do your company's defense-related employees reside (approximate percentage):

_____ % in the town/city where your company is located
_____ % outside of your company's town/city but in the same county
_____ % outside of the county

10a. Anticipating cuts in the defense industry, has your company considered finding other markets to replace defense related contracts?

_____ yes
_____ no

10b. If yes, what markets are being considered (check all that apply):

_____ in Maine
_____ in New England
_____ in U.S.A.
_____ Outside U.S.A.
_____ commercial/private
_____ government/other public

11. Is your company involved in any international exporting at this time?

_____ yes
_____ no

12. Please rate your interest in receiving public assistance or access to programs in the following areas by placing a check mark on the appropriate lines:

	<u>High</u>	<u>Med.</u>	<u>Low</u>
a. market research			
in Maine	_____	_____	_____
national	_____	_____	_____
international	_____	_____	_____
b. marketing, promotion techniques	_____	_____	_____
c. exporting technical assistance	_____	_____	_____
d. research and development funds	_____	_____	_____
e. loans for retooling, etc.	_____	_____	_____
f. funds for retraining employees	_____	_____	_____

Other, please explain:

13. Business name, contact name, location and phone number of your suppliers, subcontractors, or other known businesses which may be affected by defense industry decline:

14. Comments, and other important information we should know about your company as it relates to defense related work:

THANK YOU !!

2. INTRODUCTION

The Androscoggin Valley Council of Governments (AVCOG) in March, 1992 contracted with the Maine State Planning Office to conduct a regional defense dependency analysis for the AVCOG territory located in western Maine.

AVCOG was considered to be the best agency qualified agency to conduct the regional defense dependency analysis because of its understanding the economic development issues affecting western Maine. The Androscoggin Valley Council of Governments is a non-profit quasi-governmental corporation which was established to provide regional cooperation in the areas of economic and community development, physical and environmental planning for the counties of Androscoggin, Franklin and Oxford Counties (Figure 1 on the next page identifies this three county territory).

Although, the AVCOG territory does not include any major military or defense facilities, two facilities located outside the AVCOG territory are recognized to have profound impacts on the western Maine economy. These two facilities include the Brunswick Naval Air Station (BNAS) and Bath Iron Works (BIW) located along the coast of Maine in the communities of Brunswick and Bath, Maine respectively (refer to Figure 2 on page 5).

The defense dependency analysis identifies the potential short and long-term defense reduction impacts related to employment (defense related facility workers), businesses and communities located within western Maine. Additionally, this analysis recommends mechanisms for multi-jurisdiction defense adjustment activities. The mechanisms are presented in the form of "recommendations" for local, regional, multi-jurisdictional and state implementation.

This analysis was provided to the Maine State Planning Office for their incorporation into a state-wide defense dependency analysis. The state-wide analysis which is being conducted and coordinated by the Maine State Planning Office should be completed in the fall of 1992.

FIGURE 1

AVCOG

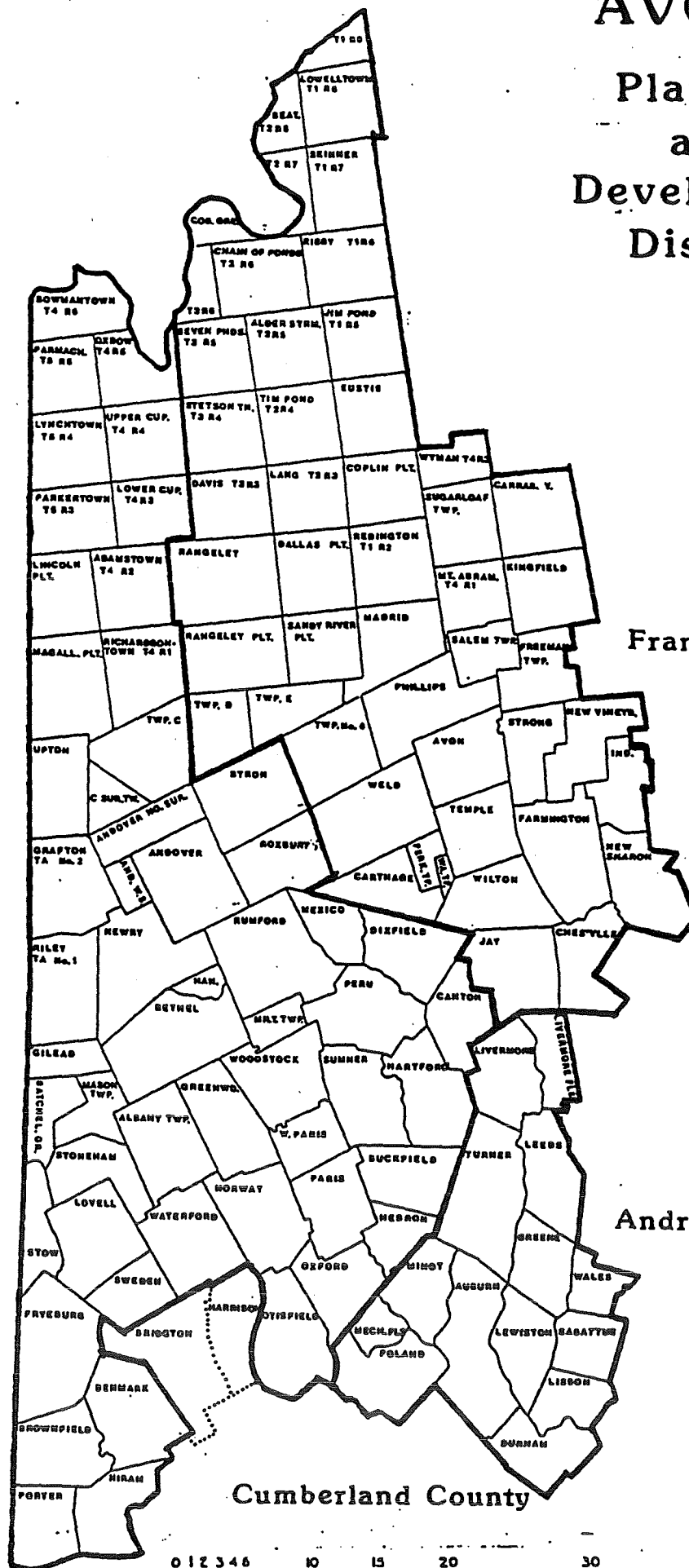
Planning and Development District

Oxford County

Franklin County

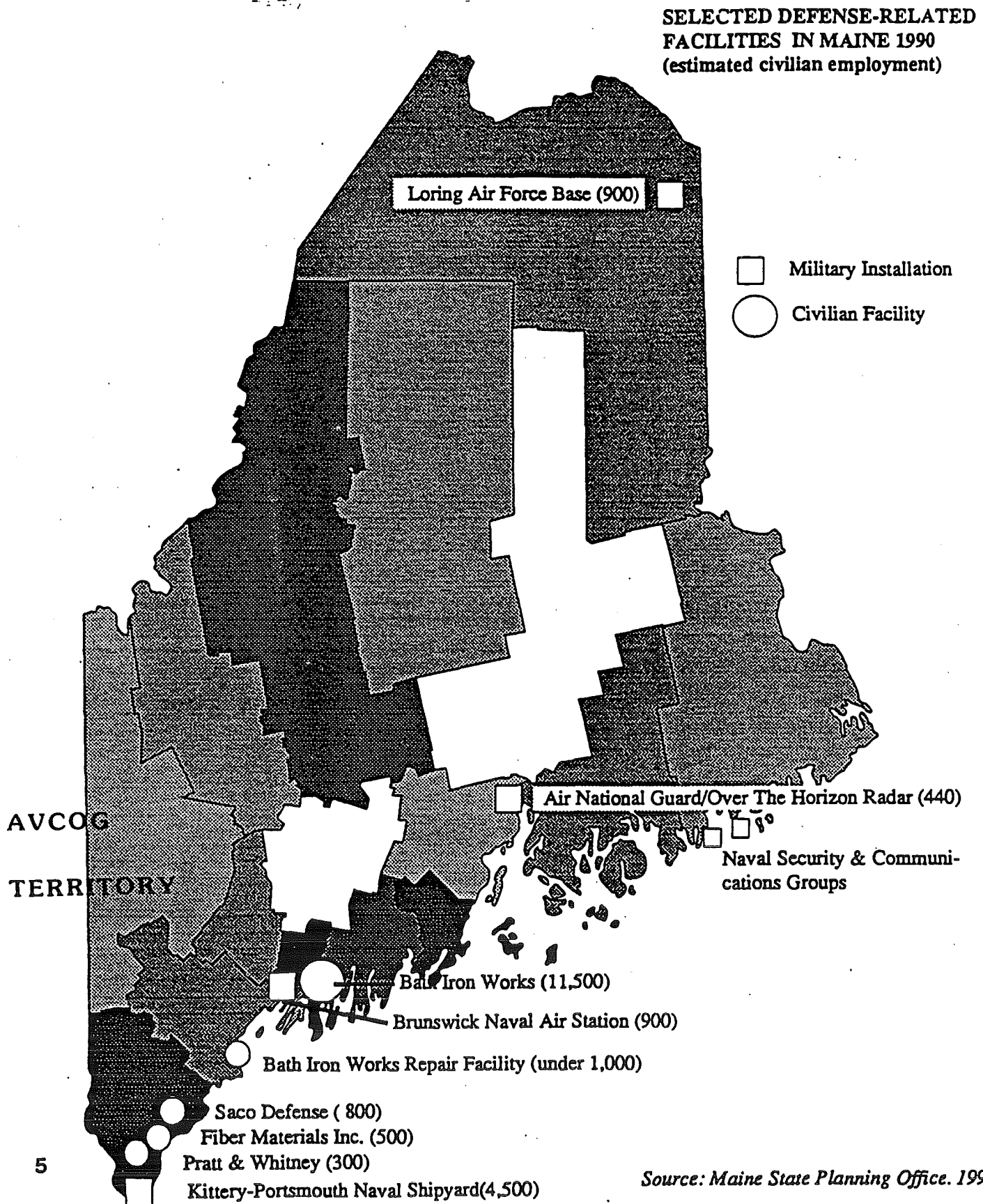
Androscoggin County

Cumberland County



0 1 2 3 4 6 10 15 20 30

FIGURE 2



3. ECONOMIC OVERVIEW

Introduction

Androscoggin, Franklin and Oxford Counties are located in western Maine. The three counties include 4426.1 square miles covered with significant natural resources (woods, fields, mountains, lakes, and rivers). There are 75 communities located within this tri-county area with a total population in 1990 of 186,869. Lewiston and Auburn are the largest communities in western Maine and combined form the second largest urban community in the State, after Portland. Lewiston and Auburn (L/A) are located about 30 miles north of Portland and lie in the south east portion of the tri-county area. Combined L/A host more employment than any other part of the region, and dominate commercial and retail sales in western Maine. Several smaller employment and retail centers are located west and south of L/A. These centers include Lisbon, Livermore Falls/Jay, Farmington/Wilton, Norway/Paris, Rumford/Mexico, and Rangeley.

This tri-county area includes many traditional industries (shoe, textiles and lumber) In the early 1980's, the major industries experienced significant lay-offs and closings due to declines in manufacturing and competition from abroad. During the 1980's the economy began to support a more diverse base of manufacturing, and the private sector burgeoned with business and health services as well as consumers service. This was a period of unprecedented growth in Maine, however, this tri-county area did not share equally in that growth. A majority of the growth in Maine during this time period can be attributed to a growth in the New England economy in general which served as a catalyst for speculative construction activities. The Unemployment rates during the 1980's were higher than the state average, however, they remained consistent with or below the national average. The labor force, which had been shrinking early in the decade due to outmigration of the working age population, began to grow. Additionally, per capita incomes which languished at 70-80% of the national levels, began to increase.

The remainder of this section will provide an economic overview discussion for each of the three counties located in western Maine. However, a more detailed discussion for Androscoggin County is provided because the findings of this analysis have determined that the defense dependency of western Maine is limited to Androscoggin County. Brief economic overview discussions are provided for both Franklin and Oxford Counties.

Androscoggin County – Historic Discussion

Androscoggin County is principally made up of the Lewiston/Auburn Metropolitan Statistical Area (L/A MSA) and the Livermore Falls labor market area (LMA). Two communities located within Androscoggin County, Minot and Wales, are excluded from these two areas because they are included in adjoining labor market areas. The L/A MSA includes the communities of Auburn, Durham, Greene, Lewiston, Lisbon, Mechanic Falls, Poland and Sabattus. The Livermore Falls LMA includes the communities of Leeds, Livermore, Livermore Falls and Turner.

The L/A MSA is dominated by L/A which are located in the southern portion of Androscoggin County. These two communities began to diversify from a mill based low wage economy to a serviced based economy during the 1980's. However, they still remain largely dependent upon manufacturing for employment (23% as of 1990). During the 1980's, the health care industry emerged as one of the larger employers in this area. The chart on page 9 provides a break-down of the resident employment of Androscoggin County by industry.

**Lewiston-Auburn Metropolitan Statistical Area
Non-Farm Wage and Salary Employment
1984-90**

	1984	1990	% Change
Total	36,550	38,910	6.46%
Total Manufacturing	11,480	8,760	-23.69%
Durable	2,320	2,310	-0.43%
Lumber & Wood	120	300	150.00%
Logging	20	50	150.00%
Non-Durable	9,160	6,440	-29.69%
Printing/Publishing	550	730	32.73%
Leather, Leather Prod.	3,540	1,730	-51.13%
Total Non-Manufacturing	25,070	30,160	20.30%
Construction	1,530	1,860	21.57%
Special Trade	1,140	1,420	24.56%
Trans/Utilities	1,320	1,350	2.27%
Wholesale Trade	1,900	2,170	14.21%
Durable Goods	980	1,130	15.31%
Retail Trade	6,460	7,870	21.83%
Finance, Insurance, Real Estate	1,750	2,320	32.57%
Services & Mining	8,810	10,680	21.23%
Health Services	4,090	4,480	9.54%

**Livermore Falls Labor Market Area
Non-Farm Wage and Salary Employment
1984-90**

	1984	1990	% Change
Total	1,700	1,970	15.88%
Total Manufacturing	n/a	140	
Durable	90	n/a	-100.00%
Lumber & Wood	n/a	n/a	
Logging	10	n/a	-100.00%
Non-Durable	n/a	n/a	
Printing/Publishing	n/a	n/a	
Leather, Leather Prod.	n/a	n/a	
Total Non-Manufacturing	1,250	1,830	46.40%
Construction	100	180	80.00%
Special Trade	60	140	133.33%
Trans/Utilities	20	50	150.00%
Wholesale Trade	40	50	25.00%
Durable Goods	*	30	
Retail Trade	380	590	55.26%
Finance, Insurance,			0.00%
Real Estate	50	50	
Services & Mining	220	360	63.64%
Health Services	100	140	40.00%

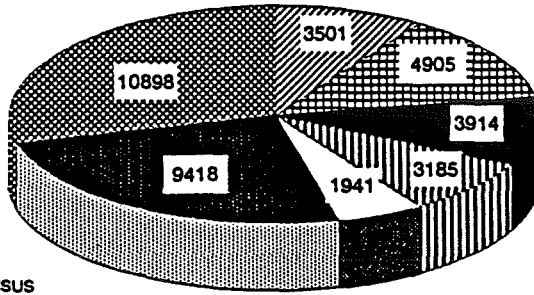
The Livermore Falls LMA economic base is primarily dependent upon lumber and wood products and is heavily tied to paper manufacturing (International Paper is located in neighboring Jay, Maine). In the early 1980's this LMA and other surrounding areas faced severe cutbacks in the shoe industry, a traditional employer for the region. However, in the early part of the 1990's the Livermore Falls LMA recaptured some of the jobs lost in the shoe industry.

The housing market for this County became increasingly linked with greater Portland, during the 1980's, as households working in the Portland area relocated to more affordable communities including the Lewiston-Auburn area.

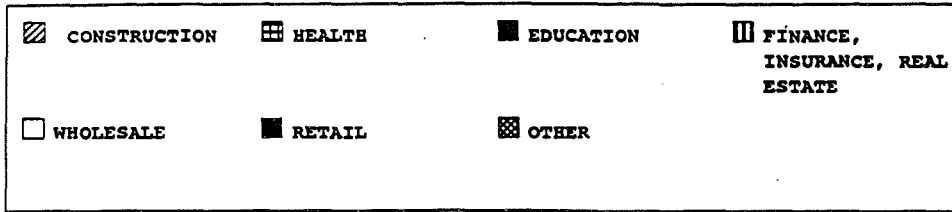
While the population growth of Androscoggin County has been growing steadily between 1980 and 1990 (5.6%), the rate of growth for this same time period was slower than the State (9.2%). One interesting occurrence related to this population growth was that it primarily occurred outside L/A (refer to the chart on page 10). Other trends include:

- An age distribution for Androscoggin County which is reflective of State and national trends. During the 1980's, the 18 to 44 age group increased by 16%, the 65 and over group grew by 11%, and the 0-4 age group grew by 8%. Both the 5 to 17 age group and the 45 to 65 age group decreased in population.
- Household size decreased from 2.73 persons per household in 1980 to 2.55 persons per household by 1990. This occurrence also was reflective of State and national trends.

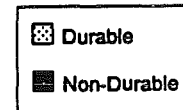
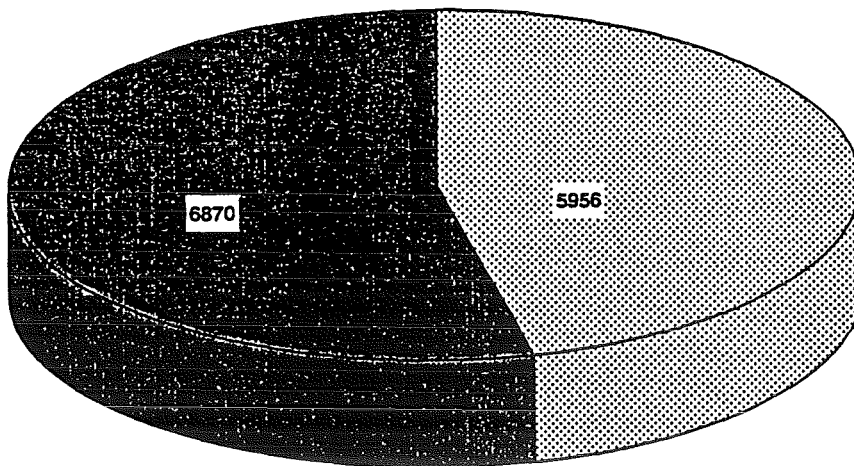
**ANDROSCOGGIN COUNTY RESIDENT EMPLOYMENT NON-MANUFACTURING BY
INDUSTRY**



SOURCE 1990 U.S. CENSUS



**ANDROSCOGGIN COUNTY RESIDENT EMPLOYMENT MANUFACTURING
BY INDUSTRY**

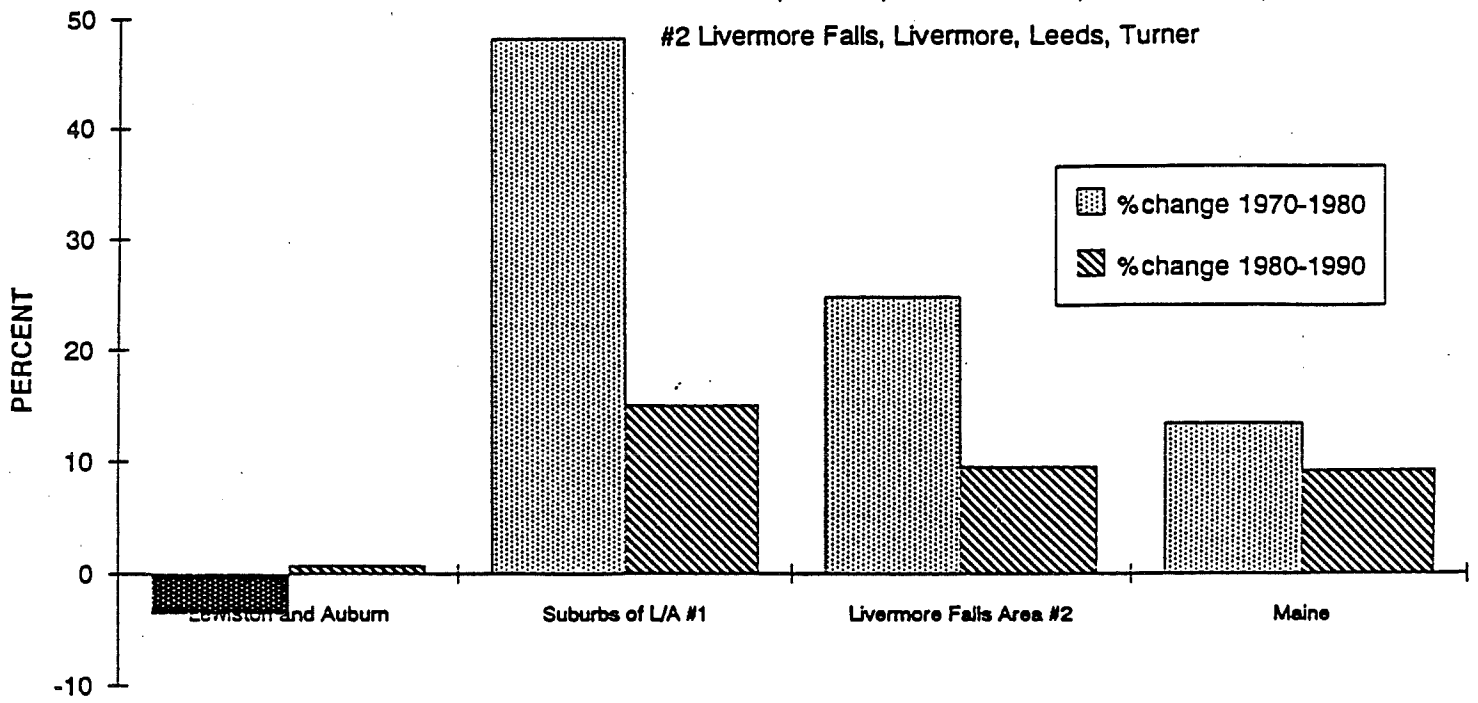


SOURCE 1990 U.S. CENSUS

POPULATION GROWTH

#1 Lisbon, Greene, Mechanic Falls, Minot, Poland, Sabattus

#2 Livermore Falls, Livermore, Leeds, Turner



SOURCE: US BUREAU OF CENSUS

Unemployment rates in Androscoggin County have reached all time highs during the late 1980's and early 1990's. Due to the number of plant closings and the shift away from the traditional industries, unemployment rates in Androscoggin County in several communities have been as high as twenty percent. Recent unemployment rates (1991) for a selected number of communities included: Auburn (9.7%), Lewiston (10.05), Lisbon (8.8%) and Sabattus (11.79%).

The average weekly wages in Androscoggin, Franklin, and Oxford counties have trailed behind state levels in most industry sectors. The following table depicts wage levels in the region by sector.

AVERAGE WEEKLY WAGE LEVEL

	ANDROSCOGGIN	FRANKLIN	OXFORD	MAINE
Agriculture, Forestry & Fishing	268	312	261	284
Construction and Mining	404	336	426	442
Manufacturing	454	463	489	477
Transportation & Public Utilities	436	463	403	487
Wholesale Trade	436	401	410	494
Retail Trade	215	186	215	227
Finance, Insurance, and Real Estate	406	343	375	483
Services	372	277	294	354
State Government	407	476	398	454
Local Government	390	365	365	370

Income and wage levels in the region have historically been lower than state and national averages. The median family income in the region has been below state levels with the exception of Livermore Falls LMA. The following chart depicts median family income over time:

MEDIAN FAMILY INCOME

GEOG UNIT	NAME	1979	1987	% CHANGE 1979 - 87	1990	% CHANGE 1987 - 90
STATE	MAINE	16,167	26,100	61.4%	31,100	19.2%
MSA	ANDROSCOGGIN	15,980	24,200	51.4%	30,000	23.9%
NON-MSA	ANDROSCOGGIN	17,056	26,200	53.6%	31,700	21.0%
CNTY	FRANKLIN	16,003	24,600	53.7%	29,800	21.1%
CNTY	OXFORD	15,232	23,500	54.3%	28,300	20.4%

Source: U.S. Dept. Housing and Urban Development

Educational levels vary throughout the region. Androscoggin County continues to have the lowest levels of educational attainment. However, this is a reflection of the availability of jobs, especially in traditional manufacturing industries, which have not historically required much formal education.

EDUCATIONAL ATTAINMENT OF PERSONS AGE 25 AND OVER: 1980 VS. 1990

	PERCENT LESS THAN 9TH GRADE		PERCENT HIGH SCHOOL GRADUATES		PERCENT BACHELOR'S DEGREE OR MORE	
	1980	1990	1980	1990	1980	1990
OXFORD	19.64	9.69	67.9	76.9	10.83	12.7
FRANKLIN	15.42	7.43	70.3	79.7	14.00	17.7
ANDROSCOGGIN CNTY	25.92	14.20	58.50	71.8	10.50	12.6
MAINE	16.57	8.82	70.61	78.8	14.40	18.8

Source: Bureau of the Census

Oxford County - Historic Discussion

The southern portion of Oxford County area also known as the Oxford Hills area saw tremendous growth and transformation from a natural resource based economy to a growing regional retail center and extended housing market for the Greater Portland area during the 1980's. During period of time, downtown areas were revitalized and limited industrial development and significant commercial development

occurred along the Route 26 corridor which bisects this area in a north easterly direction. Incomes, however, rose more slowly in southern Oxford County than anywhere else in the region, because the economic growth and diversification did not change the predominantly low wage scales. At the same time, housing costs rose more rapidly in this area than any other part of the region. New residential construction occurred primarily along lakefront property.

Northern Oxford County, during this period of time, had a net stagnation in its economy, although there were many disparate forces at work. In the Rumford area, the paper mill which dominates the local economy no longer could be counted on for job expansion, even as mechanization raised output. Consequently during the 1980's this portion of Oxford County lost population. Nearby, in the Bethel-Newry area, tourism grew to become the leading employer instead of traditional industries (wood products). Continued plant closings (primarily in wood products) and slower than average growth in the service sector for this portion of the region kept unemployment rates higher here than in any other part of the region.

Franklin County - Historic Discussion

Franklin County had the most rapid population increase in the region, at roughly 1% per year. With the exception of 1988, when there was a strike at International Paper, Franklin County had less severe ups and downs in its unemployment rates than other parts of the region. Tourism, and tourism related construction (especially second home development), accounted for most of the growth in northern Franklin County. In the southern part of the county, there was extensive new retail development along the Route 4 corridor. Per capita income grew slowly, however, Franklin County continued to include several of the lowest income towns in the region.

Region Update

Beginning in 1990, construction of new residential and commercial structures had slowed. There have been a staggering number of large layoffs in the past two years, not only in the region's traditional industries that have been experiencing long term decline, but also in newer industries such as metals and electronics. Something interesting to note was that as the traditional manufacturing industries in western Maine were on a decline, Bath Iron Works and Brunswick Naval Air Station were expanding their needs for employees, services and supplies. This occurrence served to cover up the true extent of the decline of the traditional industries. Additionally, there also have been layoffs in the financial and consumer services. Because of the severity of this situation, two counties (Androscoggin and Oxford), qualified for federal assistance under the Economic Development Administration, Sudden and Severe Economic Dislocation Title IX Program. This Program is currently being administered by AVCOG. Additionally, because of the more recent severity of unemployment in Franklin County, AVCOG is evaluating whether or not Franklin County would qualify for federal assistance under this same program.

The tenuous position of the region's still significant natural resource based industries, the reliance of the tourism industry with a depressed New England consumer market, and the persistence of relatively low incomes are severe obstacles in the AVCOG region which need to be addressed. These obstacles, coupled with high unemployment rates and decreasing retail sales will result in a slow economic recovery for western Maine in the near future.

4. DEFENSE DEPENDENCY OF WESTERN MAINE

Although there are no large military installations nor major defense facilities located in Western Maine, the region is dependent on the defense industry in a two ways:

- as a source of employment
- as a source of business sales or contracts.

Both of these "dependencies" will impact communities where the highest concentrations of resident defense workers or businesses involved in defense related work.

4. a. Defense as a Source of Employment

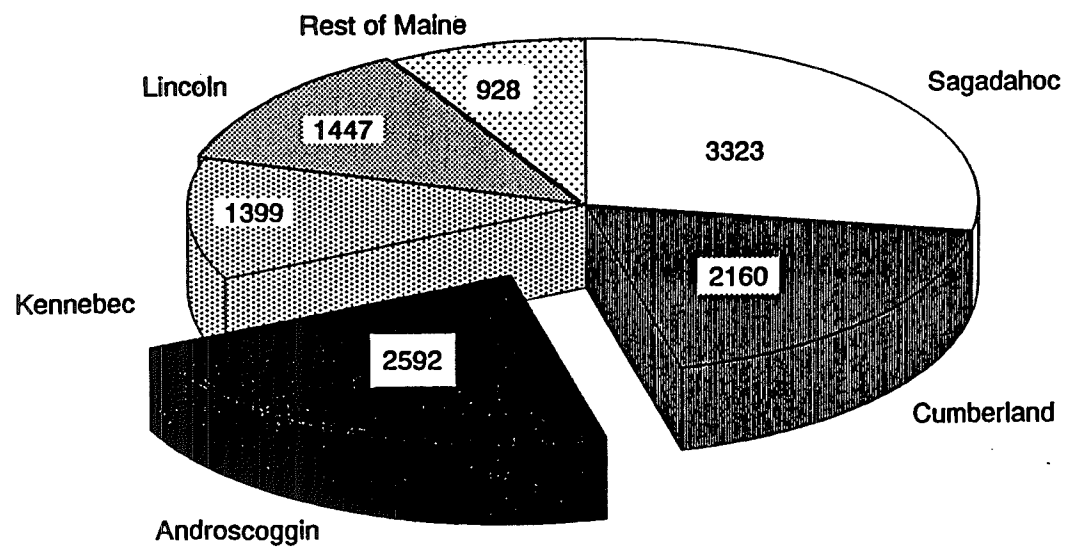
Bath Iron Works: Bath Iron Works (BIW), founded in 1884, is a private corporation with headquarters in Bath, Maine. BIW is a builder of the ARLEIGH BURKE Ageis Class Destroyer, a sophisticated surface combat vessel utilized by the U.S. Navy. The company includes three main divisions with the following missions:

1. Bath Iron Works Corporation, located in Bath, Maine: ship building and steel fabrication
2. Bath Iron Works – Hardening Plant, located in Brunswick, Maine: steel processing
3. BIW Overhaul & Repair Facility, located in Portland, Maine: ship repair.

Over the years, BIW has been involved in the construction of both commercial and military ship building. During the 1980's, with the federal defense buildup, BIW converted almost entirely to military shipbuilding. By 1990 Bath Iron Works employed close to 11,950 people (refer to the pie chart on the following page for a residential distribution by community). In the early 1990s, BIW began to downsize as military cutbacks in Washington began to effect the company. By 1991, BIW employed approximately 10,000 people.

Of those 10,000 employees in 1991, almost 25% lived locally in Bath and Brunswick. However, nearly 20%, or approximately 2000 BIW employees, resided in the AVCOG region. The following table identifies the AVCOG communities where a majority of BIW employees reside:

Total BIW Employment by County 1990



Source Bath Iron Works Corp

**BIW Employment by Community Residence
AVCOG Region**

Town	BIW Employees, 1991
Auburn	383
Greene	98
Lewiston	711
Lisbon	332
Mechanic Falls	49
Sabattus	167
Rest of AVCOG Region	248
TOTAL in AVCOG Region	1,988
TOTAL BIW EMPLOYMENT, 1991	10,380

The highest concentrations of BIW workers reside in four communities located in the AVCOG region – Auburn, Lewiston, Lisbon and Sabattus. BIW's 10,000 workers earn wages close to the national average and more than the State average wage. BIW has an annual payroll of over \$300 million for its workers concentrated in Androscoggin, Cumberland, Kennebec and Lincoln Counties.

Brunswick Naval Air Station (BNAS), located in Brunswick, Maine, is home to Patrol Wing Five, one of two Patrol Wings on the Atlantic Coast. The base was reactivated in 1951 with the principal task of anti-submarine warfare. In 1992, BNAS employed approximately 3,200 military and 800 civilian personnel. The majority of both civilian and military employees of BNAS reside in the immediate Brunswick area. However, in 1992 there were 223 BNAS military personnel and 121 civilian personnel residing in the AVCOG region.

The following table identifies communities in the AVCOG where the majority of BNAS employees reside:

**BNAS Employment by Community Residence
AVCOG Region**

Town	BNAS Civilian Employees, 1992	BNAS Military Employees, 1992
Auburn	10	22
Durham	0	21
Hebron	0	10
Lewiston	19	18
Lisbon	78	126
Sabattus	7	24
Rest of AVCOG region	7	2
Total, AVCOG region	121	223
 Total BNAS employment 1992	 789	 3184

The highest concentrations of BNAS employees reside in Auburn, Lewiston, Lisbon and Sabattus. In Fiscal Year 1990, BNAS payroll was approximately \$120 million.

Business suppliers/contractors to defense industry: As reflected in the next section, there are a large number of businesses in the AVCOG region which either contract directly with defense facilities or BIW. Through research efforts, AVCOG identified 255 firms in the region which have had defense related contracts between 1990 and 1992. The firms range in size from small to medium and the nature of the businesses range from manufacturing to nonmanufacturing. Due to the sporadic nature of defense related contracts, it is difficult to estimate the number of jobs which could be considered "defense related". Additionally, there exist an unknown number of suppliers of the identified contractors and local retail sector jobs (serving resident defense employees) which might be affected indirectly by the defense industry decline.

By surveying identified defense suppliers/contractors, AVCOG was able to determine the nature of defense related employment. A general discussion of the AVCOG survey methodology is included in the next subsection (Defense as a Source of Business Sales or Contracts).

Following is a discussion of employment trends as summarized from AVCOG business survey results. This discussion categorizes employment of identified defense suppliers/contractors located within the AVCOG region by three industry types – manufacturing, construction, other non-manufacturing.

Manufacturing employment of defense contracts has been decreasing since 1989, according to survey respondents. The 13 manufacturing businesses responding to the survey represent industries including metal manufacturing, food and beverage production, material manufacture (textile, plastics), concrete fabrication and others. Employees of these businesses were classified either as semi-skilled or highly skilled employees. Income levels ranged from \$15,000 to \$35,000.

Construction employment generated by defense contracts is often seasonal in nature, and varies greatly from year to year. Construction employers who completed the survey (ten businesses) identified their employees as possessing skills ranging from minimal to very highly skilled. Survey respondents indicated that due to the seasonal nature of employment, income levels were generally difficult to categorize. Those that did respond indicated that most of their employees fall in the \$15,000 to \$24,999 income range. Due to the sporadic nature of the work, construction firms were unable to label employees as being "defense dependent." However, the defense industry has provided a large number of defense contracts for construction firms in Western Maine, and is probably responsible in part for the large growth in construction employment in the region in 1980s and into 1990.

Other Non-Manufacturing employment related to defense contracts was considered more stable by survey respondents than defense related employment in either the manufacturing or construction sectors. Defense work was often a small percentage of total business sales (less than 10%) but a steady part of contracts. Of 13 total respondents in this category, eight businesses were wholesale/retail, and five were service oriented businesses. Employee skill levels were reported as semi to high skilled, and income levels ranged from \$15,000 to \$35,000.

Summary Subsection 4.a.

In 1991 approximately 2000 BIW employees or 20% of BIW's total workforce resided in the AVCOG region. The highest concentration of workers resided in five communities – Auburn, Greene, Lewiston, Lisbon and Sabattus. Almost six percent or 223 BNAS workers reside in the AVCOG region. Again, the highest concentration of these employees reside in the same four communities identified above with the exception of the community of Greene. The defense, supplier/contractors responding to AVCOG's survey indicated that approximately 76 jobs were dependent upon defense work.

4.b. Defense as a Source of Business Sales or Contracts

Within Western Maine, there are many businesses which have had, or continue to have, contracts with military installations or large defense industries/facilities outside the region. Through research efforts, State contacts and the Small Business Administration, AVCOG has identified 255 businesses in Western Maine who have had "defense" contracts between 1990 and 1992. These businesses are direct suppliers and contractors to BIW, BNAS, and other military installations in Maine and outside of Maine. There may also be suppliers of these suppliers not identified and contractors of other large defense industries, such as Saco Defense and Pratt & Whitney, which are not included in the list of 255 businesses.

Discussions with local leaders and business persons indicate that local business dependency on defense dollars is mostly linked to Bath Iron Works (BIW) and Brunswick Naval Air Station (BNAS). Of the two facilities, BIW generates considerably more contracts in Maine than BNAS. In FY 1992 BNAS made \$44,700,000 in purchases from Maine firms. In FY 1992, BIW bought \$183,400,000 of goods and services from Maine firms. Of the 255 businesses identified in Western Maine, here is a breakdown of known contracts:

<u>Defense Industry/Installation</u>	<u># Businesses Identified as Suppliers in WE. Maine</u>
Bath Iron Works	140
Brunswick Naval Air Station	118
Camp Keyes, Nat'l Guard	31
Loring Air Force Base	17
Portsmouth Naval Ship Yard	17

Several area businesses also had contracts with other military installations such as the Department of Defense in Pennsylvania and Virginia, and Pearl Harbor Ship Yard in Hawaii. Through AVCOG's business surveying efforts, AVCOG discovered that more than half of the businesses surveyed also had contracts with more than one defense industry/facility.

Additionally, the types of contracts that each facility generates are not of similar nature. In reviewing the types of businesses and services provided to BIW and BNAS by firms in Western Maine in the past two years, it can be summarized that:

-BIW, as a major production facility, required numerous parts, and generated contracts which require manufacturing. Additionally, BIW purchased wholesale goods and required significant amounts of services. Contracts with BIW ranged from under \$1000 to over \$1,000,000.

-BNAS, as a naval station, had fewer contracts with manufacturing firms. Contracts included a significant amount of construction, services and wholesale goods. Except for major construction contracts and repair jobs, most contracts were under \$10,000.

4.c. AVCOG Defense Survey Summary

In order to better understand the defense dependency of the region's businesses, AVCOG conducted a survey of 70 area businesses of total 255 identified in "defense" related work. The seventy businesses chosen were those with contracts during the past 3 years totalling over \$50,000, businesses with repetitive contracts, and other businesses which would significantly impact local rural communities outside of Lewiston and Auburn area. Through mail surveys and follow-up phone calls, AVCOG collected 36 completed surveys (five companies refused to answer the survey, two businesses had closed). This represents a greater than fifty percent response rate. A copy of the survey is included in the appendix. The businesses surveyed generally fell into three categories: manufacturing, construction, other nonmanufacturing. Following is a discussion of survey results for those three categories.

Manufacturing Businesses-Survey Results

A total of 13 manufacturing businesses were successfully surveyed including seven metal and tool fabricators and one food and beverage processing company. Eight of the manufacturing firms responding to the survey were in Lewiston or Auburn. Annual defense related sales during the past three years were reported by almost all respondents. The percentage of total sales reported by respondents was as follows:

<u># of Firms</u> <u>a % of total sales</u>	<u>Defense related sales as</u>
1 firm	100%
6 firms	10 - 50%
6 firms	0 - 10%

Seven of the firms experienced a noticeable drop in defense sales since 1989, and five reported a decrease in total employment since 1989. All firms surveyed were pessimistic concerning future defense contracts. However, these businesses were extremely optimistic about the potential growth of their total sales in 1993 and 1994: five indicated that their total employment will grow, and seven indicated that their total employment levels would remain stable. Eight of these firms had already begun to seek markets to replace defense contracts, and five were already involved in exporting to international markets. The firms responding to the survey expressed interest in receiving public assistance in the following areas:

<u>Category</u>	<u># firms indicating</u> <u>medium-high need</u>
Market Research ME & US	11
Research and Development	7
Marketing Techniques	6
Loan funds	6
Employee Training	5
Exporting Assistance	4

Construction Related Businesses – Survey Results

Of the ten construction businesses completing the survey, all described the sporadic nature of defense construction contracts. None of these companies had annual contracts for consistent amounts during the past three years. Typically these businesses had a contract for one year which accounted for a large percentage of their total annual sales and did not have a contract the following year. Only four of the ten respondents indicated that they were considering new markets to replace defense contracts. Although the construction businesses could not correlate their employment levels directly to defense contracts, every company noted a decrease in employment from 1989 to 1992. In 1990, these ten construction companies employed a total of 380 employees. By mid 1992, they employed only 180 employees. The firms expressed interest in public assistance in the following areas:

<u>category</u>	<u># firms indicating</u>
<u>medium-high need</u>	
Marketing Techniques	7
Market Research, in Maine	5
Employee Training	5
Loan funds	4

Other Non-Manufacturing Businesses–Survey Results

Of the 13 non-manufacturing businesses (other than construction) responding to the survey, eight businesses were wholesale/retail, and the remaining were repair and other miscellaneous service providers. During a three year period, these companies indicated that annual sales were fairly stable from year to year (unlike construction), and no major decrease in sales has been noticed to date. Defense related sales as a percentage of total sales for this category was as follows:

<u># firms</u>	<u>Defense related sales as</u> <u>a % of total sales</u>
1	over 50%
4	10 – 30%
7	1 – 10%

Each of the firms surveyed were fairly optimistic about their future in general, predicting their total employment level to remain stable or grow slightly. However, nine of the respondents indicated that they had begun to consider replacing defense contracts with other alternatives. Four of the firms are already involved in exporting to international markets. These firms expressed interest in public assistance in the following areas:

<u>category</u>	<u># firms indicating medium-high need</u>
Market Research, in Maine	10
Marketing Techniques	7
Employee Training	3
Loan funds	3
Market Research, in US	3
Exporting Assistance	2

Summary Subsection 4.b. and 4.c.

Businesses surveyed recognized that defense industry work is declining and have already felt some impacts of decreasing defense contracts. The businesses were optimistic about the future, however, they indicated that their greatest need, by far, is in finding new markets to replace defense contracts.

4.d. Defense Dollars Indirectly in the Region's Economy

A large number of workers employed at BIW and BNAS (over 2,200) reside in the AVCOG region. The largest segment of this group are the BIW workers which total approximately 2000. AVCOG was unable to obtain specific information regarding the income make-up of BIW workers in order to conduct an economic impact analysis. However, it is recognized that BIW workers make higher than average wages for Maine and, therefore, would have higher than average disposable income.

Additionally, through one survey, AVCOG was able to determine that there are at least 76 workers whose jobs are dependent upon businesses located within the AVCOG region which contract directly with BIW or BNAS. Therefore the average number of "defense dependent" jobs for the 36 companies responding to the AVCOG survey is 2.11 (76 jobs divided by the 36 businesses responding to the AVCOG survey). Multiplying this "average" by the remaining businesses identified to be involved in defense work ($219 = 255$ (total number of businesses identified to be involved in defense work) - 36 (number of businesses responding to the survey)) results in approximately an additional 462 jobs which potentially could be defense dependent. the summation of these two figures 76 plus 462 leads one to conclude that approximately 538 jobs could be considered defense dependent. The workers for these businesses involved in defense work also will impact the local economies as the defense industry continues to decline.

5. THE DECLINING DEFENSE INDUSTRY AND POTENTIAL IMPACTS TO WESTERN MAINE

In response to evolving national security policies, the Department of Defense has been targeted for budget cutbacks. The extent of future cutbacks is difficult to determine because forecasts are dependent upon decisions about national and international policies. Present policies have impacted the funding the Department of Defense and it is recognized by State and federal sources that there will addition reductions in defense expenditures in the future.

The previous sections of this analysis have identified some potential impacts to western Maine. This section will provide a discussion of the current events associated with both BIW, BNAS and suppliers/contractors to the defense industry along with identifying the ways western Maine will be impacted.

Bath Iron Works (BIW): As indicated earlier, BIW employs approximately 10,000 people. In the early 1990s, BIW already began to be impacted by the declining defense industry. Between 1990 and 1992, BIW laid off approximately 800 employees. Two hundred and twenty-four of the BIW workers laid-off during this period of time reside in the AVCOG region. BIW layoffs during this period of time in the AVCOG region by occupation, were as follows:

AVCOG Region BIW LAYOFFS May 1, 1990 - June 2, 1992 <u># of Layoffs/occupation</u>
35 Tinsmiths
24 Electricians
22 Shipfitters
22 Welders
14 Outside Machinists
12 Pneumatic Operators
11 Laborers
9 Insulators
7 Material Clerks
6 Stage builders
6 Painters
5 Safety Inspectors
5 Carpenters
5 Yard Riggers
31 Other Miscellaneous
 224 Total AVCOG region

In 1992, BIW laid off people on a monthly basis despite several new ship orders. It has been announced that BIW may reduce their workforce by another 2,400 jobs over the next two years. In the short-term (1992-1994) the impacts of future BIW lay-off will be gradual, but

continuous. In the long term (1994 and after), BIW must rely either upon the federal need for the class of warship produced at BIW, or success in product diversification. If BIW opts to diversify into commercial shipbuilding markets, they will face tough competition both nationally and internationally. If BIW is successful with a transition to commercial ship building, the competition will probably force BIW to reduce the size of their workforce, and wage rates. The present size of the workforce will need to be reduced because commercial ship construction does not require the sophisticated equipment needed for a military ship. Additionally, the wages of the present and future workforce probably will be affected negatively because BIW will be forced to reduce wages to be competitive in the private sector. The long-term prospects for BIW are uncertain.

Brunswick Naval Air Station (BNAS) To date, BNAS employment has remained stable. Additionally, base contractual work has remained fairly constant during the last three years. However, BNAS faces two more rounds of base closures and realignment assessments, in 1993 and 1995. No impacts to the western Maine economies are expected in the short term (1992-1994) because of the length of time it takes to eventually close a military base once it have been identified for closure. The long-term (1994 and after) future of BNAS is difficult to determine. However, future closure of BNAS will result in a loss of jobs for AVCOG region residents and a loss of sales to businesses located in the AVCOG region. The size of BNAS existing workforce and historical contractual work will not impact the AVCOG region as significantly as changes occurring at BIW.

Suppliers/contractors to Defense Industry Suppliers and contractors in the AVCOG region are dependent upon the fate of BIW and BNAS for a portion of business sales. According to the Maine State Planning Office:

The outlook for Maine's subcontractor segment is mixed. Many of these firms have already suffered job losses related to defense cutbacks. At least 1,400 jobs have been lost at these other defense-dependent firms around the State since 1990. As they cover the gamut of U.S. defense activity, this segment of Maine's defense-dependent economy is likely to experience some level of continuing decline in demand. The fate of individual firms depends upon the continuation of the weapon systems or installation upon which they rely and the success of their efforts to reduce their dependency upon defense-related contracts.

In summary, it is clear that Western Maine's economy will be impacted by future reductions in defense expenditures. The impacts will be gradual, but continuous in the short term (1992 - 1994). The long term (1994 and after) is remains uncertain, however, economic impacts could be severe if either BNAS is downsized or closed; or, if BIW is unable to maintain defense contracts or make the switch to commercial shipbuilding. The economic impacts can be categorized in the following three ways:

1. impacts to workers
2. impacts to businesses
3. impacts to communities

The extent of impact to workers, businesses and communities depends greatly upon the fate of the defense industry in Maine, the capability of Maine's defense industry to successfully reduce their dependency, and the preparedness of communities to actively assist in this transitional economic period.

The next three sections of this analysis

- a. identifies existing resources for transitioning workers, businesses and communities
- b. identifies specific needs for transitioning workers, businesses and communities and
- c. provides recommendations for local, regional, multi-regional and state implementation to address determined impacts. The word "transitioning" is defined to describe the needs of workers, businesses and communities in all stages of defense decline.

6. EXISTING RESOURCES AND RECOMMENDATIONS FOR TRANSITIONING DEFENSE WORKERS

The AVCOG region, and in particular the greater Lewiston-Auburn Area, is extremely fortunate to have a wide array of services currently available for workers, businesses and communities. The agencies and organizations of this area have a long history of working cooperatively to develop innovative and comprehensive services. However, it has become clear, in analyzing the capacity of existing agencies, that the changing economy and recent recession have over burdened the existing service delivery system. Unemployment rates in the past have exceeded 12 percent in the Lewiston-Auburn MSA resulting in long waiting lists to be used in order to determine service delivery. Any additional job for area residents which will occur due to declines in defense will place an additional burden on an already over burdened system both short- and long-term.

6.a. Defense Workers in Transition: Existing Public/Non Profit Agency Resources

Training and Education

Job Corps Admission & Placement
ME Employment Security Commission
Mountain Valley Training*
Adult Education Departments (each school district)
Literacy volunteers of L/A, Portland
Central Maine Technical College
Mid-State College
Husson College, Lewiston
Lewiston-Auburn College
Univ. of ME, Farmington
Univ. of So. ME, Portland
WEET, Department Human Services

Job Search and Placement

Department of Labor, Job Service
Mountain Valley Training

Small Business Assistance

AVCOG, Small Business Development Center
S.C.O.R.E.
Cooperative Extension Service (each county)

Health/Mental Health

Tri-County Family Health
Tri-County Dental Health
Tri-County Mental Health
Crisis Intervention hotline
YWCA, YMCA (Stress management)
Alcoholics Anonymous
St. Mary's Chemical Dependency Unit

Food/Shelter/Heat

Foodstamps, Dept. Human Services
General Assistance (Town offices)
Women, Infants, Children (WIC)
Local food banks, homeless shelters
Emergency Assistance, Dept Human Services
CMP
Western Maine Community Action
Community Concepts Inc.

Credit Counseling

Credit Counseling Center, Portland

Information/Referral

United Way First Call

*Mountain Valley Training and Coastal Economic Development in Brunswick currently receive funding for retraining BIW employees who are laid off. However this contract terminates in June, 1993.

6.b. Defense Workers in Transition: Identification of Needs

The agencies listed above have a long history of working cooperatively. However, in the wake of rapidly rising unemployment rates, especially in Androscoggin County, in the Fall of 1991 the University of Maine Cooperative Extension joined forces with the United Way to establish an ad hoc committee called **Workers in Transition**. The committee was made up of representatives from the agencies described above as well as dislocated workers, and grew to include over 60 people. The Committee has been actively meeting monthly since it was established. The Committee was partitioned into subcommittees to actively pursue responses to needs identified by the ad hoc Committee. Accomplishments to date include:

- a listing of agency programs and services
- an effort to collect additional information on workers and their needs through a survey of people in general assistance offices
- a comprehensive resource directory of available services for workers in transition
- a unified calendar of educational and training offerings
- the initial stages of developing a "walk-in center" for all workers in transition.

AVCOG called upon the Workers-in-Transition Committee to discuss the decline of the defense industry as it affects transitioning workers and the agencies which serve transitioning workers. AVCOG met with the committee twice, in June and July of 1992. Considering the nature of defense employment, the committee identified the following specific needs of this population:

1. Access to job opportunities, job placement services
2. Access to affordable education and retraining
3. Access to affordable counseling services including career counseling, credit counseling, adjustment counseling, and family counseling
4. Access to basic human services including medical care, food, shelter

The Committee agreed that the majority of agencies currently serving transitional workers are over burdened due to the high unemployment rates and fiscal constraints. Additional layoffs from the defense related occupations would added to an already over burdened system. this will result in addition delays and a reduction of service. One example of an agency which is operating in this environment is Mountain Valley Training, an agency providing assistance to dislocated workers, which has a waiting list of over 300 people. This translating to a 3-9 month wait for service. additionally, Tri-county Mental Health and other public health agencies have been faced with cutbacks and community needs which surpass funding availability.

The Committee noted that the current system is not structured to serve all transitional defense workers for the following reasons:

- Some defense workers need transitional services while still employed, and therefore, may not qualify for assistance because they are not "dislocated" workers. Defense workers needs include career counseling and subsidized training.
- Some defense workers may not qualify for assistance because of their past income, and assets still in possession.
- Many defense workers possess technical skills, but may need basic educational upgrades and other workplace skills.
- Skilled defense workers may be good candidates for starting their own small business. However, starting a small business requires an initial investment and a considerable amount of counseling/assistance.
- Coming from relatively high paying, fairly stable jobs, defense workers will face considerable changes -- which can be emotionally difficult for individuals and families.
- Defense workers may not know what services are available, or may not be willing to enter into traditional programs and existing agencies

6.c. Defense Workers in Transition: Recommendations

Recommendations for Local Implementation (Auburn, Lewiston, Lisbon, and Other Communities with Defense Workers)

- Educate affected municipalities about potential defense decline impacts. AVCOG will provide information regarding defense industry decline to municipal officials, as well as make them aware of resources available for defense workers in transition. AVCOG will do this by providing copies of this report to Auburn, Lewiston, Lisbon and Sabattus (the most impacted communities) and meet with these communities to discuss the report findings.
- Make resource directories available locally. The Workers-in-Transition Committee should provide the agency/resource directory for distribution to municipal offices, social service agencies and other locations frequented by the public such as grocery stores.
- Participate in Regional Efforts. Municipal officials, including community development staff and general assistance staff particularly from the most affected communities, should remain part of the regional Workers in Transition Committee and other regional efforts. Communities should also participate in regional planning efforts conducted by AVCOG.

- Explore needs for services in Lisbon and Sabattus. Because most of the existing services available to defense workers in transition are located in Lewiston and Auburn, the towns of Lisbon and Sabattus together with service provider agency representatives should assess the need for providing services locally.
- Expand Adult Education and other Local Services. Existing programs, such as adult education, should be supported and expanded to serve the educational needs of defense workers in transition.

Recommendations for Regional Implementation (AVCOG region, Androscoggin, Franklin, Oxford Counties)

- Include Defense Issues in Regional Planning Efforts. AVCOG should include "defense workers in transition" as a regional issue in the AVCOG's 1992-93 Overall Economic Development Plan under the Androscoggin county section.
- Include Defense Issues in Multi-town Planning Efforts. AVCOG should educate the Lewiston-Auburn Development Strategy Committee about the need for the transitioning of defense workers, and incorporate issues/strategies into L/A Development Strategy planning process.
- Recognize Transitioning Defense Worker Needs in Program Development. All service provider agencies should recognize the needs of defense workers in transition when developing future programs and services.
- Continue Participation in Regional Workers in Transition Efforts All service provider agencies should continue quarterly meetings of the Workers in Transition Committee, as well as subcommittee efforts as needed. Continue the educational calendar and continue disbursement of agency/resource directory and update as appropriate.
- Continue the Development of the "Walk-In Center". The group responsible for the development of a walk-in or informational center for workers in transition (Workers in Transition Subcommittee) should continue to meet regularly to develop this concept and identify potential funding sources. This Subcommittee should continue to coordinate/cooperate with United Way. As envisioned, this center would serve as a source of referrals and information, would provide counselling for all workers in transition, would have limited eligibility requirements, would be a cooperative effort of numerous agencies linking all types of worker services, and could provide some services at the center location. This "Center" should not duplicate existing programs or services already available.
- Coordinate with Bath-Brunswick Area for Assuring Service Needs are Met. Coordination with Coastal Economic Development (CED), for assuring immediate services for dislocated BIW (and if needed BNAS) employees. Improve tracking of dislocated defense workers. Presently services to dislocated BIW workers are handled by upwards of three agencies providing services dependent upon the individuals' residence. No one agency of the three has the responsibility to track dislocated BIW workers.

- Coordination with Regional Planning Agencies, State and Federal Agencies. AVCOG should continue to work with other regional, state and federal agencies such as Capital Coastal Council of Governments, State Planning Office, Economic Development Administration (EDA). Work with regional and state agencies would be in the area of multi-regional solutions to assist transitional defense workers. Federal agencies such as EDA will be contacted as appropriate to assist in funding defense related work.
- Explore Business Opportunities for Transitional Workers. AVCOG should explore possibilities for determining and establishing additional programs to assist interested transitional defense workers start their own businesses.

Recommendations for Multi-jurisdictional Implementation (AVCOG, Bath and Brunswick)

- AVCOG Representation on Bath and Brunswick Defense Committees. AVCOG should be represented and participate as a member of local or regional committees established to address defense dependency issues relating to BIW and BNAS. The findings of the AVCOG regional defense dependency analysis identify the reliance of Androscoggin County (particularly Auburn, Lewiston, Lisbon and Sabattus) to BIW and BNAS.

Recommendations for State Implementation

- Continue Centralized Organization of Defense Strategies. The Maine State Planning Office should continue to function as a central point for planning and organizing defense conversion strategies.
- Recognize Needs of Transitional Defense Workers in development Programs and Provide Funding. The State Departments of Education, Human Services, Labor, Economic and Community Development, etc. should recognize the need for transitional services for defense workers in providing funding to service provider agencies and communities.
- Pursue Funding for "Career Centers." The State Planning Office and Department of Labor should continue to pursue funding for development of the "career center" proposal, as consistent with regional "walk-in/information center" concept. If awarded, the Workers-in-Transition Committee should serve in an advisory capacity for both planning and implementation for the regional "walk-in/career center" established in Lewiston or Auburn.

- Evaluate Statewide System for Worker Training. The statewide system for worker training should be evaluated and improved in the following areas:
 - the system's ability to serve large numbers of people
 - the system's ability to react to employer needs
 - the system's ability to provide services to all types of workers
 - the system's ability to make career changes a more positive experience
- Explore Alternative Mechanisms to Fund Education and Training of Transitional Workers. The State should explore ways to encourage dislocated (or soon to be dislocated) workers to obtain education and/or training before unemployment benefits run out.
- Insure Health Care Coverage is available for Dislocated Defense Workers. The State should evaluate the health care system, to insure that dislocated workers and their families have access to adequate health care.

7. EXISTING RESOURCES AND RECOMMENDATIONS FOR TRANSITIONING DEFENSE DEPENDENT BUSINESSES

The AVCOG region, and in particular the greater Lewiston-Auburn Area, is extremely fortunate to have services currently available for local businesses. The development agencies and organizations of the area have a long history of working cooperatively to develop innovative and comprehensive services. However, defense dependent businesses have identified specific needs. There is also the potential for defense workers to start their own small business.

The recommendations to address the needs of transitional defense dependent businesses and communities were developed with input from a committee established by AVCOG to identify and respond to economic development issues. AVCOG staff from the Economic Development Division annually work with three established committees, one for each of the three counties in the region, to develop the Overall Economic Development Program (OEDP) for the region. The committee established for Androscoggin County is named the OEDP/ Subregional Policy Advisory Committee.

7.a. Defense Dependent Businesses in Transition: Existing Public Resources

AVCOG Programs and Services

Business Finance Programs:

AVCOG initiated a formal Business Development Finance Program in 1980-1981. The critical component of this program are AVCOG's in-house lending programs. The loans are described below in five categories: Revolving Loan Fund Program, Sudden and Severe Economic Dislocation Program, SBA 504 Program, Development Opportunity Fund (DOF) and FmHA Intermediary Relending Program.

In 1980 the U.S. Economic Development Administration (EDA) awarded a \$500,000 grant to Androscoggin Valley Council Of Governments to establish a Revolving Loan Fund (RLF) under the Long-Term Economic Deterioration (LTED) provision of Title IX of the Economic Development and Public Works Act. The \$500,000 in EDA funding was matched by \$100,000 in local resources, bringing the initial capitalization of the fund to \$600,000. These local resources included \$30,000 from the state, and the balance from AVCOG's membership. In September, 1984 AVCOG was awarded a second EDA Title IX grant of \$380,000 in conjunction with \$86,667 of local matching funds, bringing the total capitalization of the fund to \$1,066,667.

In September of 1991, AVCOG was awarded a \$1 million grant from EDA for a Title IX Sudden and Severe Economic Dislocation Project. Rapid job loss occurred in both Androscoggin and Oxford Counties in 1990, making the two counties eligible for the program. The funds are used for a revolving loan pool and training programs to assist businesses rehire dislocated workers.

AVCOG was designated as a Certified Development Company (CDC) by the U.S. Small Business Administration on June 22, 1981. The 504 program provides long term, fixed asset financing for qualified small business concerns that are expanding and creating or retaining jobs. As a CDC, AVCOG may lend up to \$750,000 or 40% of eligible project cost, whichever is less. The balance of financing must come from participating private lenders and owners equity. Under the original "503" program, bonds were sold through the Federal Financing Bank, in order to finance CDC loans. Five years ago the program was "privatized" and bonds are now sold through public placements. AVCOG responsibilities under the CDC program include the packaging, processing, closing and servicing of 503/504 loans.

The Development Opportunity Fund was established in 1986 through voluntary transfer of state funds from three municipalities to AVCOG. Initial capitalization was \$245,000. These municipalities had successfully competed for state grants to loan to businesses under a special program of the Community Development Block Grant Program. AVCOG agreed to prioritize applicants for loans from recaptured funds of these three communities in the administration of the program.

In August of 1991, AVCOG was awarded \$2 million from Farmer's Home Administration for the administration of an Intermediary Relending Program.

Financial Packaging Services: In addition to its in-house lending programs, AVCOG is also very active in packaging assistance for tri-county businesses from a variety of other state, federal and private sources. Dozens of businesses have been assisted through this service. AVCOG was designated as a Certified Borrower Assistant (CBA) by the Finance Authority of Maine in 1986. FAME is the state's primary business lending and financing delivery system. AVCOG has assisted between 15 and 20 businesses as a CBA. AVCOG maintains ongoing relationships with other state and federal funding agencies and programs including the U.S. Small Business Administration, Farmers Home Administration, Department of Housing and Urban Development, and Maine Department of Economic and Community Development. AVCOG also works closely with the banking community, venture capitalists and other private investors.

Small Business Development Center: Since 1984 AVCOG has provided management assistance and counseling services for small businesses as part of the Maine Small Business Development Center (SBDC) program, sponsored by the U.S. Small Business Administration and the Maine Department of Economic and Community Development. The SBDC offers assistance in the following areas: start-up basics, preparing a business plan, financing, record keeping, marketing, production management, cash flow analysis and budget preparation.

Development Planning/Exporting: As an EDA Development District, AVCOG develops an annual work program each year to address the needs of businesses and communities in the area of economic and community development. This process includes annually updating the Overall Economic Development Program Report, and sub-regional economic development strategy development. Past studies have been conducted and technical assistance provided in subject such as exporting, tourism and the wood product industry. AVCOG also maintains a regional datacenter.

Lewiston-Auburn Economic Growth Council (LAEGC) - is the primary organization for attracting and assisting new and expanding businesses. Low-cost loans and financial packaging assistance are available through LAEGC along with other free businesses services.

Local Development Corporations - Located within Auburn, Lewiston and Lisbon.

7.b. Defense Dependent Businesses in Transition: Identification of Needs

The AVCOG staff working with the Androscoggin County OEDP Subregional Policy Advisory Committee over a four month period beginning in June, 1992 identified several barriers and opportunities affecting economic development activities for businesses located within the region. A selected list of both the identified barriers and opportunities is as follows:

Business Development Barriers

- Access to capital continues to be difficult, especially for small businesses
- Business assistance programs are operating at maximum capacity
- Businesses lack expertise, information and assistance related to exporting
- High cost of doing business in Maine: business climate, workman compensation, etc.
- Need for more access to job training/retraining and workplace education
- Defense dependency of some businesses

Business Development Opportunities

- Existing development organizations and financing programs: AVCOG, Lewiston Economic Council (LAEGC) and others. Ability of these agencies to work together.
- Established businesses assistance programs: AVCOG, L/A Chamber, LAEGC
- Growth industries which may be appropriate for Androscoggin County: telecommunications and information services, environmental related and health care industries.

Through defense survey efforts, the overwhelming need of businesses responding to the survey include market research assistance. A specific recommendation to address this need is included under the state Implementation Section.

7.c. Defense Dependent Businesses in Transition: Recommendations

Recommendations for Local Implementation (Auburn, Lewiston, Lisbon, Sabattus, and Other Communities with Defense Businesses)

- L/A Development Strategy. Address the needs of defense dependent business in strategy activities through input from local businesses involved in the L/A Development Strategy and additional survey work.
- Develop local efforts for business retention and diversification. Implement business retention and diversification efforts through the Lewiston/Auburn Chamber of Commerce, Lewiston/Auburn Economic Growth Council, AVCOG and community development directors. Network with State and Federal agencies, in addition to other defense dependent communities, to develop programs and access funding.

Recommendations for Regional Implementation (AVCOG region, Androscoggin, Franklin, Oxford Counties)

- Expand outreach of SBDC services to defense businesses. AVCOG should improve and expand business counseling efforts to help business access new markets. This can be accomplished with increased funding and through continued outreach and working with export assistance providers such as Maine World Trade, Maine Department of Economic and Community Development and the U.S. Department of Commerce, International trade Administration.

- Increase businesses financing options. Administer existing loan programs and establish new programs to provide financing to all businesses. Provide assistance to businesses to develop business plans, structure deals with local lenders, and access state and federal lending programs.
- Skills upgrade and education of existing employees. All training providers should recognize the needs of defense workers in transition when developing future programs or services for dislocated workers.
- Continue monitoring of BIW & BNAS activities. AVCOG should continue to monitor events associated with the Brunswick Naval Air Station and Bath Iron Works.
- Coordinate efforts of State and federal programs impacting the Androscoggin Valley Council of governments territory. This would include administration of present economic development programs and future programs developed to provide assistance to defense dependent businesses.
- Coordinate efforts of export assistance agencies to provide continued export assistance and education to businesses. AVCOG should continue to work closely with the Maine World Trade Association, U.S. Department of Commerce, ITA, Department of Economic and Community Development, and the Small Business Development Center to provide education, financing, and technical assistance related to exporting.

Recommendations for Multi-jurisdictional Implementation (AVCOG, Bath and Brunswick)

- AVCOG Representation on Bath and Brunswick Defense Committees. AVCOG should be represented and participate as a member of local or regional committees established to address defense dependency issues relating to BIW and BNAS. The findings of the AVCOG regional defense dependency analysis identify the reliance of Androscoggin County (particularly Auburn, Lewiston, Lisbon and Sabattus) to BIW and BNAS.

Recommendations for State Implementation

- Explore opportunities with the State SBDC Office. The State SBDC office should consider developing customized training seminars and programs for defense dependent businesses.
- Participate in local, regional, and inter-regional efforts related to defense dependency work. The State should respond to and participate in defense dependency efforts.

8. EXISTING RESOURCES AND RECOMMENDATIONS FOR TRANSITIONING DEFENSE DEPENDENT COMMUNITIES

Within the AVCOG region, defense dependency is concentrated in Androscoggin County. Within Androscoggin County, four communities located within Androscoggin County are considered to be "defense dependent" based on the findings of this analysis. The four communities are Auburn, Lewiston, Lisbon, and Sabattus. Community defense dependency is based upon the following two factors:

1. The number of BIW or BNAS employees which reside in the community and/or
2. The number of businesses involved in defense related work which are located within the community.

The following table provides the residential distribution for BIW and BNAS employment for the most defense dependent communities:

**Residential Distribution for BIW & BNAS Employment
AVCOG Region, 1992**

Community	Labor Force (Civilian)	BIW Employ.	BNAS Employ.	Total BIW & BNAS Employ.	% of Total(BIW & BNAS Employ.) of Labor Force
Auburn	12,361	383	32	415	3.4
Lewiston	20,362	711	37	748	3.7
Lisbon	4,968	332	204	536	10.8
Sabattus	2,036	167	31	198	9.7

Source: Androscoggin Valley Council of Governments, 1992

A review of the above information provides insight into the determination about how severely the above four local communities will be affected should continued future lay-offs occur as a result of declining defense expenditures. The communities of Auburn and Lewiston were included in this analysis because of their business defense dependence. This will be explained in the following table.

The annual unemployment rates as of 1991 for these four communities are as follows: Auburn (9.7%), Lewiston (10.05%), Lisbon (8.8%) and Sabattus (11.79%). Obviously, any increase in the unemployment rate for these communities will result in further declines to the local economies.

Based upon AVCOG's research the number of businesses involved in defense related work located within each of the four communities is as follows:

**Defense Dependent Communities
AVCOG Region, 1992**

Community	Total number of businesses involved with defense work	Number of businesses with contracts with BIW/BNAS (1990 - 1992)
Auburn	85	67
Lewiston	93	80
Lisbon	19	16
Sabattus	3	3

Source: Androscoggin Valley Council of Governments, 1992

A review of standard industrial classification codes for the businesses located within the above communities indicates that the "type" of businesses located within Sabattus can be considered construction. The three remaining communities include all types of businesses with no particular concentration. However, it should be noted that Auburn and Lewiston each included several metal and other types of manufacturing industry. The varied mixture of businesses located in these communities will make it difficult to "tailor" a specific program(s) to meet their needs.

The recommendations to address the needs of transitional defense dependent businesses and communities, included in this section, were developed with input from a committee established by AVCOG to identify and respond to economic development issues. AVCOG staff from the Economic Development Division annually work with three established committees, one for each of the three counties in the region, to develop the Overall Economic Development Program (OEDP) for the region. The committee established for Androscoggin County is named the OEDP/ Subregional Policy Advisory Committee.

8.a. Defense Dependent Communities in Transition: Existing Resources

The following resources are available to provide some form of community assistance:

Androscoggin Valley Council of Governments - A voluntary membership organization. Programs and services are highlighted in the previous section. Community based assistance services include economic development strategy planning and assistance with access to state and federal public infrastructure financing programs.

Maine Municipal Association

Workers in Transition Ad Hoc Committee - The make-up and mission of this committee are highlighted in the previous section.

Community Development Offices - Located within in Auburn, Lewiston, Lisbon ~~not~~ Sabattus.

Development corporations - Located within L/A and Lisbon.

8.b. Defense Dependent Communities in Transition: Identification of Needs

The AVCOG staff working with the Androscoggin County OEDP Subregional Policy Advisory Committee over a four month period beginning in June, 1992 identified several barriers and opportunities affecting economic development activities for businesses located within the region. A selected list of both the identified barriers and opportunities is as follows:

Business Development Barriers

- state and federal mandates: dumps, sand/slat storage, tank replacement, clean water, storm water separation.
- Multimodal transportation improvements are needed.
- high cost of maintaining community services, especially in the rural communities.
- rural communities lack economic development staff to meet local needs.

Business Development Opportunities

- Additionally economic development strategy planning and comprehensive planning is needed to better define future business development opportunities.
- State and federal infrastructure financing programs (CDBG, EDA, FMHA, etc.)
- State "Defense Adjustment Career Center" proposal needed to address transitional workers.
- Worker in Transition Committee effort to establish a "Walk in Center"

8.c. Defense Dependent Communities in Transition: Recommendations

Recommendations for Local Community Implementation (Auburn, Lewiston, Lisbon, Sabattus, and Other Communities)

- Educate affected communities about potential defense decline. AVCOG will provide information regarding defense industry decline to municipal officials, as well as make them aware of resources available for defense workers in transition. AVCOG will do this by providing copies of this report to Auburn, Lewiston, Lisbon and Sabattus (the most impacted communities) and meet with these communities to discuss the report findings.
- Participate in local, regional, inter-regional and state efforts related to defense dependency work. Municipal officials, local development corporations, and chambers of commerce should continue to participate on the Workers in Transition Committee and other state and federal efforts. Additionally, communities through their representatives should continue to participate in regional planning efforts conducted by AVCOG.

Recommendations for Regional Implementation (AVCOG region, Androscoggin, Franklin, Oxford Counties)

- Promote community comprehensive planning and provide assistance. AVCOG in conjunction with the State should continue to provide assistance to communities in with to develop comprehensive plans.

- Pursue available funding for the most impacted communities (Auburn, Lewiston, Lisbon and Sabattus) to conduct multi-town development strategies and other work as appropriate. AVCOG should research funding sources for this activity.
- AVCOG should coordinate or remain involved in multi-town efforts. AVCOG should continue to function as a central point for coordination of multi-town efforts related to defense dependency work.
- Liaison for State and Federal Agencies. AVCOG should act as the liaison between the State or federal agencies and local communities regarding defense dependency issues.

Recommendations for Multi-jurisdictional Implementation (AVCOG, Bath and Brunswick)

- AVCOG Representation on Bath and Brunswick Defense Committees. AVCOG should be represented and participate as a member of local or regional committees established to address defense dependency issues relating to BIW and BNAS. The findings of the AVCOG regional defense dependency analysis identify the reliance of Androscoggin County (particularly Auburn, Lewiston, Lisbon and Sabattus) to BIW and BNAS.

Recommendations for State Implementation

- Continue Centralized Organization of Defense Strategies. The State Planning Office should continue to function as a central point for planning and organizing defense conversion strategies.
- Consider establishing a new program under CDBG to provide assistance (planning, infrastructure financing, etc.) for defense dependent communities. The CDBG program should be broadened to include defense dependency related planning as an eligible activity. Additionally, the Program could be broadened to give priority to defense dependent communities.

APPENDIX A

APPENDIX B

**ANDROSCOGGIN VALLEY COUNCIL OF GOVERNMENTS
ANDROSCOGGIN COUNTY**

**OVERALL ECONOMIC DEVELOPMENT PROGRAM/
SUBREGIONAL POLICY ADVISORY COMMITTEE**

Ms. Maxine Bailey, Town Manager
Town of Livermore Falls

Mr. David Bowie
Town of Lisbon

Mr. Raymond Guest
Town of Leeds

Mr. Kenneth Kokernak, Town Manager
Town of Turner

Mr. Ted Curran
Town of Sabattus

Mr. Robert Thompson
City of Lewiston

Mr. Dana Lee, Town Manager
Town of Mechanic Falls

Mr. Stephen Heavener
L.A.E.G.C

Ms. Laurie Winsor
L/A Area Chamber of Commerce

Mr. Roland Miller
City of Auburn

Mr. Rodney Santos
Minot

Richard Chick, Town Manager
Town of Poland

Mr. John Turner
DCI

Mr. Richard Willis
C.M.T.C

WORKERS IN TRANSITION COMMITTEE

Belanger, Charlene
WCSH TV, Channel 6

Bourret, Mike
Department of Labor

Buch, Eric
United Way - Mid Coast of ME

Chase, Charlene
Community Concepts

Cost, Joan
Tri County Day Center

Costello Steve
Lewiston Sun Journal

Coverstone, Nancy
UMCE

Derosier, Mary
United Way

Donatelli, David
Auburn Mall Management

Dorrer, John
TDC

Dubord, Olive
Franklin County Extension

Dufour, Louise
ME Employment Security Comm.

Duval, Steve
Job Training Adm.

Eddy, Brenda
CMP

Edgerly, Earl
Auburn Welfare Dept.

Farley, Jon
TDC

Feeney, Dan
Development Director

Fowler, Fenwick
Western ME Community Action

Gove, Richard
WGME TV

Greenwood, Helen
L/A College

Gross, Richard
Mid State College

Hackett, Sallie
Kelly Temporary Services

Haegle, Lynda
Community Concepts

Hager, Shirley
UM Cooperative Extension

Halinski, Gene
United Way of Tri-Valley Co

Heath, Beverly
Dir. of General Assistance

Heavener, Stephen
LAEGC

Hierstein, William
CMTC

Howes, Eric
Senator William Cohen

Kearney, Kathy
CEI

WORKERS IN TRANSITION COMMITTEE
(Member list continued)

Low, Koreene
Community Concepts

Martin, Lisa
CEI

McIntosh, Ed
Trinity Episcopal Church Group

Michel, Paul
ME Job Service

Mitchell, Greg
AVCOG

Morin, Peter
Rep. Olympia Snowe

Niemiec, Anne
Lewiston Adult Ed

O'Brien, Lillian
DHS - Aspire

Ohler, Patricia
--

Patenaude, Judy
Lisbon General Assistance

Pedersen, Joan
Senator George Mitchell

Plourde, Sylvia
Mountain Valley Training

Pollock, Wendy
Oxford County Extension

Richter, John
Rep. Olympia Snowe

Ronquist, Karen
L/A College

Rubenstein, Estelle
Headstart/Family Daycare

Scalia, Helen
CEI

Shea, Greg
Tri-County Mental Health

Thompson, Bob
City of Lewiston

Tierney, Jim
DHS

Vallancourt, Robert
Job Service

Vermeulen, Bruce
TDC

Walker, Paul
Dept. of Education

Ward, Gil
Mountain Valley Training

Warlick, Leith
Lewiston Sun/Journal

Webber, Gary
CMTC

Willis, Dick
CMTC

Winsor, Larue
Chamber of Commerce

Woolf, Wynona
Auburn Adult Education

Young, Diana
United Way of Oxford

APPENDIX C

Effort focuses on lost defense-industry jobs

By LINDA GALWAY
Sun-Journal Staff Writer

AUBURN — If you work in a defense industry or face a potential lay-off because of military budget cuts, there may be a program designed to help you through the rough spots — that is, if federal funding becomes available.

Julia Barbagallo, economic development specialist for the Androscoggin Valley Council of Governments, said the council is joining forces with the Workers-in-Transition Committee. That committee, made up of local service providers, has had an ongoing mission for the last four or five months to prioritize the needs of displaced defense industry workers and identify ways to secure federal dollars for Maine and the region to help offset lost defense-related jobs.

The state has hired AVCOG to collect information and identify needs locally for dealing with the loss in defense industry jobs. If the data supports the need and federal funding becomes available, then programs based on the information gathered will be implemented.

"As the defense industry declines nationwide, our region's economy will be affected," noted Barbagallo.

Defense workers generally are at the mercy of the next contract.

Bath Iron Works, the state's largest private employer, last month announced it would be cutting back its Portland work force, transferring up to 700 of its 750 Portland employees to its Bath facility because of lack of work.

This week, BIW announced it has a \$3.75 million contract to repair the guided missile frigate U.S.S. Kaufman. The contract, however, will provide work for only 200 of the Portland yard employees for three months.

The committee met June 25 with an eye toward sharing information gathered by AVCOG so they can begin to see the potential impacts on their respective agencies, Barbagallo ex-

plained.

So far, AVCOG has looked at BIW's and the Brunswick Naval Air Station's resident employment, number of business suppliers and contractors with the defense industry and preliminary business survey results. Several programs including Mountain Valley Training, Job Service, Adult Education, credit counseling, and the like have been identified.

Committee members discussed the fact that the needs of dislocated defense workers are, in most ways, similar to the needs of other dislocated workers. Specifically, those needs include jobs (many have technical skills but are rooted to the area), career, budget and family counseling; health insurance coverage; basic training skills and information about starting a business.

"The timing of services is extremely important," Barbagallo pointed out. "Because layoff is such a radical change for this population, they do not usually seek services until unemployment benefits have run out."

Greg Mitchell, Director of AVCOG's Economic Development Division, is in charge of the project, Barbagallo said.

The Workers-in-Transition Committee, she added, has been an ongoing effort for the last four or five months. "Although we're working with service providers," she explained, "anyone with information to share should call us at AVCOG." The number there is 783-9186.

Sun-Journal, Lewiston, Maine,

Saturday, July 11, 1992

One-stop center to serve displaced defense workers

By LINDA GALWAY
Sun-Journal Staff Writer

AUBURN — Although still in the discussion stages, the community will soon have a walk-in center offering various kinds of help under one roof to displaced workers — especially those who once held defense jobs.

Many Bath Iron Works and Brunswick Naval Air Station workers live in this area, which could be hard hit if a large number of people lose their jobs in the wake of defense spending cutbacks by the federal government.

Representatives from social-service agencies in Auburn, Lewiston and Lisbon, as well as several municipal officials, have been meeting for almost a year to discuss defense dependency and "workers in transition."

Steve Adams of the Maine State Planning Office attended a meeting of the group last Wednesday and told its members he hopes

the state can "replicate" in other regions — including York County, the Bath-Brunswick area and Limestone in northern Maine — what the Workers-in-Transition Committee has planned for Lewiston-Auburn and Lisbon.

The state hopes to set up four career centers to provide one-stop help for the unemployed, as well as to serve as a broker for other services. But Adams said that is only a small part of what needs to be done.

Although the group has focused on displaced defense industry workers, Adams said, "If we fix things for defense workers, we'll be fixing them for everyone."

Chairwoman Patricia Ohler said the Workers-in-Transition Committee has looked at ways to support and supplement existing services and wrestled with the "financial and philosophical mission of providing services for the unemployed."

Many defense workers, Adams noted, are often ineligible for some programs because they have had good paying jobs and have accumulated assets or "they may not yet be unemployed, just worried about it. Also, they haven't had to depend on these services and, therefore, hesitate to take advantage of them, and their skills are varied."

Retraining, counseling, adult education and workshops on stress management are some of the ways unemployed workers can get past the initial crisis, the committee concluded. Many of those who lose their jobs actually have the skills to start their own small businesses, Adams said.

"We're coming to the point where we need to have one individual — paid — to help us continue to seek out . . . money to serve those people who need help," said Lillian O'Brien, a Department of Human Services employee. Earl Edgerley, Auburn's welfare director,

said using the First Call service provided by United Way of Androscoggin County helps someone with a "known need." First Call gives county residents information about a variety of community programs.

The next step, he urged, is "assessment. There has to be an assessment (of the worker) for emotional, financial and retraining needs and to determine the skills they have. We need to find out what talents and interests they have. We'll have a lot of people who won't be falling into specific categories."

"At one time, people graduated at 17, got a job and retired at 55," noted Ohler. "Now, the average American has four or five career changes, and retraining needs to be seen as a good situation."

Adams described the Workers-in-Transition Committee's effort as a "window of opportunity" because the federal Department of Labor has been given \$150 million to

dole out to those states whose work force has been affected by defense cuts. He said the state hopes to have a proposal — using the Workers-in-Transition Committee's walk-in center as a prototype — within the next few weeks.

"What I'm hearing you say is there needs to be a restructuring of the first-line system for people to get assistance, even before they're laid off," Adams said. Committee members agreed.

The program now coming together from the committee "is probably the only one like it in Maine," Adams said. "You've formed a coalition, and there's enough energy here to get done what you need to do."

"If you treat people uniformly, in an impersonal way, you will be no further ahead," Ohler said. "You've already failed. The only way to success is to be responsive to individuals and have that as a priority."

APPENDIX 7

STATE OF MAINE
DEFENSE REALIGNMENT TASK FORCE MEMBERS

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APPENDIX 8



OFFICE OF
THE GOVERNOR

NO. 2 FY 90/91
DATE July 23, 1990

AN ORDER ESTABLISHING A TASK FORCE ON
DEFENSE REALIGNMENT AND THE MAINE ECONOMY

WHEREAS, recent reductions in superpower tensions will inevitably result in a realignment of U.S. national security priorities and associated federal spending decisions; and

WHEREAS, defense-related activities in Maine support a significant portion of the economic activity in the State; and

WHEREAS, reductions in defense spending may have important impacts on Maine communities and Maine-based defense contractors, their suppliers and workers; and

WHEREAS, a forward-looking strategy to respond to reduced defense spending in Maine may allow Maine workers, businesses and communities to buffer their economic consequences;

NOW, THEREFORE, I, JOHN R. McKERNAN, JR., Governor of the State of Maine, do hereby establish the Task Force on Defense Realignment and the Maine Economy.

Purpose

The purpose of this Task Force shall be to determine the likely effects upon Maine businesses, workers and communities of changes in future federal Defense spending, assess the ability of workers, businesses and State and local governments to adjust to those changes, and recommend a strategy for private and public sector decision-makers in Maine to strengthen their capacity to cope with the potential dislocations associated with reduced defense spending in Maine.

Functions and Duties

The Task Force shall include in its consideration, but shall not be limited to, the following topics:

1. the contribution of the current level of defense spending to the Maine economy;
2. the effect of likely changes in defense spending on the Maine economy in general, and Maine businesses, workers and communities, in

3. the implications of efforts in neighboring states to convert military installations to private uses;
4. current efforts of Maine businesses to reduce their dependency on defense-related contracts;
5. emerging and future opportunities for alternative commerce and employment opportunities for defense-related Maine businesses and workers;
6. the capacity of existing public and private mechanisms to respond to the economic dislocations associated with future defense spending reductions; and,
7. the most desirable and practical methods to minimize the negative impact of changes in defense spending on Maine workers, businesses, and communities.

Administration

The Director of State Planning Office shall serve as Chair of the Task Force. The State Planning Office shall provide staff support to the Task Force and shall receive the assistance of participating State agencies as needed. The Task Force shall prepare a report of its findings and recommendations on or before February 1, 1991.

Membership

The Task Force shall consist of the following members:

Director of the State Planning Office; Commissioner of Economic and Community Development; Commissioner of Labor; President of the Maine Vocational Technical College System; Commissioner of Defense and Veterans' Services; Commissioner of Professional and Financial Regulation; Michael Aube, Eastern Maine Development Corporation (Bangor); William Ryan, Peoples Heritage Bank (Portland); Maurice Subilia, Fiber Materials (Biddeford); Thomas Baum, Pratt and Whitney (No. Berwick); Representative Susan Pines (Limestone); Senator Pamela Cahill (Woolwich); Representative Orland McPherson (Eliot); Michael Kiernan, Bath City Council (Bath); Mark Kearns, Attorney (Wells); William Haggett, Bath Iron Works (Bath); Jack Dexter, Maine Chamber of Commerce (Augusta); G. Melvin Hovey, Maine Public Service (Presque Isle); Sandy Blitz, U.S. Economic Development Administration (Augusta); P. Andrews Nixon, Dead River Company (Portland); Kathy Leonard, Auburn Manufacturing (Mechanic Falls); Jack Daigle, Casco Northern Bank (Portland); Bruce Makas, Saco Defense, Inc. (Saco); Richard Morrill, Brunswick Coal & Lumber (Brunswick); Charles O'Leary, Maine AFL-CIO (Brewer); James Mackie, Bath Iron Works (Portland); and Katherine Greenleaf, Hannaford Bros. (Scarborough).

At the discretion of the Governor, the Task Force membership may be expanded at a later time.

APPENDIX 9

APPROVED

APR 09 '92

BY GOVERNOR

CHAPTER

854

PUBLIC LAW

STATE OF MAINE

IN THE YEAR OF OUR LORD
NINETEEN HUNDRED AND NINETY-TWO

H.P. 1773 - L.D. 2455

An Act to Create Jobs, Promote Economic Growth and
Provide Business Assistance

Emergency preamble. Whereas, Acts of the Legislature do not become effective until 90 days after adjournment unless enacted as emergencies; and

Whereas, the unemployment rate in the State is high, requiring special efforts to stimulate the economy and create jobs; and

Whereas, the current recession has been accentuated by major structural changes in the regional, national and international economies; and

Whereas, this recession points to the need to make significant improvements in how State Government develops, implements and coordinates long-term strategies for economic growth in order to achieve and maintain economic prosperity into the 21st century; and

Whereas, these facts have necessitated the need for State Government, jointly with the private sector and the educational system, to develop and update specific action plans for stimulating long-term economic growth and for State Government to coordinate the delivery of the economic development and business assistance services outlined in the long-term plans; and

Whereas, this Act implements the recommendations of the Maine Jobs Commission, which was established to recommend programs and activities that will create jobs within the State; and

Whereas, in order to provide maximum benefit to the State's economy, these programs and activities need to be initiated before the expiration of the 90-day period; and

Whereas, in the judgment of the Legislature, these facts create an emergency within the meaning of the Constitution of Maine and require the following legislation as immediately necessary for the preservation of the public peace, health and safety; now, therefore,

Be it enacted by the People of the State of Maine as follows:

PART A

Sec. A-1. 10 MRSA §965, sub-§1, as amended by PL 1991, c. 511, Pt. A, §1, is further amended to read:

1. **Selected board members.** ~~Six~~ Four members of the authority to consist of:

~~A. Two veterans selected by the Governor from the members of the Maine Veterans' Small Business Loan Board;~~

B. Two members selected by the Governor from the public members of the Natural Resource Financing and Marketing Board; and

C. Two members selected by the Governor from the appointed members of the Maine Education Assistance Board.

Sec. A-2. 10 MRSA §965, sub-§3, as amended by PL 1987, c. 596, §1, is further amended to read:

3. **At-large members.** ~~Three~~ Five members appointed by the Governor and subject to review by the joint standing committee of the Legislature having jurisdiction over economic development matters and subject to confirmation by the Legislature ~~shall~~ must be appointed from at large. Two of the at-large members must be veterans.

Sec. A-3. 10 MRSA §1026-A, sub-§1, ¶A, as amended by PL 1985, c. 714, §16, is further amended to read:

A. No A mortgage payment may not be applied in a manner ~~which~~ that would, for any one project, increase the percentage of mortgage payments insured by the authority, except that this paragraph ~~shall~~ does not apply where when insurance payments for any one project may not in the

aggregate exceed the lesser of 25% of the original principal amount of the mortgage loan or:

(1) In the case of insurance provided pursuant to section 1026-B, ~~\$125,000~~ \$250,000;

(2) In the case of insurance provided pursuant to section 1026-C, \$25,000; or

(3) In the case of insurance provided pursuant to section 1026-D, \$1,000,000;

Sec. A-4. 10 MRSA §1026-A, sub-§3, as enacted by PL 1985, c. 714, §18, is amended to read:

3. Mortgage insured loan limitation for small businesses. Whenever an applicant applies for mortgage insurance under sections 1026-B and 1026-C, the authority may insure mortgage loans for which the combined principal amounts of mortgage insurance of both sections ~~does do~~ not exceed ~~\$600,000~~ \$1,100,000.

Sec. A-5. 10 MRSA §1026-B, as amended by PL 1991, c. 511, Pt. A, §§5 to 7, is further amended to read:

§1026-B. Mortgage insurance of \$1,000,000 or less

1. Scope of section. This section applies, in addition to other applicable provisions of this subchapter, when the original principal amount of the mortgage insurance is ~~\$500,000~~ \$1,000,000 or less, but not when mortgage insurance is provided pursuant to section 1026-D.

2. Insurance. Any mortgage insurance provided pursuant to this section is subject to the following:

A. The original principal amount of mortgage insurance ~~must~~ may not exceed ~~\$500,000~~ \$1,000,000; and

B. The authority may insure no more than 85% 90% of the mortgage payments.

3. Mortgage eligibility. The authority may insure mortgage payments under this section provided that:

A. Repayment of the loan may be secured by less than full collateral if the borrower or the principals of the borrower are of good character and have good credit records;

B. The mortgage loan has a maturity satisfactory to the authority; and

C. The borrower:

(1) In the case of an existing business, at the time application is made for financing assistance, employs 20 50 persons or less or has gross sales not exceeding \$2,500,000 \$5,000,000 per year; or

(2) In the case of a new business, at the time application is made for financing assistance, projects that, during the first 12 months of operation, it will employ 20 50 persons or less or will have gross sales not exceeding \$2,500,000 \$5,000,000.

4. **Retail store projects.** The authority may insure mortgage loans for a retail store project, provided that:

A. The principal amount of mortgage insurance for the project does not exceed \$200,000;

B. The project includes only one retail store that is not attached or does not adjoin another retail store that has received an insured mortgage loan under this chapter; and

C. The applicant has not received mortgage insurance under this subsection for any other retail store.

5. **Professional office building projects.** The authority may insure mortgage loans for a professional office building project, provided that:

A. The principal amount of mortgage insurance for the project does not exceed \$200,000;

B. Less than 35% of the project is intended or planned for professional office space;

C. Notwithstanding paragraph B, in the event that the project proposes that more than 35% of the project will be professional office space, the project is not attached or adjoined to any other professional office building that has received an insured mortgage loan under this chapter; and

D. The applicant has not received mortgage insurance under this subsection for any other professional office building project.

Sec. A-6. 10 MRSA §1026-C, sub-§2, as amended by PL 1989, c. 857, §47, is further amended to read:

2. **Insurance.** The authority may provide mortgage insurance benefiting a veteran in an original principal amount of \$250,000 or less in addition or as an alternative to any amount provided pursuant to section 1026-B. The authority may insure 100% of mortgage payments under this section of for a loan approved ~~pursuant-to-section-980-B~~ of up to \$75,000.

Sec. A-7. 10 MRSA §1100-T, sub-§1, as enacted by PL 1987, c. 854, §§2 and 5, is amended to read:

1. **Legislative findings; authorization.** The Legislature finds that the growth of new and existing small businesses in the State results in increased job opportunities for Maine residents, produces more spending in the State and increases municipal tax bases. Businesses ~~which~~ that export their products or services out of the State bring capital into the State and help to develop export markets for Maine products. Small new and existing businesses can provide significant economic benefits to the State ~~provided-that~~ if they can obtain sufficient seed equity financing to carry them from start-up through the initial development phases of a business. In order to encourage the increased availability of risk equity capital to ~~these-early-growth-stage~~ enterprises that bring capital into the State, the authority is authorized to issue certificates of eligibility for the seed capital investment tax credit permitted by Title 36, section 5216-B, subject to the requirements of this section. This program ~~shall-be~~ is known as the Maine Seed Capital Tax Credit Program.

Sec. A-8. 10 MRSA §1100-T, sub-§2, ¶¶B to D, as enacted by PL 1987, c. 854, §§2 and 5, are amended to read:

B. The Maine business must be a manufacturer; must provide a product or service ~~which~~ that is sold or rendered, or is projected to be sold or rendered, predominantly outside of the State; or must bring capital into the State, as determined by the authority. ~~Businesses--which--bring products--into--the--State--and--then--sell--the--same--products outside--the--State--are--not--eligible.---Construction, transportation,--financial--services,--insurance--and--real estate--businesses--are--not--eligible.---Other--service businesses--are--eligible--provided--that--the--customers--are predominantly--out--of--the--State--and--the--employment--functions are--carried--out--predominantly--in--the--State.~~

C. Aggregate investment eligible for tax credits shall may not be ~~less-than-\$25,000--nor~~ more than \$250,000 \$600,000 for any one business as of the date of issuance of a tax credit certificate.

D. The investment with respect to which any individual is applying for a tax credit certificate shall ~~be~~ may not less than ~~than--\$10,000--nor~~ be more than an aggregate of \$50,000 \$100,000 in any one business, provided except that this paragraph shall does not ~~be--interpreted--to~~ limit other investment by any applicant for which that applicant is not applying for a tax credit certificate.

Sec. A-9. 10 MRSA §1100-T, sub-§2, ¶E, as amended by PL 1989, c. 765, §4, is further amended to read:

E. The business receiving the investment must have annual revenues gross sales of \$200,000 \$2,000,000 or less and the operation of the business must be the full-time professional activity of the principal owner, as determined by the authority. ~~Businesses with annual revenues of \$500,000 or less may receive the investment, provided that credits for investments in businesses with annual revenues between \$200,001 and \$500,000 are claimed only during tax years beginning on or after January 1, 1991. The principal owner and the principal owner's spouse, parents, brothers, sisters and children are not eligible for a credit for investment in that business. Businesses in which the principal owners are not one or more individuals are not eligible.~~

Sec. A-10. 10 MRSA §1100-T, sub-§2, ¶G, as enacted by PL 1987, c. 854, §§2 and 5, is amended to read:

G. The authority shall establish limits on repayment of the investment, ~~requiring at a minimum that the investment remain in the business for at least 5 years with no current income to the investor during the 5 year period.~~ The investment must be at risk in the business.

Sec. A-11. 10 MRSA §1100-T, sub-§§3 and 4, as enacted by PL 1987, c. 854, §§2 and 5, are amended to read:

3. Priority. The authority shall may reserve \$500,000 in tax credit authorization for "natural resource enterprises," as defined in section 963-A, subsection 41, and shall may reserve an additional \$500,000 in tax credit authorization for eligible investments in businesses located in job opportunity zones designated pursuant to Title 5, chapter 403, or in contiguous communities designated by the Commissioner of Economic and Community Development, as being entitled to zone benefits due to special circumstances.

4. Total of credits authorized. The authority may issue tax credit certificates in the an aggregate ~~credit~~ amount of \$700,000 ~~in the fiscal year ending June 30, 1989, \$650,000 in the~~

~~fiscal-year-ending-June-30,-1990,-and-\$650,000-in-the-fiscal-year
ending-June-30,-1991,-for-a-total-aggregate-of not to exceed
\$2,000,000 in--tax--credit--certificates,--provided--that--any
authorized-credit-for-which-certificates-have-not-been-issued-in
the-year-authorized-may-be-carried-forward-to-subsequent-years
until-an-aggregate-of-\$2,000,000-in-certificates-has-been-issued.~~

PART B

Sec. B-1. 5 MRSA §3307-E is enacted to read:

§3307-E. Task Force on Defense Realignment and the Economy

The Task Force on Defense Realignment and the Economy, referred to in this section as the "task force," is established in the State Planning Office to monitor federal reductions in defense spending and defense realignment affecting the State and to ensure a timely, comprehensive, statewide response to those cuts.

1. Membership. The task force consists of the following members:

A. The Director of the State Planning Office, the Commissioner of Economic and Community Development, the Commissioner of Labor, the Commissioner of Professional and Financial Regulation, the Commissioner of Defense and Veterans' Services and the President of the Maine Technical College System who serve ex officio;

B. One Senator appointed by the President of the Senate and 2 members of the House of Representatives appointed by the Speaker of the House of Representatives; and

C. Eighteen public members representing the interests of the public, business, commerce, labor and local, regional and federal government, 9 of whom are appointed by the Governor and 9 of whom are appointed jointly by the President of the Senate and the Speaker of the House of Representatives. The appointing authorities shall coordinate appointments so that, to the maximum extent possible, appointments result in geographic diversity and balanced representation among the constituencies on the task force.

2. Terms; compensation. Public and legislative members serve 2-year terms and may be reappointed. Legislative members are entitled to receive per diem compensation; all members are entitled to reimbursement for expenses incurred in carrying out

their duties. The compensation and reimbursement costs of the task force must be paid by the State Planning Office.

3. Administration. The director is the chair of the task force. The office shall provide staff support to the task force. State agencies shall provide technical assistance to the task force as needed.

4. Duties. The task force shall perform the following duties:

A. Prepare a statewide strategy and implementation plan to assist the State and its defense-dependent industries, workers and communities to reduce defense dependency by shifting from military to civilian enterprises while retaining a stable industrial and commercial base, high employment and wages and diverse state, regional and local economies. A strategic plan and recommendations for implementation must be submitted to the Governor and the joint standing committee of the Legislature having jurisdiction over economic development matters by July 1, 1992. The report must be updated annually and as otherwise requested by the joint standing committee. The strategic plan must include:

(1) Determination of how firms in the State will be affected by the reduction of output by prime contractors and bases, how defense realignment will affect local and state government services and the adequacy and effectiveness of existing federal, state and local dislocation response capacity;

(2) Assessment of the current capacity of at-risk businesses and workers to reduce their defense dependency;

(3) Identification of sources of assistance for local and regional planning efforts, including coordination of local and regional efforts;

(4) Development of a comprehensive strategy for reducing the State's defense capacity, including identification of steps required to: encourage, assist and strengthen local development capacity in at-risk regions; help diversify the reemployment base; enhance reemployability of workers; broaden the markets of defense-dependent firms; and anticipate and mitigate impacts on communities associated with defense-spending reductions; and

(5) Identification of barriers to the effective implementation of the plan and recommendation of actions to remove these barriers;

B. Prepare and submit legislation by October 1, 1992 and as necessary thereafter that:

(1) Identifies how state agencies will assist the regions in achieving their objectives;

(2) Provides for adequate incentives and resources to implement state, regional and industry strategic plans; and

(3) Provides for adjustment assistance for communities and workers while the economy adjusts to reductions in defense spending;

C. Coordinate funding, technical assistance and other support to defense-dependent regional and industry planning committees to help various regions of the State develop and implement economic conversion and diversification goals, objectives and strategies; and

D. Coordinate state efforts toward the adoption of federal legislation and policies that support economic conversion and diversification planning, commercial industries, market opportunities and global competitiveness.

Sec. B-2. Transition. Current public and legislative members of the Task Force on Defense Realignment and the Maine Economy established by Executive Order may continue to serve as members of the Task Force on Defense Realignment and the Economy established in this Part until July 1, 1992. At that time, they may be reappointed or new members appointed in their places.

PART C

Sec. C-1. Study innovative approaches to assist dislocated workers. The Department of Labor shall study alternative uses of unemployment insurance compensation funds to encourage the reemployment of unemployed workers and the retention of currently employed workers who would otherwise be terminated from employment. In conducting the study, the department shall review efforts in other states to achieve similar results. As part of the study, the department shall investigate the need for and availability of waivers from federal requirements and the possibility of the State qualifying for demonstration status to implement possible alternatives. The department shall consider at least the following alternatives:

1. Using unemployment insurance compensation funds to encourage dislocated workers to take action necessary to return to productive employment, including permitting unemployed workers to continue to receive full unemployment benefits for a limited period of time if they participate in an authorized retraining program or start their own businesses;

2. Using unemployment insurance compensation funds to maximize job creation efforts of business by providing incentives to employers to hire new employees, including permitting employers to hire unemployed workers during a probationary period at less than the minimum wage while supplementing wages with unemployment benefits;

3. Using unemployment insurance compensation funds to encourage employers to retain current jobs, including permitting an employer to retain workers who would otherwise be terminated by reducing the wages paid to those workers and using unemployment benefits to offset part of the wage reduction; and

4. Other possible uses of unemployment insurance compensation funds to promote job creation and retention by employers and retraining and entrepreneurial efforts by dislocated workers.

Sec. C-2. Report. The Department of Labor shall submit a written report to the joint standing committees of the Legislature having jurisdiction over economic development matters and labor matters during any special session of the 115th Legislature or, if a special session is not convened, to the First Regular Session of the 116th Legislature by December 1, 1992. The report must include the department's findings and recommendations and a draft of any necessary implementing legislation.

PART D

Sec. D-1. 5 MRSA c. 380 is enacted to read:

CHAPTER 380

LONG-TERM ECONOMIC GROWTH PLANNING AND COORDINATION OF ECONOMIC DEVELOPMENT AND BUSINESS ASSISTANCE SERVICES

§13001. Economic Development and Business Assistance
Coordinating Council established

The Economic Development and Business Assistance Coordinating Council, referred to in this chapter as the "council," is established to develop a long-term economic development plan for the State as provided in this chapter and to coordinate and oversee economic development and business assistance services throughout the State.

1. Membership. The council consists of 13 members as follows:

A. The Commissioner of Economic and Community Development;

B. The Commissioner of Labor;

C. The Chief Executive Officer of the Maine Development Foundation;

D. The Chief Executive Officer of the Finance Authority of Maine;

E. The Executive Director of the Maine Science and Technology Commission;

F. The President of the Maine World Trade Association;

G. A member representing the University of Maine, appointed by the Chancellor of the University of Maine System;

H. A member representing the University of Southern Maine, appointed by the Chancellor of the University of Maine System;

I. The President of the Maine Technical College System;

J. The Director of the United States Small Business Administration Small Business Development Subcenter Program at the University of Southern Maine;

K. The Executive Director of the Maine State Housing Authority;

L. The Director of the State Planning Office; and

M. The Executive Director of the Maine State Retirement System.

2. Quorum; voting. Seven members of the council constitute a quorum, which is necessary for voting on issues before the council. A majority vote of those voting is necessary for official action of the council.

3. Compensation. Members of the council are not entitled to compensation for their services on the council. Personnel and operating costs of the council and council member expenses must be funded by the agencies and organizations comprising the council.

4. Staff. The council shall provide for its staffing. The council may raise and expend funds from the private sector to support council staffing and other expenses.

5. Chair. The council shall biennially elect a chair, except that the Commissioner of Economic and Community Development shall chair the council for the first term ending January 1, 1994.

§13002. Powers and duties

1. Identify regions; regional services. The council shall identify regions throughout the State for the purpose of developing regional economic development strategies and creating a regionally based delivery system of economic development and business assistance services.

A. Economic development regions are subject to the following.

(1) No later than February 1, 1993, the council shall provide to the joint standing committee of the Legislature having jurisdiction over economic development matters a preliminary report that inventories existing economic development regions and resources, analyzes the effectiveness of those regions in carrying out their mission and proposes a system of economic development regions to provide comprehensive economic development and business assistance services throughout the State.

(2) Following presentation of the report required by subparagraph (1), the council shall adopt by rule a system of economic development regions for the State that identifies each region and a proposed system of delivering economic development and business assistance services within each region.

(3) As part of the regional system adopted under subparagraph (2), the council shall provide a procedure by which a person, firm, organization or municipality adversely affected by the establishment of a delivery system of economic development and business assistance services may appeal to the council for a change in the delivery system to meet the needs of the affected entity or person.

(4) In adopting a system of economic development regions for the State, the council shall establish regions that best meet the needs of municipalities and the private sector with respect to developing a regional strategy and a regional delivery system of economic development and business assistance services. In identifying the regions, the council shall consider existing regional designations used by other state and federal agencies.

(5) In establishing regions, the council shall provide for the efficient and convenient delivery of economic development and business assistance services to all users within each region. Services provided within a region and economic development and business assistance services provided by state and federal agencies must be coordinated to provide users with the most efficient services possible. Services may be provided across regional lines as the council determines appropriate.

B. The council, through its member agencies, shall help each region identify the industries and economic activities with significant growth potential, the types of jobs and the job training required for these activities and the infrastructural improvements and projects that may be necessary within each region.

2. Encourage regional strategies. Following adoption of regions as provided in this section, the council shall encourage and assist regions in developing economic development strategies.

A. In assisting regions to develop economic development strategies, the council, among other services, shall help identify and organize the public and private economic development and business assistance agencies, the private sector and interested groups within each region to work cooperatively on developing a strategy.

3. Develop long-term plan. Following adoption of regions and development of regional strategies, the council shall develop a long-term economic development and business assistance plan f

the State in accordance with section 13004. The long-term plan must guide state agencies and other agencies receiving state funds with respect to economic development throughout the State.

The council shall submit to the Governor and the Legislature the long-term plan and any necessary implementing legislation no later than December 1, 1993. Following submission of the plan, the council shall adopt by rule a long-term economic development and business assistance plan for the State.

4. Investigate issues. The council may investigate any issues involving economic development and business assistance and report its findings and recommendations, including any necessary implementing legislation, to the Governor and the Legislature.

5. Advisory committee. The council shall establish an advisory committee composed of municipal officials, interested citizens and representatives of business, labor and banking to advise the board with respect to the long-term plan, regional strategies and the delivery of economic development and business assistance services. The council may establish other advisory committees as it finds necessary.

6. Evaluate long-term plan. The council shall provide, at least every 2 years, for the objective evaluation of the long-term plan required under subsection 3, including the extent to which the goals and strategies of the plan have been met, the effectiveness of the coordinating effort of the council, the effectiveness of the regional delivery system and the effectiveness of the long-term plan in generating jobs, new and expanded businesses and increased personal income. The evaluation may not be conducted by any member of the council.

7. Update long-term plan and regional strategies. At least every 2 years, the council shall update the long-term plan required under subsection 3 and coordinate with the regions an update of the regional strategies. The council shall include in the report required in subsection 8 the results of the updates.

8. Report. At a minimum, the council shall provide the Governor and the Legislature with a biennial report by December 1st beginning in 1995 that describes the economic activity in each region, the extent to which the goals and objectives of each regional strategy are being met, the successes and the failures of policies and programs and any other information determined important by the council.

§13003. Regional economic development plans and strategies

The council shall encourage and assist regions in developing long-term economic development plans and strategies. The council shall strive to create a process by which public and private agencies, the business community and interested persons within each region cooperate and coordinate their efforts to develop a regional economic development plan.

The Department of Economic and Community Development, the State Planning Office and the Department of Labor shall cooperate in providing the council with information that will help to identify:

1. Economic growth potential. The industries and economic sectors with significant growth potential;

2. Job training needs. The types of jobs involved in the industries and economic sectors with significant growth potential and the job training requirements for these jobs;

3. Development needs. The means necessary for the development of the sectors and industries pursuant to subsection 1; and

4. Infrastructure needs. The infrastructural needs to support the economies of each region.

§13004. Long-term plan

1. Contents. The long-term plan developed by the council pursuant to section 13002, subsection 3 must consist of: a vision statement for the State's economy to guide the economic planning process; the regional strategies developed in accordance with this chapter; statewide and regional economic goals and strategies, including evaluation criteria; and specific biennial action plans, including coordination of the delivery of economic development and business assistance services, organizational and funding recommendations, expected outcomes and measurable performance indices.

In developing the long-term plan, the council shall consider:

A. The types of industries and jobs with significant growth potential in the State and job training requirements to meet the needs of business;

B. Long-term economic growth recommendations of the public and private sectors and any other relevant studies and evaluations;

C. The long-term infrastructural needs that support the State's economy, including, but not limited to:

(1) The educational system;

(2) The State's science, technology and research infrastructure;

(3) The State's transportation infrastructure and energy policies; and

(4) The State's regulatory policies;

D. The State's evolving industrial base;

E. The diverse economies of the regions of the State;

F. International commerce opportunities;

G. Existing efforts to convert military economies to civilian economies;

H. Federal funding opportunities; and

I. The extent to which economic development and business assistance services can be delivered regionally.

The council shall give specific attention to the means by which activities in the science, technology and research arenas can be adapted to invigorate the State's economy.

2. Science and technology infrastructure. The Maine Science and Technology Commission, in cooperation with the University of Maine System, the Maine Technical College System and the private sector, is responsible for developing strategies and an action plan for strengthening the State's science and technology infrastructure and enterprise that must include research and development. These strategies and action plan must be considered in the development of the long-term economic development plan for the State. The council shall also consider the research and development strategy undertaken by the Maine Science and Technology Commission pursuant to Private and Special Law 1991, chapter 68.

3. International commerce and business development. The Maine World Trade Association, in cooperation with the University of Maine System and the Department of Economic and Community Development, is responsible for developing strategies and an action plan for expanding international activities by businesses

in the State and encouraging international investment in the State. These strategies and the action plan must be considered in the development of the long-term economic development plan for the State.

4. Financial support for business development. The Finance Authority of Maine, in consultation with the banking community and the private sector, is responsible for developing strategies and an action plan to provide financial support to facilitate the growth and development of business enterprises and entrepreneurs involved in the development and fabrication of new commercial products and to promote modernization and conversion of existing firms. Financial support may include, but is not limited to, loans, equity capital and tax incentives. The Finance Authority of Maine shall seek input from the Maine Science and Technology Commission and the Maine World Trade Association to ensure that financial needs for strengthening the State's science and technology infrastructure and international commerce activities are appropriately considered and integrated in the financial support strategies and action plan. These strategies and action plan must be considered in the development of the long-term economic development plan.

Emergency clause. In view of the emergency cited in the preamble, this Act takes effect when approved.