

	NNSY	SSN-INAC	MAX POTENTIAL (TABLE 13.2 p. 28)		
	97	98	99	00	01
	0.321	1.048	0.261	0.556	1.666
Predicted	<u>0.043</u>	<u>0.245</u>	0.261	0.001	—
	0.278	0.833	0.0	0.555	1.666

~ 0.25 km to INAC 688

	NNSY	688 ERO	MAX POTENTIAL (TABLE 15.2 p. 35)		
	97	98	99	00	01
	0.846	3.551	1.846	2.510	2.967
Predicted	—	—	0.070	0.717	1.191
Excess	0.846	3.551	1.776	1.793	1.776

	NNSY	SSBN	EOH/ERO	MAX POTENTIAL (TAB 12.2 p. 26)	
	97	98	99	00	01
	1.215	1.215	—	2.430	2.430
Predicted	—	—	—	—	—
Excess	1.215	1.215	0	2.430	2.430

	NNSY	SSRA	MAX POT (TAB 16.2 p. 40)		
	97	98	99	00	01
	1.424	1.467	0.910	1.801	1.650
Predicted	<u>0.344</u>	<u>0.251</u>	0.0	0.045	0.029
	1.08	1.216	0.81	1.756	1.621

	NNSY	SSN DMP	MAX POT (TAB 17.2 p. 43)		
	97	98	99	00	01
	0.582	1.170	1.072	2.132	1.962
Predicted	—	<u>0.006</u>	<u>0.490</u>	<u>0.968</u>	<u>0.216</u>
	0.582	1.164	0.582	1.164	1.746

"Hey, no one can put trash in my car - I can't find anything." David E.

	97	<del>98</del> OPW	99	00	01
Nuke	0.604	0.558	0.486	0.317	0.294
Predicted Nuke	0.258	0.258	0.258	0.259	0.258
Non Excess	0.346	0.3	0.228	0.058	0.036
Non-Nuke	2.808	2.593	2.59	1.465	1.359
Predicted Non-Nuke	0.427	1.136	1.136	1.198	1.193
Excess	1.671	1.457	1.454	0.267	0.166

~~98~~ OPW MAX POT (TEL 29.2 p. 74)

# Jackson

	97	98	99	00	01	SSN E R O
NNSY <del>MAX POT</del> EXCESS ERO CAP	0.896	3,551	1,776	1,793	1,776	
PNSY Predicted ERO CAP	0.444	0,926	1,145	0,717	0,9	
	0.402	2,625	0,631	1,076	0,876	

This scenario assumes that a) NORVA workload remains as assigned, that b) sufficient production demand is available to justify max hiring, max apprentice training, optimum procurement, max equip support, and that c) no major MILCON is added to what is already programmed @ Norfolk.

Under these assumptions, Portsmouth's refueling workload is transferred to Norfolk.

	97	98	99	00	01	SSN I N A C S
<del>NNSY EXCESS SSN ERO CAP</del>	<del>1.215</del>	<del>1,215</del>	<del>0</del>	<del>2,430</del>	<del>2,430</del>	
<del>PNSY Predicted SSN ERO CAP</del>	<del>0.278</del>	<del>0,533</del>	<del>0.0</del>	<del>0.555</del>	<del>1.666</del>	
NNSY XS SSN INACS	0.278	0,533	0.0	0.555	1.666	
PNSY Predicted SSN INACS	0.240	0,206	0.002	0.048	0.192	
	0.038	0,627	(0.002)	0.507	1.474	

	97	98	99	00	01	SSN D S R A
NNSY EXCESS SSN DSRA	1.08	1,216	0.91	1,756	1,621	
PNSY Predicted SSN DSRA	0.406	0,065	0,040	0.0	0.0	
	0.674	1,151	0,77	1,756	1,621	

	97	98	99	00	01	SSN D M P
NNSY XS SSN DMP	0.582	1,164	0.582	1,164	1,746	
PNSY Predicted SSN DMP	0.106	0,065	0.040	0.392	0.209	
	0.176	1,099	0,542	1,164	1,746	

	97	98	99	00	01
NNSY XS NUKE OPW	0.346	0.3	0.228	0.058	0.036
PNsy Predicted Nuke OPW	0.071	0.039	0.039	0.032	0.032
	0.275	0.261	0.189	0.026	0.004
NNSY XS NON-NUKE OPW	1.671	1.457	1.454	0.267	0.166
PNsy Predicted Non-NUKE OPW	0.350	0.341	0.331	0.331	0.331
	1.321	1.116	1.123	(.04)	(.165)

O  
P  
W

NNSY XS RATA

# Building Facilities ~~vs~~ Maint Facilities

## Questions for SSN Briefing

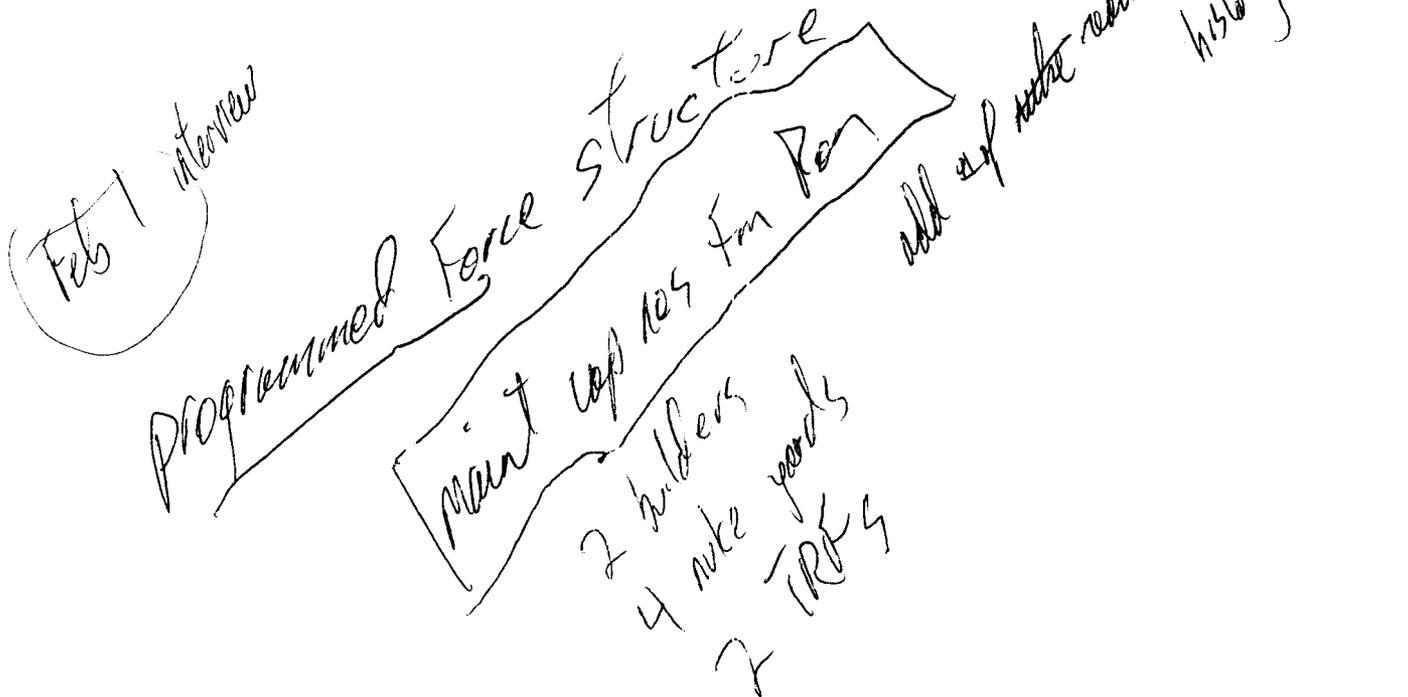
- What are the standing intelligence requirements for SSNs?
- How many SSNs are required by the CINCs and current DON policy?
- How many SSNs are desired by the CINCs?
- What is the depth capability of the LA class?
- What is the depth capability of the AKULA class?

New Attack Sub Cost & Op EFF Analysis  
LOEA ~ SEP 93  
by CNA

USN positioning for slightly ↑ FS under  
Repub admin in 2 yrs

Class Im BUR of 2346 - high 300s (375-390)

JCS 51-67 subs



JACKSON

	97	98	99	00	01
	0.402	2.625	0.631	1.076	0.976
SSN XXX	0.402	1.498			
SSN XXY		1.127	0.631	0.142	
SSN XXZ				0.934	0.876
SSN XXX	0.402	1.398			
SSN XXY		1.227	0.573		
SSN XXZ			0.058	1.076	0.666

1.9 KDMY  
per ERO

1.8 KDMY  
per ERO

PNSY ERO

	FY 97	98	99	00	01
701	0.073	0.9	0.421		
711		0.026	0.724	0.644	
715				0.073	0.9

PNSY INAC

NNSY INAC

	FY 97	FY 98	FY 99	FY 00
SSN <del>XXX</del>	0.043	0.199		
SN XXX		0.016	0.261	0.001

# Excess Depot Capacity

40% excess to needs, but closing NSY w. smallest capacity  
 How do you rationalize carrying the excess capacity?

688's listed refuelings currently which will likely be de-activations

NSY mil vals from 93 make LBNSY #3

Nuclear capacity is more expensive to maintain, yet LBNSY

BRAC DATA CALL 9 Manyears/year

	Nuclear core	Non nuke		Predicted	
				Nuke	Non-nuke
LBNSY	0	2696		0	1.849
PNSY	3686	378	4064	1.372	.331
WNSY	4965	3051	8016	3.518	2.796
PSNSY	5313	2202	7515		
PH	3155	845	4000		
	<u>17119</u>	<u>9172</u>	<u>26291</u>		

Expd Nuke 9759  
 Non-nuke 4852

17119 - 3686

Excess nuke

total 11680

CORE 2001 Nuke ~~9309~~ 9759  
 Non-nuke 4852

Homeported SD  
LHAs  $\approx$  2 CVs = 2  
LHDs = 2

35~~4~~ days SD-Seattle 7 SD- Pearl  
4 LA class still to be delivered for total of 62

681-0432  $\rightarrow$  Cindy De

NORVA

LA Class 62 total

4 to be delivered

2 inactivations

3 refueled or being refueled

2 more by FY 99 @ PMSY

62 (total) - 31 (don't need refueling) - (3 refueled)  
- (2 by 1999) = 26 that might req. refuel

50 ship fleet - 36 (refueled ships)  $\approx$  14 ships

*Taxed  
Working Papers*

Date: 03 APR 95

To: Commissioner Davis  
Commissioner Steele  
David Lyles

CC: Ben Borden  
Alex Yellin

From: Larry Jackson

Subject: ATTACK SUBMARINE BACKGROUND READING

---

The attached information is intended to familiarize you with some of the issues surrounding attack submarine procurement. Information in this memo is intended to increase your understanding of the underlying issues as they pertain to this round of base closure, particularly with regard to Naval shipyards.

#### **Relevance**

Attack submarine procurement is relevant to this round of base closure primarily for three reasons:

1. Procurement rate of new submarines is a significant factor in determining the timing and the rate of old attack submarine (primarily LA-class) de-activations.
2. One potential scenario for long-term procurement strategy involves extending the life of several Los Angeles class submarines.
3. In very rough numbers, attack submarines comprise 15% of the Navy's ship inventory, but account for 30% of the maintenance performed in the public shipyards.

#### **Missions and Fleet Composition**

Attack submarines perform a variety of missions. During the Cold War, emphasis was placed primarily on Anti-Submarine Warfare (ASW), but attack subs, or SSNs, are also capable of performing intelligence gathering missions, launching Tomahawk cruise missiles, mining coastal areas, anti-surface warfare, and insertion and extraction of spies and special forces.

The Navy's fleet of attack submarines consists of approximately 56 Los Angeles class (also known as LA-class and 688-class) submarines, and 27 Sturgeon class (637-class) submarines. Two single-ship classes of submarines are also active.

#### **Background--The Los Angeles Class Submarine**

A total of 62 LA-class submarines have been procured by the Navy. Of these, four have yet to be delivered, and two have been inactivated. The first 31 submarines were built with nuclear cores which needed replacement after roughly 15 years. Since the LA-class was intended to have a service life of 30 years, this meant that the first 31 submarines would require a refueling overhaul (abbreviated ERO by the Navy). The second flight of submarines were built with cores which had a core-life comparable to the 30-year service life. In other words, the second flight of submarines did not require refueling.

A submarine refueling is perhaps the most demanding (in terms of skill and time) evolution performed in the naval shipyards. Notional duration for the refueling of a 688-class submarine is approximately 1,400 direct labor man years. The first 688 was commissioned in 1976, based on a late-1960s design. Because the first flight of 688's were commissioned at rates approaching 4 submarines per year, large numbers of the submarines were scheduled for refueling beginning in middle 1990's, and this "bow-wave" required the naval shipyards to retain the capacity to complete the task.

In the early 90's, after the demise of the Soviet Union, the Joint Chiefs of Staff began studying options for decreasing the numbers of attack submarines in the fleet. One proposal, dubbed JCS-1, called for defueling (vice refueling) nine 688's. (A defueling more than halves the level of effort required for a refueling.) The JCS-1 scenario resulted in a 15% decrease in the necessary capacity required in the latter 1990's, when compared to the Bush-Cheney Base Force.

#### **About the Attachments**

If you are pressed for time, I would recommend first reading the Congressional Research Service (CRS) testimony by Ron O'Rourke. Ron has taken more of a middle-ground approach to the procurement issue. Ms. Slatkin's testimony stakes out the Navy's position, which boiled down is, "Build the New Attack Submarine." The GAO testimony outlines several lower-cost procurement strategies that the Navy could pursue. I highly recommend reading the "Background" portion of the GAO testimony, if nothing else.

#### **A Few Notes**

The New Attack Submarine has also been known as the Seawolf follow-on, and the Centurion.

We have obtained or will soon obtain all of the references in the GAO testimony.

Staff has requested a classified briefing on attack submarine missions, the threat, and the Navy's perspective regarding procurement and budget limitations. It has been requested for the morning of 18 April, and will probably be held in the Pentagon.

On page 3 of the CRS report, note that "requirements for an attack submarine force of more than about 45 boats are driven primarily by *peacetime* deployment considerations." (Emphasis added.)

Pages 6-8 of the GAO testimony discuss the proposal to extend the lives of nine 688s. During the hearing, Admiral Bruce DeMars, who is in charge of Naval Reactors, noted that a study of service life extension would take many years.

Page 10 of Ms. Slatkin's testimony briefly touches on the broad issue of industrial skill preservation. In particular, she discusses the disadvantages of overhauling submarines vice building new ones. This issue will probably crop up again.

## SHIPYARD ISSUES

### DoD Recommendations

Close the Naval Ship Repair Facility, Guam, except transfer appropriate assets, including the piers, floating drydock, its typhoon basin anchorage, the recompression chamber, and the floating crane to, to Naval Activities, Guam.

Close the Naval Shipyard Long Beach, California, except retain the sonar dome government-owned, contractor-operated facility and those family housing units needed to fulfill Department of the Navy requirements, particularly those at Naval Weapons Station, Seal Beach, California. Relocate necessary personnel to other naval activities as appropriate, primarily Naval Weapons Station, Seal Beach and naval activities in the San Diego, California area.

### Background

Capacity is the driving factor in determining how many yards are recommended for closure. With shipyards, the capacity and capability of the graving docks<sup>1</sup> also plays an important role, since not all graving docks can accommodate the larger ships, such as carriers and other large-decked vessels, and newer submarines, which typically have a deep draft. Attachment A to this paper address Staff's initial calculations of excess capacity based on various closure scenarios.

Some important points about how the Navy conducted their analysis:

- Capacity calculations were based on the ideal assumption of one 8-hour shift per day, 5 days per week--or a standard 40-hour work-week. In fact, most shipyards operate an extra half shift every day;
- Private-sector capacity and capability was not taken into account in the formal analysis. It is possible that the senior decision-makers did consider the private sector as a safety net of sorts, but Staff has not yet uncovered references in the minutes.

### Portsmouth Naval Shipyard

Starting Year:	1996
Final Year:	1998
ROI Year:	Immediate
NPV in 2015:	\$2.3 billion
1-Time Cost :	\$85 million
Recurring Savings:	\$151.9 million

1. The key issue revolves around LA-class attack submarine refueling overhauls (EROs) and the follow-on attack submarine to the LA-class. In 1993, the Navy indicated that it did not intend to refuel these submarines, but instead de-activate them. During testimony on 6 March, Chief of Naval

---

<sup>1</sup> A graving dock is a special kind of drydock, which is essentially, an expensive and big hole in the ground. The term "drydock" can refer either to a graving dock or a floating dock. Graving docks are considered permanent and irreplaceable assets, while floating docks can be moved over great distances with little difficulty.

## DRAFT

Operations Mike Boorda stated that the Navy may refuel some LA-class subs, and perhaps even extend their lives. He indicated that further details were classified.

2. Closing Portsmouth Naval Shipyard will increase the Navy's total 20-year NPV by approximately 20%.
3. Staff's initial evaluation of the Navy's capacity analysis indicates that not closing any nuclear shipyards will leave the Navy with about 37% excess capacity to perform nuclear work, which is enough to perform more than four LA-class attack submarine refueling overhauls per year. If Portsmouth were closed, the Navy would still have enough excess capacity to refuel almost two LA-class subs annually.
  - As noted by the CNO, excess capacity is "lumpy." Currently, the Navy is not refueling LA-class submarines at any other facility.
  - Norfolk Naval Shipyard is scheduled to perform LA-class refuelings beginning in FY 99.
  - Based solely on capacity numbers provided in the Navy datacalls, Norfolk Naval Shipyard should be able to absorb nearly all of Portsmouth's workload. These calculations do not account for possible physical plant limitations at Norfolk which might restrict accomplishment of the increased workload.
  - If Norfolk has insufficient capacity to perform the Navy's refueling workload, some of Norfolk's work, both nuclear and conventional, could be shed to the private sector. Two private-sector shipyards, Newport News and Electric Boat, are capable of performing some nuclear work. Another possibility would be to add another shift to Norfolk.

### Long Beach

Starting Year:	1996
Final Year:	1997
ROI Year:	Immediate
NPV in 2015:	\$1.97 billion
1-Time Cost :	\$74 million
Recurring Savings:	\$131.9 million

1. Long Beach Naval Shipyard ranked slightly higher in military value than Portsmouth Naval Shipyard, yet Portsmouth did not appear on the closure list. In 1993, Long Beach ranked well above both Portsmouth and Long Beach.
  - According to Navy testimony, Long Beach's degraded military value resulted, at least in part, from alterations in the military value computations, which were implemented in response to criticism from both the GAO and the Commission.
  - Also, according to the Chief of Naval Operations, geography is an issue, and the current proposal to close only Long Beach leaves two shipyards on each coast: Puget Sound, in Washington; Pearl Harbor; Portsmouth, in Maine; Norfolk in Virginia.
2. Long Beach has a carrier-capable drydock. In 1993, the Navy stated that the senior decision-makers were "concerned that there was insufficient capacity on the West Coast for drydocking carriers and other large ships. Accordingly, they agreed not to consider Long Beach Naval Shipyard...."
  - The Navy has a total of six large-decked ships in San Diego, two of which are carriers. Transit time for a ship from San Diego to Long Beach is less than a day. From San Diego to Puget Sound is a little over three days. From San Diego to Pearl Harbor is about seven days.

DRAFT

3. Questions from Congressman Steve Horn's office note that the recommended closure of Long Beach closes the least amount of excess capacity and saves the least amount of money. They further note that the Navy did not actively consider other options, such as down-sizing of Pearl Harbor Naval Shipyard or closure of Norfolk Naval Shipyard.

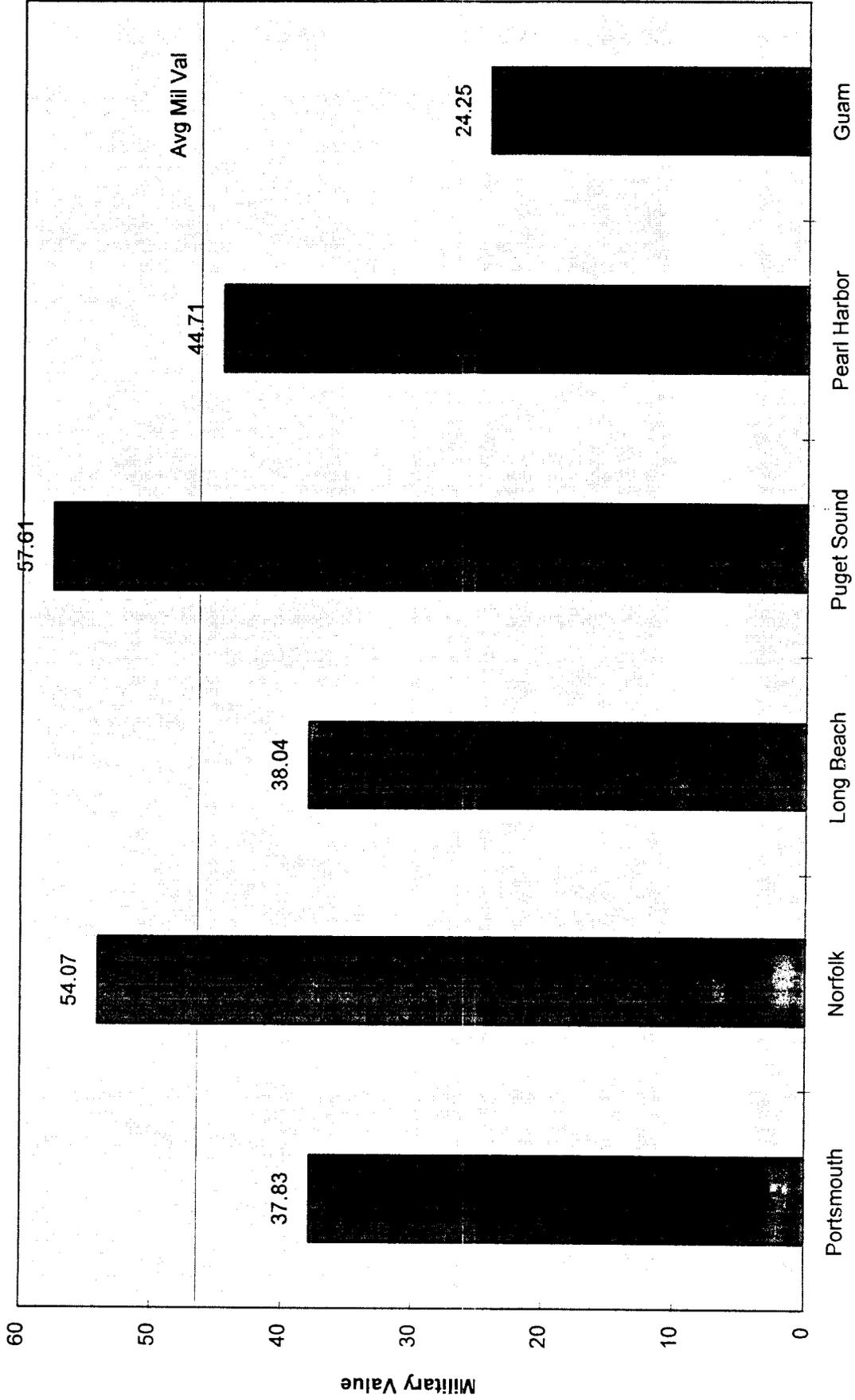
**Guam**

Starting Year:	1996
Final Year:	1997
ROI Year:	Immediate
NPV in 2015:	\$5.3 million
1-Time Cost :	\$8.4 million
Recurring Savings:	\$37.8 million

1. The facility at Guam is not classified as a shipyard, but as a Ship Repair Facility (SRF). The Navy's Detailed Analysis and Recommendations (the yellow book) states, "The normal distinction between a shipyard and a ship repair facility is that shipyards are generally found near fleet homeport concentrations, while ship repair facilities are responsive to deployment and operating areas." In fact, SRF's are much less capable than shipyards, and this is borne out in the military value calculations.
  - The average military value of the five shipyards is 58.1, whereas the military value for SRF Guam is 24.25.
  - In the '93 round, the Navy did not include SRF's in its shipyard analysis.
  - Guam strongly argues that the Navy should allow the community to utilize the facilities at the SRF. Indeed, from a community perspective, shutting down a facility while retaining the land and other physical assets for contingencies, is the worst possible scenario.

Chart2

### Naval Shipyards Military Value



**DRAFT**

*Larry -  
What think you?  
Wayne*



**THE DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION**  
1700 NORTH MOORE STREET SUITE 1425  
ARLINGTON, VA 22209  
703-696-0504

ALAN J. DIXON, CHAIRMAN  
COMMISSIONERS:  
AL CORNELLA  
REBECCA COX  
GEN J. B. DAVIS, USAF (RET)  
S. LEE KLING  
RADM BENJAMIN F. MONTOYA, USN (RET)  
MG JOSUE ROBLES, JR., USA (RET)  
WENDI LOUISE STEELE

**MEMORANDUM FOR THE SUBMARINE WARFARE DIVISION (N87)**  
**DCNO (RWR&A) ATTN: CDR Mauney**

**SUBJECT: CLASSIFIED BRIEFING ATTENDEES**

This memorandum certifies the security clearances of the following commissioners and staff members of the Defense Base Closure and Realignment Commission, all of whom are U.S. citizens. These individuals will attend your 18 APR 95 classified briefing to the DBCRC.

<u>NAME</u>	<u>SSN</u>	<u>CLEARANCE/DATE GRANTED/DOB</u>
DAVIS, JAMES B.	505-38-3274	TOP SECRET/20 MAR 95/14 NOV 35
CORNELLA, ALTON W.	501-52-3738	TOP SECRET/17 MAR 95/02 APR 47
STEELE, WENDI L.	210-36-3682	TOP SECRET/20 MAR 95/31 JUL 62
LYLES, DAVID S.	247-92-4143	TOP SECRET/08 NOV 90/08 MAR 51
BORDEN, BENTON L.	230-50-1385	TOP SECRET/18 JAN 95/23 FEB 40
YELLIN, S. ALEXENDER	181-40-8317	TOP SECRET/23 JAN 95/17 MAR 47
<i>CAN'T WILL</i> CHRILLO, FRANCIS A.	214-42-5863	TOP SECRET/20 SEP 92/12 JUL 43
JACKSON, LAWRENCE B.	437-722751	TOP SECRET/01 MAR 95/29 JAN 62
LINDENBAUM, ERIC J.	258-17-1199	TOP SECRET/26 FEB 91/15 MAR 59

**FACILITY: DBCRC Conference Room, 1700 N. Moore St. Suite 1425 Arlington VA 22209**

**PERSON TO BE CONTACTED: Colonel Wayne Purser, USAF, Military Assistant/Security Officer**

**DATE OF BRIEFING: 18 MAR 95**

**PURPOSE OF BRIEFING: TO CONDUCT INDEPENDENT ANALYSIS OF MILITARY VALUE AS A PRELUDE TO MAKING A BASE-CLOSURE RECOMMENDATION TO THE PRESIDENT.**

Please refer questions and/or requests for additional information concerning this visit to Col Wayne Purser, USAF, at (703) 696-0504 or DSN 226-0504. This certifies that subject visitor(s) hold(s) the level of security clearance indicated above.

**WAYNE PURSER, Colonel, USAF**  
Military Assistant/Security Officer

**DRAFT**

*Alex: For review & comment. Needs to go to David Thursday.*

*Attached will be testimonies of GAO, CRS & ASN*

Date: 12 APR 95

To: Admiral Montoya  
Commissioner Cornella  
*JB Davis?*  
*Wendy?*

CC: David Lyles  
Ben Borden  
Alex Yellin

From: Larry Jackson

Subject: ATTACK SUBMARINE BACKGROUND READING (Substantive changes since 03 April memo are underlined.)

---

The attached information is intended to familiarize you with some of the issues surrounding attack submarine procurement. Information in this memo is intended to increase your understanding of the underlying issues as they pertain to this round of base closure, particularly with regard to Naval shipyards.

#### **Relevance**

Attack submarine procurement is relevant to this round of base closure primarily for three reasons:

1. Procurement rate of new submarines is a significant factor in determining the timing and the rate of old attack submarine (primarily LA-class) de-activations.
2. One potential scenario for long-term procurement strategy involves extending the life of several Los Angeles class submarines.
3. In very rough numbers, attack submarines comprise 15% of the Navy's ship inventory, but account for 30% of the maintenance performed in the public shipyards.

#### **Missions and Fleet Composition**

Attack submarines perform a variety of missions. During the Cold War, emphasis was placed primarily on Anti-Submarine Warfare (ASW), but attack subs, or SSNs, are also capable of performing intelligence gathering missions, launching Tomahawk cruise missiles, mining coastal areas, anti-surface warfare, and insertion and extraction of spies and special forces.

The Navy's fleet of attack submarines consists of approximately 56 Los Angeles class (also known as LA-class and 688-class) submarines, and 27 Sturgeon class (637-class) submarines. Two single-ship classes of submarines are also active.

#### **Background--The Los Angeles Class Submarine**

A total of 62 LA-class submarines have been procured by the Navy. Of these, four have yet to be delivered, and two have been inactivated. The first 31 submarines were built with nuclear cores which needed replacement after roughly 15 years. Since the LA-class was intended to have a service life of 30 years, this meant that the first 31 submarines would require a refueling overhaul (abbreviated ERO by the Navy). The second flight of submarines were built with cores

which had a core-life comparable to the 30-year service life. In other words, the second flight of submarines did not require refueling.

A submarine refueling is perhaps the most demanding (in terms of skill and time) evolution performed in the naval shipyards. Notional duration for the refueling of a 688-class submarine is approximately 1,400 direct labor man years. The first 688 was commissioned in 1976, based on a late-1960s design. Because the first flight of 688's were commissioned at rates approaching 4 submarines per year, large numbers of the submarines were scheduled for refueling beginning in middle 1990's, and this "bow-wave" required the naval shipyards to retain the capacity to complete the task.

In the early 90's, after the demise of the Soviet Union, the Joint Chiefs of Staff began studying options for decreasing the numbers of attack submarines in the fleet. One proposal, dubbed JCS-1, called for defueling (vice refueling) nine 688's. (A defueling more than halves the level of effort required for a refueling.) The JCS-1 scenario resulted in a 15% decrease in the necessary capacity required in the latter 1990's, when compared to the Bush-Cheney Base Force.

### The Current Debate

The testimonies of Ms. Slatkin, GAO, and Mr. Ron O'Rourke deal with several issues, the primary of which boils down to whether and when the Navy should procure the New Attack Submarine (NSSN). Secondary issues discuss whether the Navy truly needs two nuclear-capable shipbuilders and funding for a third Seawolf-class submarine (SSN-23).

It now appears that Congress is no longer debating whether to build the NSSN, but rather who will build it, and how the builder will be determined. Based on this observation, Staff believes that construction will start in FY 98, though it could be pushed a year later if Newport News is given the contract.

Rate of production will be lower

### Food for Thought: The Private Shipyards<sup>1</sup>

Both Electric Boat and Newport News Shipbuilding have performed maintenance on nuclear submarines. It is generally accepted that shipbuilders would rather build than repair, but given the bleak outlook for shipbuilding in the United States, it is very likely that both yards would welcome additional work. In general, new construction does not require the same facilities as maintenance. Furthermore, as stated in Ms. Slatkin's testimony (p.10), submarine overhaul does not require the same skill mix demanded by new construction. This is important because it means that the capacity to build new submarines is relatively independent of the capacity to overhaul submarines.

In a broad sense, public and private shipyards are in competition for the declining nuclear workload. (In 19xx the Navy had xx naval reactor plants in operation; today there are approximately xx in operation.) Furthermore, the private yards are largely funded by the American Taxpayer. (Electric Boat's workload is 100% government, and Newport News' workload is probably around 90% government.) Thus, taking a (very) broad perspective, one could state that the Navy is supporting six nuclear capable shipyards--four public and two private.

<sup>1</sup> Because we are discussing nuclear shipwork, I have restricted discussion of the private yards to those currently capable of performing nuclear work: Newport News Shipbuilding and Electric Boat.

## About the Attachments

If you are pressed for time, I have included a synopsis of the readings; however, I would recommend reading the Congressional Research Service (CRS) testimony by Ron O'Rourke. Ron has taken more of a middle-ground approach to the procurement issue. Ms. Slatkin's testimony stakes out the Navy's position, which boiled down is, "Build the New Attack Submarine." The GAO testimony outlines several lower-cost procurement strategies that the Navy could pursue. I highly recommend reading the "Background" portion of the GAO testimony, if nothing else.

## A Few Notes

The New Attack Submarine has also been known as the Seawolf follow-on, and the Centurion.

We have obtained or will soon obtain all of the references in the GAO testimony.

Staff has requested a classified briefing on attack submarine missions, the threat, and the Navy's perspective regarding procurement and budget limitations. It has been requested for the morning of 18 April, and will probably be held in the Pentagon.

On page 3 of the CRS report, note that "requirements for an attack submarine force of more than about 45 boats are driven primarily by *peacetime* deployment considerations." (Emphasis added.)

Pages 6-8 of the GAO testimony discuss the proposal to extend the lives of nine 688s. During the hearing, Admiral Bruce DeMars, who is in charge of Naval Reactors, noted that a study of service life extension would take many years *to determine if it could be done*.

Page 10 of Ms. Slatkin's testimony briefly touches on the broad issue of industrial skill preservation. In particular, she discusses the disadvantages of overhauling submarines *vice in lieu of* building new ones. This issue will probably crop up again.

Just to put things in perspective, the Navy's COBRA analyses indicate that the 20-year *savings* *net present value (NPV)* are approximately \$2.0 billion per shipyard closed. This would almost pay for one Seawolf-class submarine, or would pay for a little more than one NSSN.

DRAFT

## Attack Submarine Procurement Synopsis of Unclassified Readings

The Bottom Line is that no one is sure what the future requirements will be. For a variety of reasons, Staff is of the opinion that Congress will opt to construct the New Attack Submarine. The reasons center on the need to preserve the submarine industrial base, and the growing obsolescence of the 688-class. More light may be shed on the issue during the classified briefing on 18 April.

Force-level Requirement according to Bottom-Up Review (BUR) is 45-55 submarines.

- Classified number is on the higher end.
- Requirements for an attack submarine force of more than about 45 boats are driven primarily by *peacetime* deployment considerations (i.e. maintaining forward deployments for purposes of intelligence and surveillance and for responding rapidly at the outset of a crisis or conflict), according to the Congressional Research Service (CRS).
- According to the GAO report, the JCS Study indicates that a 55-submarine force would meet all wartime requirements for regional conflicts, as well as fulfill peacetime needs.
- Policy limitations on perstempo, and the less fungible requirements for maintenance, training, and transit time require an average of 5.7 attack submarines to keep one continuously deployed in an oparea around the vicinity of Eurasia.

Extending the Service Life of Nine 688s is proposed by GAO as a cost-saving measure. Naval Reactors is clearly against this idea. Staff does not believe that this option will be adopted for the following reasons:

- The challenge in maintaining the overall numbers of SSNs is not a short- or mid-term problem, but arises around 2020.
- In 2020, the newer 688s will be almost 30 years old.
- The 688s have little room left for increasing their capabilities.
- Russia has developed submarines quieter than the 688s.
- Russia continues to build submarines at a rate considerably higher than the United States.
- Sustaining Electric Boat and its component suppliers, many of which are now the only remaining domestic source, will be very difficult if building rates decline. There have been no submarine starts since 1991.

Staff Note: It is possible, however, that an increase in the required number of attack submarines might dictate refuelling more 688s.

Rate of Procurement, according to the CRS study must increase significantly. (See pp. 9-11 for greater details.) "The near-hiatus in submarine procurement of the 1990s has already produced a requirement for an attack submarine procurement bow wave for the period after the turn of the century." Staff is unaware of how this will affect future submarine maintenance requirements.

DUPLICATE PAGE

DRAFT

DRAFT

## Attack Submarine Procurement Synopsis of Unclassified Readings

Attack submarine procurement is relevant to this round of base closure primarily for three reasons:

1. Procurement rate of new submarines is a significant factor in determining the timing and the rate of old attack submarine (primarily LA-class) de-activations.
2. One potential scenario for long-term procurement strategy involves extending the life of several Los Angeles class submarines.
3. In very rough numbers, attack submarines comprise 15% of the Navy's ship inventory, but account for 30% of the maintenance performed in the public shipyards.

**The Bottom Line** is that no one is sure what the future requirements will be. For a variety of reasons, Staff is of the opinion that Congress will opt to construct the New Attack Submarine. The reasons center on the need to preserve the submarine industrial base, and the growing obsolescence of the 688-class. More light may be shed on the issue during the classified briefing on 18 April.

**Force-level Requirement** according to Bottom-Up Review (BUR) is 45-55 submarines.

- Classified number is on the higher end.
- Requirements for an attack submarine force of more than about 45 boats are driven primarily by *peacetime* deployment considerations (i.e. maintaining forward deployments for purposes of intelligence and surveillance and for responding rapidly at the outset of a crisis or conflict), according to the Congressional Research Service (CRS).
- According to the GAO report, analysis by the JCS indicates that a 55-submarine force would meet all wartime requirements for regional conflicts, as well as fulfill peacetime needs.
- Policy limitations on perstempo, and the less fungible requirements for maintenance, training, and transit time require an average of 5.7 attack submarines to keep one continuously deployed in an oparea around the vicinity of Eurasia.

*Debate is not whether  
but who will build it  
& how determined*

*Study  
Start FY 98*

**Submarine Missions** vary. During the Cold War, emphasis was placed primarily on Anti-Submarine Warfare (ASW), but attack subs, or SSNs, are also capable of performing intelligence gathering missions, launching Tomahawk cruise missiles, mining coastal areas, anti-surface warfare, and insertion and extraction of spies and special forces.

**Operating Characteristics** of the 688s, as interpreted by Staff, imply that further construction of SSN-688s will not suit the Navy's (i.e. the Nation's) needs.

**Extending the Service Life of Nine 688s** is proposed by GAO as a cost-saving measure. Naval Reactors is clearly against this idea. Staff does not believe that this option will be adopted for the following reasons:

- The challenge in maintaining the overall numbers of SSNs is not a short- or mid-term problem, but arises around 2020.
- In 2020, the newer 688s will be almost 30 years old.
- The 688s have little room left for increasing their capabilities.
- Russia has developed submarines quieter than the 688s.
- Russia continues to build submarines at a rate considerably higher than the United States.
- Sustaining Electric Boat and its component suppliers, many of which are now the only remaining domestic source, will be very difficult if building rates decline. There have been no submarine starts since 1991.

**Rate of Procurement**, according to the CRS study must increase significantly. (See pp. 9-11 for greater details.) "The near-hiatus in submarine procurement of the 1990s has already produced a requirement for an attack submarine procurement bow wave for the period after the turn of the century." What will this do to submarine maintenance requirements?

DRAFT

Date: 03 APR 95

To: Commissioner Davis  
Commissioner Steele  
David Lyles

CC: Ben Borden  
Alex Yellin

From: Larry Jackson

Subject: ATTACK SUBMARINE BACKGROUND READING

---

The attached information is intended to familiarize you with some of the issues surrounding attack submarine procurement. Information in this memo is intended to increase your understanding of the underlying issues as they pertain to this round of base closure, particularly with regard to Naval shipyards.

#### **Relevance**

Attack submarine procurement is relevant to this round of base closure primarily for three reasons:

1. Procurement rate of new submarines is a significant factor in determining the timing and the rate of old attack submarine (primarily LA-class) de-activations.
2. One potential scenario for long-term procurement strategy involves extending the life of several Los Angeles class submarines.
3. In very rough numbers, attack submarines comprise 15% of the Navy's ship inventory, but account for 30% of the maintenance performed in the public shipyards.

#### **Missions and Fleet Composition**

Attack submarines perform a variety of missions. During the Cold War, emphasis was placed primarily on Anti-Submarine Warfare (ASW), but attack subs, or SSNs, are also capable of performing intelligence gathering missions, launching Tomahawk cruise missiles, mining coastal areas, anti-surface warfare, and insertion and extraction of spies and special forces.

The Navy's fleet of attack submarines consists of approximately 56 Los Angeles class (also known as LA-class and 688-class) submarines, and 27 Sturgeon class (637-class) submarines. Two single-ship classes of submarines are also active.

#### **Background--The Los Angeles Class Submarine**

A total of 62 LA-class submarines have been procured by the Navy. Of these, four have yet to be delivered, and two have been inactivated. The first 31 submarines were built with nuclear cores which needed replacement after roughly 15 years. Since the LA-class was intended to have a service life of 30 years, this meant that the first 31 submarines would require a refueling overhaul (abbreviated ERO by the Navy). The second flight of submarines were built with cores which had a core-life comparable to the 30-year service life. In other words, the second flight of submarines did not require refueling.

A submarine refueling is perhaps the most demanding (in terms of skill and time) evolution performed in the naval shipyards. Notional duration for the refueling of a 688-class submarine is approximately 1,400 direct labor man years. The first 688 was commissioned in 1976, based on a late-1960s design. Because the first flight of 688's were commissioned at rates approaching 4 submarines per year, large numbers of the submarines were scheduled for refueling beginning in middle 1990's, and this "bow-wave" required the naval shipyards to retain the capacity to complete the task.

In the early 90's, after the demise of the Soviet Union, the Joint Chiefs of Staff began studying options for decreasing the numbers of attack submarines in the fleet. One proposal, dubbed JCS-1, called for defueling (vice refueling) nine 688's. (A defueling more than halves the level of effort required for a refueling.) The JCS-1 scenario resulted in a 15% decrease in the necessary capacity required in the latter 1990's, when compared to the Bush-Cheney Base Force.

### **About the Attachments**

If you are pressed for time, I would recommend first reading the Congressional Research Service (CRS) testimony by Ron O'Rourke. Ron has taken more of a middle-ground approach to the procurement issue. Ms. Slatkin's testimony stakes out the Navy's position, which boiled down is, "Build the New Attack Submarine." The GAO testimony outlines several lower-cost procurement strategies that the Navy could pursue. I highly recommend reading the "Background" portion of the GAO testimony, if nothing else.

### **A Few Notes**

The New Attack Submarine has also been known as the Seawolf follow-on, and the Centurion.

We have obtained or will soon obtain all of the references in the GAO testimony.

Staff has requested a classified briefing on attack submarine missions, the threat, and the Navy's perspective regarding procurement and budget limitations. It has been requested for the morning of 18 April, and will probably be held in the Pentagon.

On page 3 of the CRS report, note that "requirements for an attack submarine force of more than about 45 boats are driven primarily by *peacetime* deployment considerations." (Emphasis added.)

Pages 6-8 of the GAO testimony discuss the proposal to extend the lives of nine 688s. During the hearing, Admiral Bruce DeMars, who is in charge of Naval Reactors, noted that a study of service life extension would take many years.

Page 10 of Ms. Slatkin's testimony briefly touches on the broad issue of industrial skill preservation. In particular, she discusses the disadvantages of overhauling submarines vice building new ones. This issue will probably crop up again.

## SHIPYARD ISSUES

### DoD Recommendations

Close the Naval Ship Repair Facility, Guam, except transfer appropriate assets, including the piers, floating drydock, its typhoon basin anchorage, the recompression chamber, and the floating crane to, to Naval Activities, Guam.

Close the Naval Shipyard Long Beach, California, except retain the sonar dome government-owned, contractor-operated facility and those family housing units needed to fulfill Department of the Navy requirements, particularly those at Naval Weapons Station, Seal Beach, California. Relocate necessary personnel to other naval activities as appropriate, primarily Naval Weapons Station, Seal Beach and naval activities in the San Diego, California area.

### Background

Capacity is the driving factor in determining how many yards are recommended for closure. With shipyards, the capacity and capability of the graving docks<sup>1</sup> also plays an important role, since not all graving docks can accommodate the larger ships, such as carriers and other large-decked vessels, and newer submarines, which typically have a deep draft. Attachment A to this paper address Staff's initial calculations of excess capacity based on various closure scenarios.

Some important points about how the Navy conducted their analysis:

- Capacity calculations were based on the ideal assumption of one 8-hour shift per day, 5 days per week--or a standard 40-hour work-week. In fact, most shipyards operate an extra half shift every day;
- Private-sector capacity and capability was not taken into account in the formal analysis. It is possible that the senior decision-makers did consider the private sector as a safety net of sorts, but Staff has not yet uncovered references in the minutes.

### Portsmouth Naval Shipyard

Starting Year:	1996
Final Year:	1998
ROI Year:	Immediate
NPV in 2015:	\$2.3 billion
1-Time Cost :	\$85 million
Recurring Savings:	\$151.9 million

1. The key issue revolves around LA-class attack submarine refueling overhauls (EROs) and the follow-on attack submarine to the LA-class. In 1993, the Navy indicated that it did not intend to refuel these submarines, but instead de-activate them. During testimony on 6 March, Chief of Naval

---

<sup>1</sup> A graving dock is a special kind of drydock, which is essentially, an expensive and big hole in the ground. The term "drydock" can refer either to a graving dock or a floating dock. Graving docks are considered permanent and irreplaceable assets, while floating docks can be moved over great distances with little difficulty.

DRAFT

Operations Mike Boorda stated that the Navy may refuel some LA-class subs, and perhaps even extend their lives. He indicated that further details were classified.

2. Closing Portsmouth Naval Shipyard will increase the Navy's total 20-year NPV by approximately 20%.
3. Staff's initial evaluation of the Navy's capacity analysis indicates that not closing any nuclear shipyards will leave the Navy with about 37% excess capacity to perform nuclear work, which is enough to perform more than four LA-class attack submarine refueling overhauls per year. If Portsmouth were closed, the Navy would still have enough excess capacity to refuel almost two LA-class subs annually.
  - As noted by the CNO, excess capacity is "lumpy." Currently, the Navy is not refueling LA-class submarines at any other facility.
  - Norfolk Naval Shipyard is scheduled to perform LA-class refuelings beginning in FY 99.
  - Based solely on capacity numbers provided in the Navy datacalls, Norfolk Naval Shipyard should be able to absorb nearly all of Portsmouth's workload. These calculations do not account for possible physical plant limitations at Norfolk which might restrict accomplishment of the increased workload.
  - If Norfolk has insufficient capacity to perform the Navy's refueling workload, some of Norfolk's work, both nuclear and conventional, could be shed to the private sector. Two private-sector shipyards, Newport News and Electric Boat, are capable of performing some nuclear work. Another possibility would be to add another shift to Norfolk.

**Long Beach**

Starting Year:	1996
Final Year:	1997
ROI Year:	Immediate
NPV in 2015:	\$1.97 billion
1-Time Cost :	\$74 million
Recurring Savings:	\$131.9 million

1. Long Beach Naval Shipyard ranked slightly higher in military value than Portsmouth Naval Shipyard, yet Portsmouth did not appear on the closure list. In 1993, Long Beach ranked well above both Portsmouth and Long Beach.
  - According to Navy testimony, Long Beach's degraded military value resulted, at least in part, from alterations in the military value computations, which were implemented in response to criticism from both the GAO and the Commission.
  - Also, according to the Chief of Naval Operations, geography is an issue, and the current proposal to close only Long Beach leaves two shipyards on each coast: Puget Sound, in Washington; Pearl Harbor; Portsmouth, in Maine; Norfolk in Virginia.
2. Long Beach has a carrier-capable drydock. In 1993, the Navy stated that the senior decision-makers were "concerned that there was insufficient capacity on the West Coast for drydocking carriers and other large ships. Accordingly, they agreed not to consider Long Beach Naval Shipyard...."
  - The Navy has a total of six large-decked ships in San Diego, two of which are carriers. Transit time for a ship from San Diego to Long Beach is less than a day. From San Diego to Puget Sound is a little over three days. From San Diego to Pearl Harbor is about seven days.

DRAFT

3. Questions from Congressman Steve Horn's office note that the recommended closure of Long Beach closes the least amount of excess capacity and saves the least amount of money. They further note that the Navy did not actively consider other options, such as down-sizing of Pearl Harbor Naval Shipyard or closure of Norfolk Naval Shipyard.

**Guam**

Starting Year:	1996
Final Year:	1997
ROI Year:	Immediate
NPV in 2015:	\$5.3 million
1-Time Cost :	\$8.4 million
Recurring Savings:	\$37.8 million

1. The facility at Guam is not classified as a shipyard, but as a Ship Repair Facility (SRF). The Navy's Detailed Analysis and Recommendations (the yellow book) states, "The normal distinction between a shipyard and a ship repair facility is that shipyards are generally found near fleet homeport concentrations, while ship repair facilities are responsive to deployment and operating areas." In fact, SRF's are much less capable than shipyards, and this is borne out in the military value calculations.
  - The average military value of the five shipyards is 58.1, whereas the military value for SRF Guam is 24.25.
  - In the '93 round, the Navy did not include SRF's in its shipyard analysis.
  - Guam strongly argues that the Navy should allow the community to utilize the facilities at the SRF. Indeed, from a community perspective, shutting down a facility while retaining the land and other physical assets for contingencies, is the worst possible scenario.

### Questions for SSN Briefing

- What are the standing intelligence requirements for SSNs?
- How many SSNs are required by the CINCs and current DON policy?
- How many SSNs are desired by the CINCs?
- What is the depth capability of the LA class?
- What is the depth capability of the AKULA class?

Non-acoustic vln in littoral warfare

Can I have copies  
of script?

JT3  
Frank  
Ward  
Ben  
Al

Maintenance of NSSA  
688 i is last 25 of class

## QUESTIONS FOR N-87

✓ **Admiral, could you talk a bit about N-87's role in the budgeting and procurement process?**

Likely answer: Among other things, N-87 budgets for refuelings; so, in effect, they determine how many refuelings be performed, and when they will be performed. Money comes from TOA funds.

✓ **So, N-87 budgets for all submarine maintenance?**

✓ **What is your current PR-97 schedule for refuelings and DMP's in the Navy Shipyards?**

Likely answer: ~17 refuelings and ~14 inactivations. (Are these nos unclas?) *Yes*

✓ **How are you going to afford all those refuelings?**

**What happens to out-year refuelings as more of your TOA goes to purchasing new submarines?**

Likely answer: refuelings will be delayed or eliminated.

✓ **Does the Navy think that a fleet of ~50 SSNs is sufficient to meet the operational requirements of the 2 MRC scenario?** *yes 45 is ok.*

✓ **In testimony before the 1993 Commission, Admiral Kelso aluded to the increased operating cycles (or time between depot maintenance periods) that had resulted from improved designs, as well as more sophisticated maintenance and operating techniques. Could you talk about the recent increase in the 688 operating cycle? (Currently 120 months, recently increased from ~90 months.)**

- **How will this affect 688 availabilities currently scheduled?**
- **Is this the reason for the one-year gap in Portsmouth's workload?**

**Do you have a copy of the NSSN COEA? Could I come read it in you office tomorrow?**

*NSSN maintenance?*

## Economic Impact Data

**Activity: NSY PORTSMOUTH**

**Economic Area: \*Rockingham County NH, & York County ME**

**Impact of Proposed BRAC-95 Action at NSY PORTSMOUTH:**

Total Population of *Rockingham County NH, & York County ME (1992):	412,800
Total Employment of *Rockingham County NH, & York County ME, BEA (1992):	202,394
Total Personal Income of *Rockingham County NH, & York County ME (1992 actual):	\$8,814,779,000
BRAC 95 Total Direct and Indirect Job Change:	(11,053)
BRAC 95 Potential Total Job Change Over Closure Period (% of 1992 Total Employment)	(5.5%)

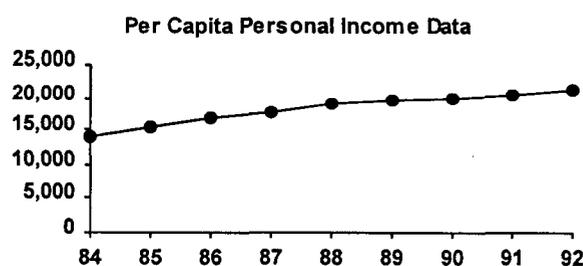
		<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>Total</u>	
Relocated Jobs:	MIL	0	0	0	(80)	0	0	0	0	(80)	
	CIV	0	0	0	(337)	0	0	0	0	(337)	
Other Jobs:	MIL	0	0	0	(77)	0	0	0	0	(77)	
	CIV	0	0	0	(4,291)	0	0	0	0	(4,291)	
<b>BRAC 95 Direct Job Change Summary at NSY PORTSMOUTH:</b>											
	MIL	0	0	0	(157)	0	0	0	0	(157)	
	CIV	0	0	0	(4,628)	0	0	0	0	(4,628)	
	TO	0	0	0	(4,785)	0	0	0	0	(4,785)	
										Indirect Job Change:	(6,268)
										Total Direct and Indirect Job Change:	(11,053)

**Other Pending BRAC Actions at NSY PORTSMOUTH (Previous Rounds):**

MIL	0	0	0	0	0	0	0	0	0	0
CIV	(17)	6	(14)	0	0	0	0	0	0	(25)

**\*Rockingham County NH, & York County ME Profile:**

Civilian Employment, BLS (1993): 212,177      Average Per Capita Income (1992): \$21,355



**Annualized Change in Civilian Employment (1984-1993)      Annualized Change in Per Capita Personal Income (1984-1992)**

Employment:	4,303	Dollars:	\$916
Percentage:	2.3%	Percentage:	5.4%
U.S. Average Change:	1.5%	U.S. Average Change:	5.3%

Unemployment Rates for \*Rockingham County NH, & York County ME and the US (1984 - 1993):

	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Local	5.2%	4.4%	3.7%	3.2%	2.8%	3.6%	5.7%	7.5%	7.6%	7.3%
U.S.	7.5%	7.2%	7.0%	6.2%	5.5%	5.3%	5.5%	6.7%	7.4%	6.8%

1 Note: Bureau of Labor Statistics employment data for 1993, which has been adjusted to incorporate revised methodologies and 1993 Bureau of the Census metropolitan area definitions are not fully compatible with 1984 - 1992 data.

## Economic Impact Data

**Activity: NSY PORTSMOUTH**

**Economic Area: \*Rockingham County NH, & York County ME**

**Cumulative BRAC Impacts Affecting \*Rockingham County NH, & York County ME:**

<b>Cumulative Total Direct and Indirect Job Change:</b>	<b>(11,112)</b>
<b>Potential Cumulative Total Job Change Over Closure Period (% of 1992 Total Employ</b>	<b>(5.5%)</b>

		<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>Total</u>
<b>Other Proposed BRAC 95 Direct Job Changes in Economic Area (Excluding NSY PORTSMOUTH)</b>										
Army:	MIL	0	0	0	0	0	0	0	0	0
	CIV	0	0	0	0	0	0	0	0	0
Navy:	MIL	0	0	0	0	0	0	0	0	0
	CIV	0	0	0	0	0	0	0	0	0
Air Force:	MIL	0	0	0	0	0	0	0	0	0
	CIV	0	0	0	0	0	0	0	0	0
Other:	MIL	0	0	0	0	0	0	0	0	0
	CIV	0	0	0	0	0	0	0	0	0
<b>Other Pending Prior BRAC Direct Job Changes in Economic Area (Excluding NSY PORTSMOUTH)</b>										
Army:	MIL	0	0	0	0	0	0	0	0	0
	CIV	0	0	0	0	0	0	0	0	0
Navy:	MIL	0	0	0	0	0	0	0	0	0
	CIV	0	0	0	0	0	0	0	0	0
Air Force:	MIL	0	0	0	0	0	0	0	0	0
	CIV	0	0	0	0	0	0	0	0	0
Other:	MIL	0	0	0	0	0	0	0	0	0
	CIV	0	0	0	0	0	0	0	0	0
<b>Cumulative Direct Job Change in *Rockingham County NH, &amp; York County ME Statistical Area (Including NSY PORTSMOUTH)</b>										
	MIL	0	0	0	(157)	0	0	0	0	(157)
	CIV	(17)	6	(14)	(4,628)	0	0	0	0	(4,653)
	TO	(17)	6	(14)	(4,785)	0	0	0	0	(4,810)
<b>Cumulative Indirect Job Change:</b>										<b>(6,302)</b>
<b>Cumulative Total Direct and Indirect Job Change:</b>										<b>(11,112)</b>

## SHIPYARD ISSUES

### DoD Recommendations

Close the Naval Ship Repair Facility, Guam, except transfer appropriate assets, including the piers, floating drydock, its typhoon basin anchorage, the recompression chamber, and the floating crane to, to Naval Activities, Guam.

Close the Naval Shipyard Long Beach, California, except retain the sonar dome government-owned, contractor-operated facility and those family housing units needed to fulfill Department of the Navy requirements, particularly those at Naval Weapons Station, Seal Beach, California. Relocate necessary personnel to other naval activities as appropriate, primarily Naval Weapons Station, Seal Beach and naval activities in the San Diego, California area.

### Background

Capacity is the driving factor in determining how many yards are recommended for closure. With shipyards, the capacity and capability of the graving docks<sup>1</sup> also plays an important role, since not all graving docks can accommodate the larger ships, such as carriers and other large-decked vessels, and newer submarines, which typically have a deep draft. Attachment A to this paper address Staff's initial calculations of excess capacity based on various closure scenarios.

Some important points about how the Navy conducted their analysis:

- Capacity calculations were based on the ideal assumption of one 8-hour shift per day, 5 days per week--or a standard 40-hour work-week. In fact, most shipyards operate an extra half shift every day;
- Private-sector capacity and capability was not taken into account in the formal analysis. It is possible that the senior decision-makers did consider the private sector as a safety net of sorts, but Staff has not yet uncovered references in the minutes.

### Portsmouth Naval Shipyard

Starting Year:	1996
Final Year:	1998
ROI Year:	Immediate
NPV in 2015:	\$2.3 billion
1-Time Cost :	\$85 million
Recurring Savings:	\$151.9 million

1. The key issue revolves around LA-class attack submarine refueling overhauls (EROs) and the follow-on attack submarine to the LA-class. In 1993, the Navy indicated that it did not intend to refuel these submarines, but instead de-activate them. During testimony on 6 March, Chief of Naval

---

<sup>1</sup> A graving dock is a special kind of drydock, which is essentially, an expensive and big hole in the ground. The term "drydock" can refer either to a graving dock or a floating dock. Graving docks are considered permanent and irreplaceable assets, while floating docks can be moved over great distances with little difficulty.

## DRAFT

Operations Mike Boorda stated that the Navy may refuel some LA-class subs, and perhaps even extend their lives. He indicated that further details were classified.

2. Closing Portsmouth Naval Shipyard will increase the Navy's total 20-year NPV by approximately 20%.
3. Staff's initial evaluation of the Navy's capacity analysis indicates that not closing any nuclear shipyards will leave the Navy with about 37% excess capacity to perform nuclear work, which is enough to perform more than four LA-class attack submarine refueling overhauls per year. If Portsmouth were closed, the Navy would still have enough excess capacity to refuel almost two LA-class subs annually.
  - As noted by the CNO, excess capacity is "lumpy." Currently, the Navy is not refueling LA-class submarines at any other facility.
  - Norfolk Naval Shipyard is scheduled to perform LA-class refuelings beginning in FY 99.
  - Based solely on capacity numbers provided in the Navy datacalls, Norfolk Naval Shipyard should be able to absorb nearly all of Portsmouth's workload. These calculations do not account for possible physical plant limitations at Norfolk which might restrict accomplishment of the increased workload.
  - If Norfolk has insufficient capacity to perform the Navy's refueling workload, some of Norfolk's work, both nuclear and conventional, could be shed to the private sector. Two private-sector shipyards, Newport News and Electric Boat, are capable of performing some nuclear work. Another possibility would be to add another shift to Norfolk.

### Long Beach

Starting Year:	1996
Final Year:	1997
ROI Year:	Immediate
NPV in 2015:	\$1.97 billion
1-Time Cost :	\$74 million
Recurring Savings:	\$131.9 million

1. Long Beach Naval Shipyard ranked slightly higher in military value than Portsmouth Naval Shipyard, yet Portsmouth did not appear on the closure list. In 1993, Long Beach ranked well above both Portsmouth and Long Beach.
  - According to Navy testimony, Long Beach's degraded military value resulted, at least in part, from alterations in the military value computations, which were implemented in response to criticism from both the GAO and the Commission.
  - Also, according to the Chief of Naval Operations, geography is an issue, and the current proposal to close only Long Beach leaves two shipyards on each coast: Puget Sound, in Washington; Pearl Harbor; Portsmouth, in Maine; Norfolk in Virginia.
2. Long Beach has a carrier-capable drydock. In 1993, the Navy stated that the senior decision-makers were "concerned that there was insufficient capacity on the West Coast for drydocking carriers and other large ships. Accordingly, they agreed not to consider Long Beach Naval Shipyard...."
  - The Navy has a total of six large-decked ships in San Diego, two of which are carriers. Transit time for a ship from San Diego to Long Beach is less than a day. From San Diego to Puget Sound is a little over three days. From San Diego to Pearl Harbor is about seven days.

DRAFT

3. Questions from Congressman Steve Horn’s office note that the recommended closure of Long Beach closes the least amount of excess capacity and saves the least amount of money. They further note that the Navy did not actively consider other options, such as down-sizing of Pearl Harbor Naval Shipyard or closure of Norfolk Naval Shipyard.

**Guam**

Starting Year:	1996
Final Year:	1997
ROI Year:	Immediate
NPV in 2015:	\$5.3 million
1-Time Cost :	\$8.4 million
Recurring Savings:	\$37.8 million

1. The facility at Guam is not classified as a shipyard, but as a Ship Repair Facility (SRF). The Navy’s Detailed Analysis and Recommendations (the yellow book) states, “The normal distinction between a shipyard and a ship repair facility is that shipyards are generally found near fleet homeport concentrations, while ship repair facilities are responsive to deployment and operating areas.” In fact, SRF’s are much less capable than shipyards, and this is borne out in the military value calculations.
  - The average military value of the five shipyards is 58.1, whereas the military value for SRF Guam is 24.25.
  - In the ‘93 round, the Navy did not include SRF’s in its shipyard analysis.
  - Guam strongly argues that the Navy should allow the community to utilize the facilities at the SRF. Indeed, from a community perspective, shutting down a facility while retaining the land and other physical assets for contingencies, is the worst possible scenario.

Economic

# SHIPYARD ISSUES

Capacity

Attack Submarines

Private Yards & Nuclear Work

Cost to Facilitate  
& training for Pearl

What does NR say  
about PN'sy

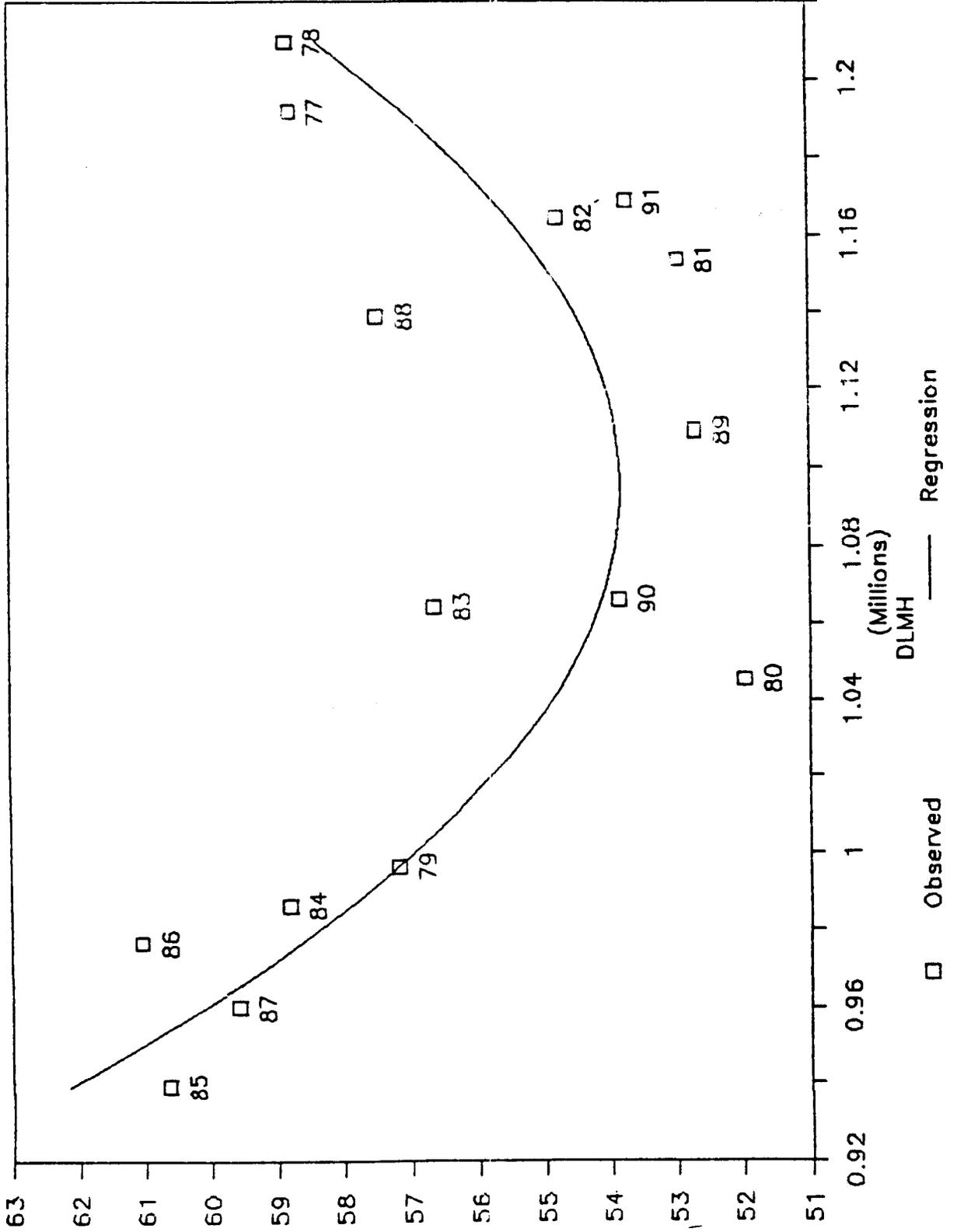
~~NR~~  
Will someone from NR  
be in 18 APR briefing

# Capacity Background

- Affected by physical constraints
  - graving docks--number & size, dock maintenance, setting blocks
- type<sup>and mix</sup> of work--you can't put as many workers on a boat as on a ship
  - subsafe procedures, nuclear work
- efficiency curves

# DEPOT XYZ

PROG QUAD



# Capacity

## Navy Analysis

- Measured in thousands of direct labor man (work) years--DLMYs
- Based on 8-hour shift, 5-day week  
*most ships operate @ least 15 shifts. Not that a doubling of shifts won't → doubled output*
- Maximum capacity (vice Core)  
*Broken out by Overhaul Type/ship Type*
  - projected workload remains as assigned
  - max hiring, max training, max equipment support
  - \* - no major MILCON not programmed
  - † - no significant increase in overhead/rates
  - must meet current commitments

*EXCESS CAP = MAX CAP - PREDICTED (FUNDED)*

# Capacity

## JCSG Analysis

- Measured in direct labor man hours--DLMDs
- Based on 8-hour shift, 5-day week
- Capacities measured by commodity groups
  - Sea Systems--Ships and Weapons
  - Very High-Level
- Based on Core calculations (DoD 4151.15H)
  - projected workload remains as assigned
- Core  $\neq$  Maximum Capacity  
*Core  $\neq$  Predicted Workload*

**2. Workload Summaries, continued****Table 2.2.g1: Core/Maximum Potential Workload Variance for FY 2001**

EVENT	FY 2001	CORE WORKLOAD	MAXIMUM POTENTIAL WORKLOAD	VARIANCE
CVN COH		0.000	0.000	0.000
CVN RCOH		0.000	0.000	0.000
CVN DSRA		0.000	0.000	0.000
CVN EDSR		0.000	0.000	0.000
CVN DPIA		1.724	0.000	-1.724
CVN SRA		0.000	0.000	0.000
CVN ESRA		0.000	0.000	0.000
CVN PIA		2.061	2.358	0.297
SSBN INACT		0.000	0.255	0.255
SSBN ERP		0.000	0.479	0.479
SSBN ROH/RFOH		0.775	0.261	-0.514
SSBN EOH/ERO		0.000	0.333	0.333
SSN INACT		0.000	1.520	1.520
SSN ROH/RFOH		1.571	0.000	-1.571
SSN EOH/ERO		0.979	2.117	1.138
SSN DSRA		0.801	2.951	2.150
SSN DMP		0.842	3.284	2.442
CGN INACT		0.000	0.684	0.684
CGN COH/RCOH		0.000	0.000	0.000
CGN DSRA/SRA		0.000	0.419	0.419
Table 2.2.g1 Total		8.753	14.661	5.908

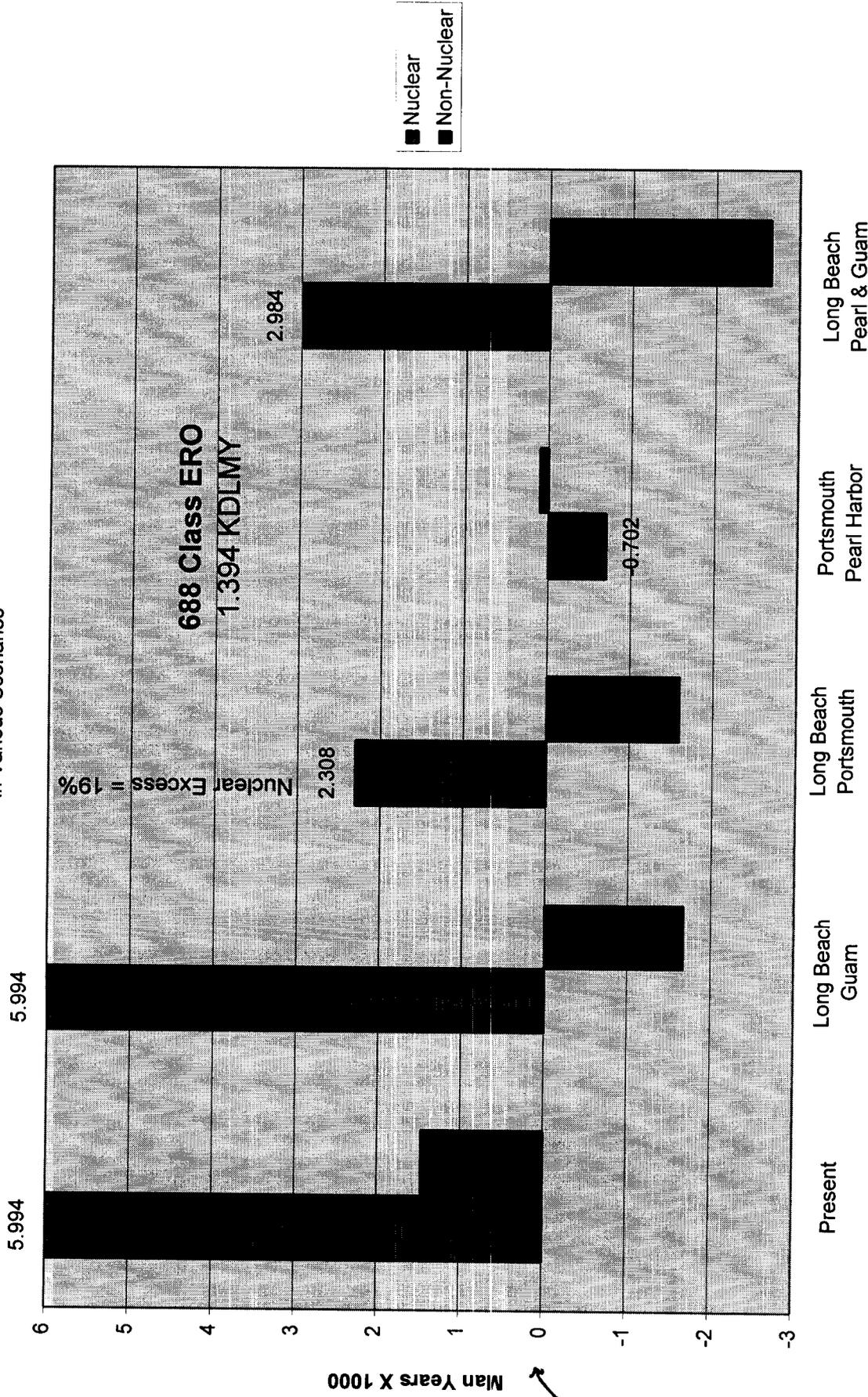
Notes: 1. For FY 1999 projected force structure and prescribed maintenance cycles for each class.

2. Does not include 5.216 KMNYRS Last Source requirements

DRAFT

Chart1

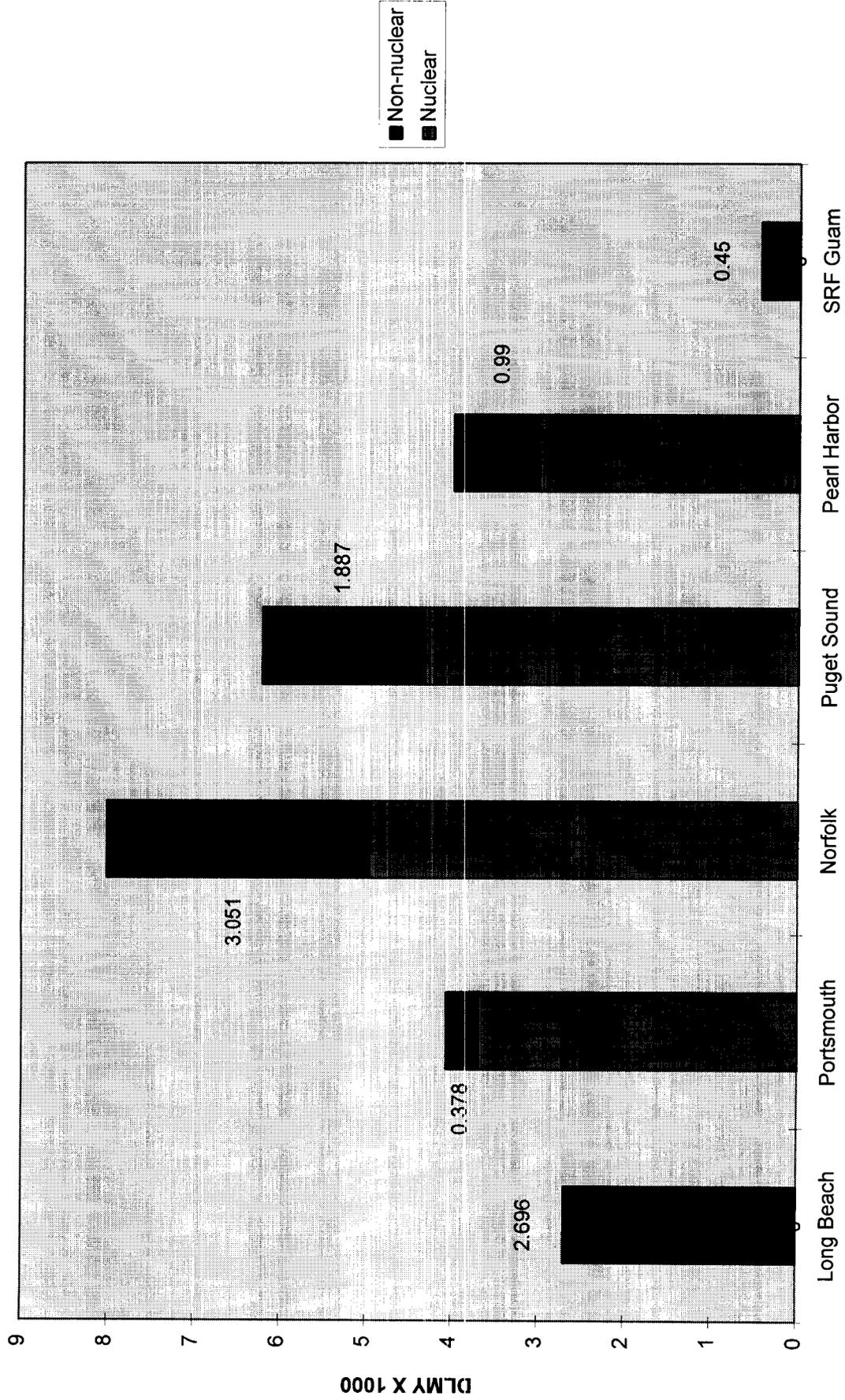
### Excess Shipyard Capacity in Various Scenarios



DRAFT

Chart2

### Shipyard Capacity: Individual Shipyards



# 688-Class SSNs

- 62 procured by Navy
  - 4 not yet delivered, 2 inactivated
  - Flight I (31 boats): ~15-year nuclear cores
  - Flight II (31 boats): ~30-year cores

*Does navy have caps to store fuel if IDANTO won't accept.*

- Refueling complete/in prog: 2 +1 boats

- In cue: 14 boats

*Do you need more than 14 refuelings*

- 6 PNSY, 4 NNSY, 4 PHNSY
  - other 14 budgeted for inac/defueling

- **FY 2005 last sked refueling in a NSY**

*get in writing when will it exist programmed costs*

# 688-Class Refueling (ERO)

- Most demanding NSY evolution
- ~1,400 DLMYs to complete
- Inactivations require ~241 DLMYs
- Inactivations do not include scrapping, all of which is done at Puget Sound
- All future non-688 inacs on West Coast

# Private Sector Nuclear-Capable Yards

- Newport News Shipyard
  - new construction of submarines and surface ships (CVNs)
  - refueling of CVNs
- Electric Boat
  - new construction of submarines only
  - used to refuel submarines (c. 1973)
- EB and NNS can build up to 3 submarines per year. Maintenance capacity unknown.

# Public vs. Private

- Competition keeps rates down on both sides
- Private yards would generally rather build than overhaul
  - According to RADM Taylor, New News has been known to give a take-it-or-leave-it price when public and private workload is high
- Once a private yard loses nuclear capability, it can only be regained at very high cost

DRAFT

## Attack Submarine Procurement Synopsis of Unclassified Readings

Attack submarine procurement is relevant to this round of base closure primarily for three reasons:

1. Procurement rate of new submarines is a significant factor in determining the timing and the rate of old attack submarine (primarily LA-class) de-activations.
2. One potential scenario for long-term procurement strategy involves extending the life of several Los Angeles class submarines.
3. In very rough numbers, attack submarines comprise 15% of the Navy's ship inventory, but account for 30% of the maintenance performed in the public shipyards.

The Bottom Line is that no one is sure what the future requirements will be. For a variety of reasons, Staff is of the opinion that Congress will opt to construct the New Attack Submarine. The reasons center on the need to preserve the submarine industrial base, and the growing obsolescence of the 688-class. More light may be shed on the issue during the classified briefing on 18 April.

Force-level Requirement according to Bottom-Up Review (BUR) is 45-55 submarines.

- Classified number is on the higher end.
- Requirements for an attack submarine force of more than about 45 boats are driven primarily by *peacetime* deployment considerations (i.e. maintaining forward deployments for purposes of intelligence and surveillance and for responding rapidly at the outset of a crisis or conflict), according to the Congressional Research Service (CRS).
- According to the GAO report, analysis by the JCS indicates that a 55-submarine force would meet all wartime requirements for regional conflicts, as well as fulfill peacetime needs.
- Policy limitations on perstempo, and the less fungible requirements for maintenance, training, and transit time require an average of 5.7 attack submarines to keep one continuously deployed in an oparea around the vicinity of Eurasia.

Submarine Missions vary. During the Cold War, emphasis was placed primarily on Anti-Submarine Warfare (ASW), but attack subs, or SSNs, are also capable of performing intelligence gathering missions, launching Tomahawk cruise missiles, mining coastal areas, anti-surface warfare, and insertion and extraction of spies and special forces.

Unit Characteristics, as interpreted by Staff, imply that further construction of SSN-688s will not suit the Navy's (i.e. the Nation's) needs.

Extending the Service Life of Nine 688s is proposed by GAO as a cost-saving measure. Naval Reactors is clearly against this idea. Staff does not believe that this option will be adopted for the following reasons:

- The challenge in maintaining the overall numbers of SSNs is not a short- or mid-term problem, but arises around 2020.
- In 2020, the newer 688s will be almost 30 years old.
- The 688s have little room left for increasing their capabilities.
- Russia has developed submarines quieter than the 688s.
- Russia continues to build submarines at a rate considerably higher than the United States.
- Sustaining Electric Boat and its component suppliers, many of which are now the only remaining domestic source, will be very difficult if building rates decline. There have been no submarine starts since 1991.

Rate of Procurement, according to the CRS study must increase significantly. (See pp. 9-11 for greater details.) "The near-hiatus in submarine procurement of the 1990s has already produced a requirement for an attack submarine procurement bow wave for the period after the turn of the century." What will this do to submarine maintenance requirements?

DRAFT

Date: 13 APR 95

To: Commissioner Montoya  
Commissioner Cornella

CC: David Lyles  
Ben Borden  
Alex Yellin

From: Larry Jackson

Subject: ATTACK SUBMARINE BACKGROUND READING (Substantive changes since  
03 April memo are underlined.)

---

The attached information is intended to familiarize you with some of the issues surrounding attack submarine procurement. Information in this memo is intended to increase your understanding of the underlying issues as they pertain to this round of base closure, particularly with regard to Naval shipyards.

### **Relevance**

Attack submarine procurement is relevant to this round of base closure primarily for three reasons:

1. Procurement rate of new submarines is a significant factor in determining the timing and the rate of old attack submarine (primarily LA-class) de-activations.
2. One potential scenario for long-term procurement strategy involves extending the life of several Los Angeles class submarines.
3. In very rough numbers, attack submarines comprise 15% of the Navy's ship inventory, but account for 30% of the maintenance performed in the public shipyards.

### **Missions and Fleet Composition**

Attack submarines perform a variety of missions. During the Cold War, emphasis was placed primarily on Anti-Submarine Warfare (ASW), but attack subs, or SSNs, are also capable of performing intelligence gathering missions, launching Tomahawk cruise missiles, mining coastal areas, anti-surface warfare, and insertion and extraction of spies and special forces.

The Navy's fleet of attack submarines consists of approximately 56 Los Angeles class (also known as LA-class and 688-class) submarines, and 27 Sturgeon class (637-class) submarines. Two single-ship classes of submarines are also active.

### **Background--The Los Angeles Class Submarine**

A total of 62 LA-class submarines have been procured by the Navy. Of these, four have yet to be delivered, and two have been inactivated. The first 31 submarines were built with nuclear cores which needed replacement after roughly 15 years. Since the LA-class was intended to have a service life of 30 years, this meant that the first 31 submarines would require a refueling overhaul (abbreviated ERO by the Navy). The second flight of submarines were built with cores

which had a core-life comparable to the 30-year service life. In other words, the second flight of submarines did not require refueling.

A submarine refueling is perhaps the most demanding (in terms of skill and time) evolution performed in the naval shipyards. Notional duration for the refueling of a 688-class submarine is approximately 1,400 direct labor man years. The first 688 was commissioned in 1976, based on a late-1960s design. Because the first flight of 688's were commissioned at rates approaching 4 submarines per year, large numbers of the submarines were scheduled for refueling beginning in middle 1990's, and this "bow-wave" required the naval shipyards to retain the capacity to complete the task.

In the early 90's, after the demise of the Soviet Union, the Joint Chiefs of Staff began studying options for decreasing the numbers of attack submarines in the fleet. One proposal, dubbed JCS-1, called for defueling (vice refueling) nine 688's. (A defueling requires 1/2 to 1/3 the level of effort required for a refueling.) The JCS-1 scenario resulted in a 15% decrease in the necessary capacity required in the latter 1990's, when compared to the Bush-Cheney Base Force.

### **The Current Debate**

The testimonies of Ms. Slatkin, GAO, and Mr. Ron O'Rourke (Congressional Research Service) deal with several issues, the primary of which boils down to whether and when the Navy should procure the New Attack Submarine (NSSN). Secondary issues discuss whether the Navy truly needs two nuclear-capable shipbuilders and funding for a third Seawolf-class submarine (SSN-23).

It now appears that Congress is no longer debating whether to build the NSSN, but rather who will build it, and how the builder will be determined. Based on this observation, Staff believes that construction will start in FY 98, though it could be pushed a year later if Newport News is given the contract.

### **Food for Thought: The Private Shipyards<sup>1</sup>**

Both Electric Boat and Newport News Shipbuilding have performed maintenance on nuclear submarines. It is generally accepted that shipbuilders would rather build than repair, but given the bleak outlook for shipbuilding in the United States, it is very likely that both yards would welcome additional work. In general, new construction does not require the same facilities as maintenance. Furthermore, as stated in Ms. Slatkin's testimony (p.10), submarine overhaul does not require the same skill mix demanded by new construction. This is important because it means that the capacity to build new submarines is relatively independent of the capacity to overhaul submarines.

In a broad sense, public and private shipyards are in competition for the declining nuclear workload. Furthermore, the private yards are largely funded by the American Taxpayer. (Electric Boat's workload is 100% government, and Newport News' workload is probably around 90% government.) Thus, taking a (very) broad perspective, one could state that the Navy is supporting six nuclear capable shipyards--four public and two private.

---

<sup>1</sup> Because we are discussing nuclear shipwork, I have restricted discussion of the private yards to those currently capable of performing nuclear work: Newport News Shipbuilding and Electric Boat.

## **About the Attachments**

If you are pressed for time, I have included a synopsis of the readings; however, I would recommend reading the Congressional Research Service (CRS) testimony by Ron O'Rourke. Ron has taken more of a middle-ground approach to the procurement issue. Ms. Slatkin's testimony stakes out the Navy's position, which boiled down is, "Build the New Attack Submarine." The GAO testimony outlines several lower-cost procurement strategies that the Navy could pursue. I highly recommend reading the "Background" portion of the GAO testimony, if nothing else.

## **A Few Notes**

The New Attack Submarine has also been known as the Seawolf follow-on, and the Centurion.

We have obtained or will soon obtain all of the references in the GAO testimony.

Staff has requested a classified briefing on attack submarine missions, the threat, and the Navy's perspective regarding procurement and budget limitations. It has been requested for the morning of 18 April, and will probably be held in our spaces. The Defense Intelligence Agency has also agreed to give us a threat brief following the SSN brief.

On page 3 of the CRS report, note that "requirements for an attack submarine force of more than about 45 boats are driven primarily by *peacetime* deployment considerations." (Emphasis added.)

Pages 6-8 of the GAO testimony discuss the proposal to extend the lives of nine 688s. During the hearing, Admiral Bruce DeMars, who is in charge of Naval Reactors, opposes the extension and noted that a study to determine whether a service-life extension is feasible would take many years.

Page 10 of Ms. Slatkin's testimony briefly touches on the broad issue of industrial skill preservation. In particular, she discusses the disadvantages of overhauling submarines vice building new ones. This issue will probably crop up again.

Just to put things in perspective, the Navy's COBRA analyses indicate that the 20-year net present value is approximately \$2.0 billion per shipyard closed. This would almost pay for one Seawolf-class submarine, or would pay for a little more than one NSSN.

# Capacity Background

- Physical constraints
  - graving docks--number & size, dock maintenance, setting blocks
- Type of work--you can't put as many workers on a boat as on a ship
  - subsafe procedures, nuclear work
- Efficiency curves

# Capacity

## Navy Analysis

- Measured in thousands of direct labor man (work) years--DLMYs
- Based on 8-hour shift, 5-day week
  - shipyards generally work at least 2 shifts
- Predicted Capacity = Predicted Use
  - Annual budgeted (scheduled) workload 2001
  - Selected year is FY 2001

# Navy Capacity (cont.)

- Maximum capacity--No surplus remaining
  - projected workload remains as assigned
  - max hiring, max training, max equipment
  - no major MILCON not programmed
  - no significant increase in overhead/rates
  - must meet current commitments
- Maximum capacity somewhat theoretical
- Excess Capacity = Maximum - Predicted

# Navy Capacity (cont.)

## Nuclear vs. Non-Nuclear

- Separated to ensure retention of sufficient nuclear capacity
- All work performed on nuclear ships classified as nuclear
- Some work performed on nuclear ships does not require nuclear-trained personnel
- DON data show current recommendation retains 37% excess nuclear capacity

# Capacity

## JCSG Analysis

- Measured in direct labor man hours--DLMHs
- Based on 8-hour shift, 5-day week
- Capacities measured by commodity groups
  - Sea Systems--Ships and Weapons
  - Very High-Level
- Based on Core calculations (DoD 4151.15H)
  - projected workload remains as assigned
- Core  $\neq$  Predicted Capacity

# Capacity

## Other Measures--Core

- Measured in direct labor man hours--DLMHs
- Title 10 Core Logistics Function
- Organic capability to meet readiness & sustainability requirements of JCS Scenarios
  - Minimum facilities, equipment, skilled personnel
  - driven by risk avoidance and cost control
- Adjustments for surge capacity, battle-damage, reconstitution
- Core  $\neq$  Predicted Capacity

# Capacity

## Other Measures--Drydock Utilization

- Measured in percent occupied
- Accounts for major limiting physical factor
- Some time required for maintenance of dock, placing of blocks, etc.
- Historical utilization has been below 80%

# 688-Class SSNs

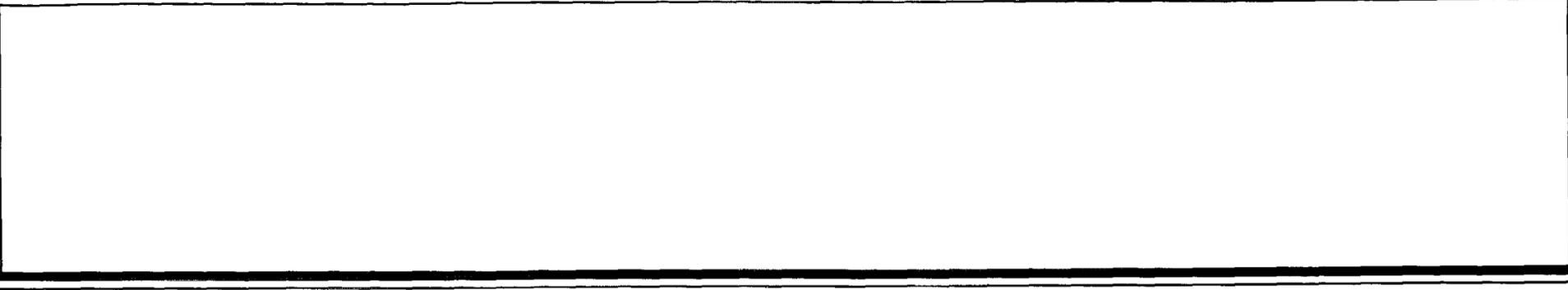
- 62 procured by Navy
  - 4 not yet delivered, 2 inactivated
  - Flight I (31 boats): ~15-year nuclear cores
  - Flight II (31 boats): ~30-year cores
- Refueling complete/ in prog: 2/1 boats
- In cue: 14 boats
  - 6 PNSY, 4 NNSY, 4 PHNSY
  - other 14 budgeted for inac/defueling
- **FY 2005 last sked refueling in a NSY**

## 688-Class Refueling (ERO)

- Most demanding NSY evolution
- ~1,400 DLMYs to complete
- Inactivations require ~241 DLMYs
- Inactivations do not include scrapping, all of which is done at Puget Sound
- All future non-688 inacs on West Coast

# Public vs. Private

- Competition keeps rates down on both sides
- Private yards would generally rather build than overhaul
  - Private yards have been known to give a take-it-or-leave-it price when public and private workload is high
  - Law and proper contracting to exert control
- 100% public-funded workload at EB
- 90% public-funded workload at NNS



# SHIPYARD ISSUES

Capacity

Attack Submarines

Private Yards & Nuclear Work

# Private Sector Nuclear-Capable Yards

- Newport News Shipyard
  - new construction of submarines and surface ships (CVNs)
  - refueling of CVNs; refueled submarines c. 1980
- Electric Boat
  - new construction of submarines only
  - used to refuel submarines (c. 1973)
- EB and NNS can each build up to 3 submarines per year. Maintenance capacity unknown.

## Naval Shipyard Drydocks: SSN-688 Refueling Capabilities

<b>Shipyard</b>	<b>Total Drydocks</b>	<b>Facilitized for Defueling Only</b>	<b>Facilitized for Refueling</b>	<b>Refueling Options<sup>*g</sup></b>
Norfolk	8	1	1	2
Portsmouth	3	1	1	0
Puget Sound	6	1	0	3
Pearl Harbor	4	0	1 (in progress)	1

<sup>\*</sup> Does not include carrier drydocks

## MAINE

### **Portsmouth Naval Shipyard**

1. What work will the shipyard be performing now that the LOS ANGELES-class (SSN-688 class) submarine refueling scheduled for FY 97 has been pushed to FY 98? Where did that work come from? (I.e. was the work simply shifted from one under-worked shipyard to another?)
2. Given the recent extension in the 688-class maintenance cycle and the declining numbers of attack submarines, what work will the shipyard perform after the 688 refuelings are complete in 2005?  
**Commissioner Background:** 688-class maintenance cycle was increased this spring from 90 to 120 months, primarily due to financial considerations. Currently, about 82 attack submarines are in the fleet; by 2002, the number will be roughly 51.
3. How much of the shipyard's work is performed at remote locations (i.e. New London, Pearl Harbor, San Diego, Kings Bay)?
4. What are the Navy's fixed costs to run the shipyard for a year?
5. What impact would the closure of Portsmouth Naval Shipyard have on the Navy's plans to refuel 688-class submarines?
6. Is the Navy currently planning to refuel any of the 688-class submarines at private shipyards? Could a private shipyard do the work?
7. The Commission has heard some discussion regarding the Net Operating Results for Portsmouth Naval Shipyard. Results for the past several years have been tens of thousands of dollars in the negative. How do you explain these results?

8. Admiral Boorda: you were quoted in a May 4 interview as saying the following.

“If you look at our planning for modernization in the [future] there is a mountain of requirements. If—and these are big ifs—we realize all the savings from base closings, if we are allowed to keep all the savings from downsizing, we could probably climb that mountain. [However], the budget five years from now never comes true. If it is smaller, we have a real modernization problem.”

Are you concerned that the savings the Navy is projecting from the 1995 base closures will not come true? Wouldn't one way to ensure that you have money for modernization be to further reduce your infrastructure?

## Questions for SECNAV/CNO

Mr. Secretary, in responding to a Commission request in June of 1993, the Acting Chairman of the Navy's Base Structure Evaluation Committee (BSEC), Mr. Charles Nemfakos, stated, "The capability and commitment of the private shipyards to maintain the skills and facilities necessary to accomplish increasingly complex workload, is unproved. Principal dependency on the private sector to accomplish this workload and to respond to unplanned, emergent and urgent repair puts Fleet readiness at risk." Is most of the shipwork currently being performed at Long Beach Naval Shipyard going to be performed in at other naval shipyards?

- If private shipyards will be receiving most of the work, how did you evaluate their capacity? Were these data certified?
- In final deliberations of the '93 Commission, considerable concern was raised regarding the financial stability of the San Diego ship-repair industry. Have you been able to resolve this issue to your satisfaction? **[If data not certified]** If so, how did you do so without receiving certified data?

Secretary Dalton, with the closure of the Navy's midwestern industrial capabilities at Louisville, and the depot at Long Beach, it would appear that your service is seeking to reduce infrastructure capital at the expense of political capital. Would you comment on this in light of the Air Force's actions (or inactions) with regard to its depots?

Secretary Dalton, the minutes from the BSEC deliberations of 9 February 1993 state that the BSEC was "concerned that there was insufficient capacity on the West Coast for drydocking carriers and other large ships. Accordingly, they agreed not to consider Long Beach Naval Shipyard...." Mr. Secretary, what has changed such that you are now recommending that shipyard for closure?

Admiral Boorda, at one time, the Navy intended to perform all CVN Regular Overhauls at Newport News Shipbuilding, a private shipyard. What impact does that have on the future workload for Puget Sound Naval Shipyard?

Admiral Boorda, the Navy's detailed analysis states that Portsmouth Naval Shipyard was removed from consideration due to the possibility that the Navy may need to refuel more 688-class submarines while awaiting delivery of

SEAWOLF. It is our understanding that only the first 31 require refueling, and of these, three either have been or are being refueled. With the Navy is headed for a 50-ship attack fleet, do the other nuclear shipyards not have the capacity to refuel 16 submarines?

Secretary Dalton, where does the Navy stand with regard to the Congressionally-mandated 60-40 split?

- How will closure of Long Beach affect this?

Secretary Dalton, as you have probably heard by now, the Commission has taken considerable interest in the statement [on page ii of Volume IV] regarding exemption of California from closures due to economic impacts. Your concern over eliminating additional civilian jobs in a region previously hit hard by base closures precluded you from closing the Fleet Industrial Supply Center (FISC) in Oakland, yet you recommended FISC Charleston for closure. Why aren't you giving Charleston the same breaks as the Bay Area? [NOTE: we're only talking about 8 direct jobs; so, this question is mostly to make the South Carolina delegation happy.]

Secretary Dalton, the Navy appears to have made an attempt to consolidate industrial functions at the shipyards, presumably in an attempt to reduce overhead and increase workload at the shipyards. We further presume that you were partially motivated to do so due to the increasing scarcity of graving docks. Unlike ships, which obviously must be repaired on the coast, other military hardware can be maintained almost anywhere, including a shipyard. Did you consider moving work from Barstow Marine Corps Logistics Base to Long Beach?

### **PNSY FY-97 Workload**

Due to fiscal and force structure reductions, a SSN-688 refueling overhaul scheduled for FY-97 was pushed to FY-98. The resulting decrease in workload at PNSY was adjusted by the most recent scheduling conference by adding numerous Selected Restricted Availabilities (SRAs), which are usually performed off-yard. The movement of work into the yard is an attempt to bring it back to an efficient workload. Staff does not know from which yards the work was moved.

<b>FY 96</b>	<b>FY 97</b>
AGSS-555 RAV	SSN-705 DSRA
SSN-647 DSRA	SSN-764 DSRA
SSN-674 DSRA	SSN-713 DSRA
NR-1 RAV	SSN-754 DSRA
	SSN-751 DSRA
	ARDM-4 SCO

DSRA: Docking Selected Restricted Availability = ~90 direct labor manyears

RAV: Restricted Availability = ~28 direct labor manyears

SCO: Service Craft Overhaul = ~200 direct labor manyears

Portsmouth NSY Drydocks

#2: SSN 688 ERO or defueling

#3: SSN 688 defueling

Norfolk NSY Drydocks

#2: SSN 688 defueling

**#3: Nuclear capable, not refueling/defueling configured**

#4: SSN 688 ERO or defueling

Puget Sound NSY Drydocks

**#2: Nuclear capable, not refueling/defueling configured**

#5: SSN 688 defueling

Pearl Harbor NSY Drydocks

#1: Being configured for SSN 688 ERO/defueling

#2: Nuclear capable, not refueling/defueling configured

**Analysis Notes**

1. TRF Kings Bay is sked to work on 7 688s per year from 94-97. (8840, 9360,8528,9048)  
What kind of work?
2. Why isn't TRF work listed beyond FY-97? Verify yellow bk.
3. SRF Yokosuka--does government of Japan subsidze?

**Air Force:**

**When Hill implemented the Navy FA-18 work, how many personnel migrated from North Island?**

**(If answer is “few” or “none”) So, what I’m hearing is that Hill required no significant transfers of personnel to work on an aircraft type they had never worked on before?**

**Navy:**

**General Klugh, in both alternatives one and two, specific workload transfers are identified for each commodity group except for sea systems. In that case, the alternative states, “Consolidate as possible within the Department of the Navy.” Why was the sea systems commodity area proposal not specific concerning workload distribution? How did the Navy respond to these instructions?**

**General Klugh, JCSG alternative two proposes the closure of Long Beach and either Pearl Harbor or Portsmouth. Did the JCSG view the latter two shipyards as equivalent in terms of capability as well as capacity?**

**General Klugh, the COBRA for scenario JCSG alternative one indicates that virtually all of Portsmouth’s workload can be moved to Norfolk for a cost of \$100 million. This implies that the current and predicted shipyard workload does not justify keeping Portsmouth. Please comment.**

**Mr. Nemfakos, the Navy says that “continuing decreases in force structure eliminate the need to retain the capacity to drydock large naval vessels for emergent requirements.” How many large-decked ships (CV, CVN, LHA & LHD) are in the Pacific Fleet now? How many are expected to be in the Pacific Fleet in 2001?**

**Mr. Nemfakos, currently, the Navy is facilitating Norfolk, Pearl Harbor, and Puget Sound Naval Shipyards for refueling 688-class submarines. How many 688’s are slated to be refuelled? At which yards? How much is it costing to facilitate Pearl Harbor to perform these refuellings, including training and milcon?**

**Mr Nemfakos, regarding the Naval Surface Warfare Center detachment at Louisville, why didn’t the Navy examine the possibility of closing the Naval Industrial Reserve Ordnance Plant at Mineapolis?**

**Mr. Nemfakos, when did you first hear of the proposal to privatize the facility at Louisville? What did you think about it? Did the proposed reuse plan affect the BSEC’s decision to place Louisville on the list? Did you consider the plan when writing the language to close Louisville?**

1. Capacity datacall instructions state that maximum potential capacity should not result in a “significant increase in overhead cost/rates....” Please explain what qualifies as a significant increase.
2. Can maximum potential capacity actually be achieved without adding another shift? If so, how? If not, what are the primary contributing factors?
3. Given the constraints placed on the shipyards, particularly the overhead cost/rate constraint mentioned in question 1, it would appear that, in calculating maximum potential capacity, the shipyards were forced to operate at a level of inefficiency equal to their current level of inefficiency. In other words, looking at the attached efficiency curve, a yard currently operating at point A on the curve would, in calculating maximum potential capacity, be forced to point B on the curve. Please comment.
4. Staff understands that CNA has performed a classified Cost and Operational Effectiveness Analysis for the New Attack Submarine. We would like to review the analysis.

Please provide the following information to the Base Closure and Realignment Commission:

- Drydock loading schedules for each of the shipyards and the SRF;
- Projected refueling schedules for SSN-688's;
- Projected decommissioning schedule for SSN-688's;
- A briefing (up to TS/SCI level, but preferably Secret) on attack submarine construction, maintenance, and refueling issues, to include the possibility of extending the lives of the LA-class; Hill staffers have referred in particular to "The Bookends Brief" and "The Bear Swims."
- Copies of any work by ASNRDA office regarding flexibility of nuclear maintenance.;
- Copies of the following:
  1. RAND Study: US Submarine Production Study by John Birkler. (I believe that the document number for this is MR-456-OSD.
  2. CNA Study: Downsizing of Defense Industrial Base & Implications for US Shipbuilding by Leeland.
  3. CRS Study on Navy Attack Sub Programs FEB 95 by Ronald O'Rourke for Congress.
- A copy of the *Report of Naval Shipyard Core*, dated 26 January, 1994, or more recent copies if available;
- A copy of 4151.18H;
- Number of Direct Labor Man-Hours and Days in a Direct Labor Man-Year;

In addition, please provide answers to the following questions.

- How did NAVSEA determine private-sector shipyard rates, and how were these certified?
- A letter received from Senator Cohen's office indicates that Norfolk does not have a shore-based IMA. Based on past experience, and BSAT data calls, this statement appears to be erroneous. Is it possible that SIMA Norfolk is less than fully-capable of working on nuclear submarines? Does the Regional Maintenance Concept address this issue?
- The 1993 capacity calculations indicated that Puget Sound had approximately 20% more capacity than Norfolk. The 1995 calculations indicate that Puget Sound has approximately 20% less capacity than Norfolk. Please comment.
- What constraints are imposed upon shipyards when calculating maximum potential capacity? Can they hire more people? Can they purchase new capital equipment? Is programmed MILCON assumed to be completed on schedule?
- Potential shipyard capacity varies from year-to-year. Why?
- How does a yard estimate how many workers it will have in 2001?
- We are still awaiting a response to the questions regarding where the Navy, as a Department, stand vis-à-vis the 60-40 split;

## Capacity Analysis

There are numerous different methods by which depot capacity and excess capacity can be measured. In the 1995 round of base closure, as in the 1993 round, the Department of the Navy (DON) has chosen to measure excess capacity in the shipyards by first calculating predicted capacity, then maximum potential capacity, and subtracting the former from the latter. The DBCRC Navy Team has chosen to present calculations based on the DON method because that was the method by which Long Beach Naval Shipyard was selected by the DON for closure.

Because predicted capacity (synonymous with “predicted workload”) is generally higher than core capacity, calculations based on core workload usually generate higher excess capacity figures than calculations based on predicted capacity. In the case of the shipyards, excess nuclear capacity based on core is approximately two percent higher than the number generated by the Navy’s process.

DON maximum potential capacity is based on the maximum workload that can be performed in the shipyard, with no surplus remaining to perform additional work. The following constraints apply: projected workload remains as assigned; maximum hiring, training, and equipment efficiencies are justified; no major unplanned milcon; no significant increase in overhead or rates, and current commitments must be met.

DON predicted capacity is predicted use, or annual budget workload.

### **Questions for SSN Briefing**

- What are the standing intelligence requirements for SSNs?
- How many SSNs are required by the CINCs and current DON policy?
- How many SSNs are desired by the CINCs?
- What is the depth capability of the LA class?
- What is the depth capability of the AKULA class?

	Nuke	Non-Nuke	Total
Long Beach	0	2.696	2.696
Portsmouth	3.686	0.378	4.064
Norfolk	4.965	3.051	8.016
Puget Sound	5.313	2.202	7.515
Pearl Harbor	3.155	0.845	4
<b>Total</b>	<b>17.119</b>	<b>9.172</b>	<b>26.291</b>
<b>CORE 2001</b>	<b>9.759</b>	<b>4.852</b>	<b>14.611</b>
<b>Excess</b>	<b>7.36</b>	<b>4.32</b>	<b>11.68</b>
<b>% Excess</b>	<b>43%</b>	<b>47%</b>	<b>44%</b>

**EXCESS CAPACITY  
Present**

	Open/Close		Non-Nuke	Total		Nuke	Non-Nuke
Long Beach	1	0	2.696	2.696		0	2.696
Portsmouth	1	3.686	0.378	4.064		3.686	0.378
Norfolk	1	4.965	3.051	8.016		4.965	3.051
Puget Sound	1	5.313	2.202	7.515		5.313	2.202
Pearl Harbor	1	3.155	0.845	4		3.155	0.845
<b>Total</b>		<b>17.119</b>	<b>9.172</b>	<b>26.291</b>		<b>17.119</b>	<b>9.172</b>
<b>CORE 2001</b>		9.759	4.852	14.611		<b>9.759</b>	<b>4.852</b>
<b>Excess</b>		7.36	4.32	11.68		7.36	4.32
<b>% Excess</b>		43%	47%	44%		43%	47%
Total Excess	11.68						
	80%						

**EXCESS CAPACITY  
Closing: Long Beach & Portsmouth**

	Open/Close		Non-Nuke	Total		Nuke	Non-Nuke
Long Beach	0	0	2.696	2.696		0	0
Portsmouth	0	3.686	0.378	4.064		0	0
Norfolk	1	4.965	3.051	8.016		4.965	3.051
Puget Sound	1	5.313	2.202	7.515		5.313	2.202
Pearl Harbor	1	3.155	0.845	4		3.155	0.845
<b>Total</b>		<b>17.119</b>	<b>9.172</b>	<b>26.291</b>		<b>13.433</b>	<b>6.098</b>
<b>CORE 2001</b>		9.759	4.852	14.611		<b>9.759</b>	<b>4.852</b>
<b>Excess</b>		7.36	4.32	11.68		3.674	1.246
<b>% Excess</b>		43%	47%	44%		27%	20%
Total Excess	4.92						
	34%						

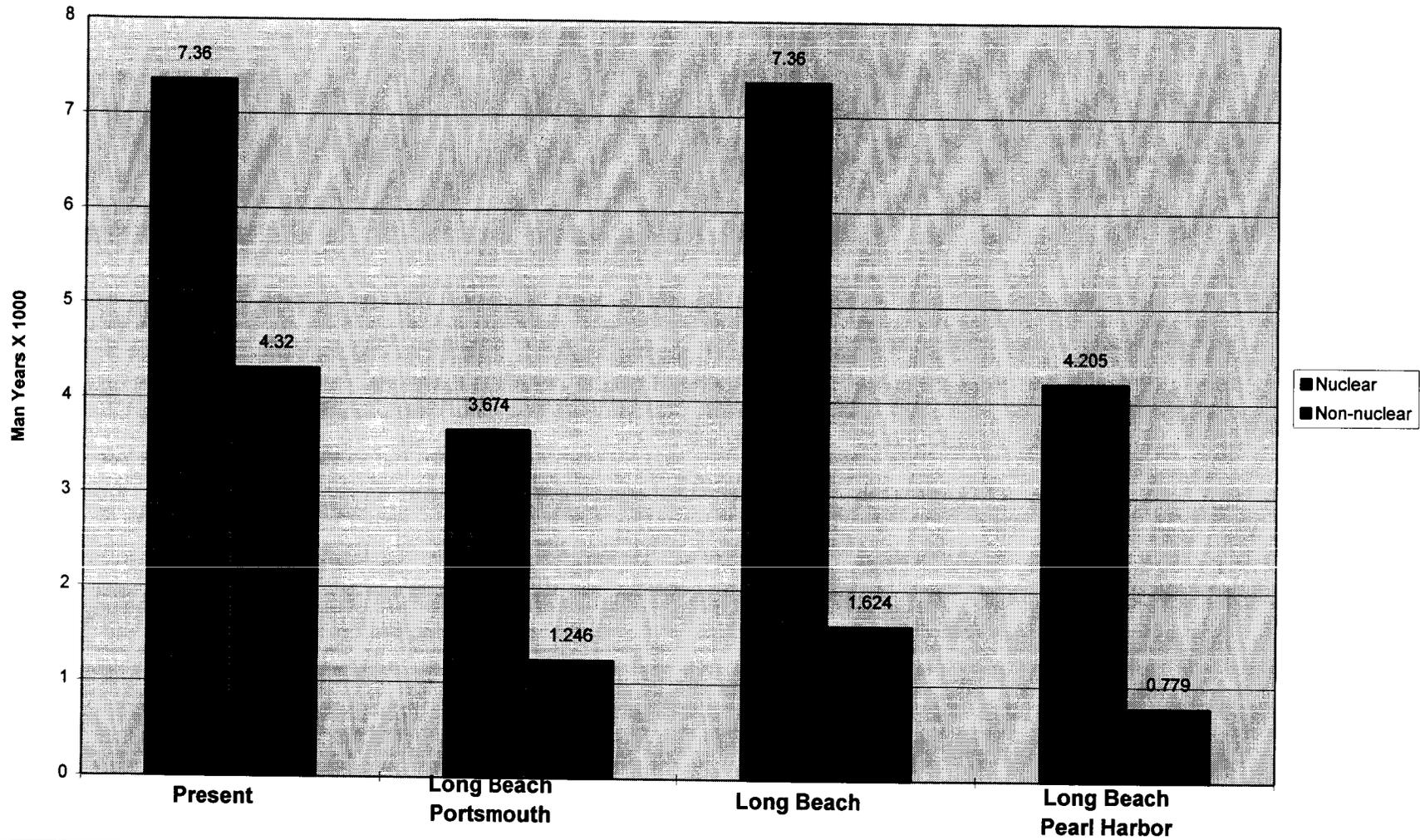
**EXCESS CAPACITY****Closing: Long Beach**

	Open/Close		Non-Nuke	Total		Nuke	Non-Nuke
Long Beach	0	0	2.696	2.696		0	0
Portsmouth	1	3.686	0.378	4.064		3.686	0.378
Norfolk	1	4.965	3.051	8.016		4.965	3.051
Puget Sound	1	5.313	2.202	7.515		5.313	2.202
Pearl Harbor	1	3.155	0.845	4		3.155	0.845
<b>Total</b>		<b>17.119</b>	<b>9.172</b>	<b>26.291</b>		<b>17.119</b>	<b>6.476</b>
<b>CORE 2001</b>		<b>9.759</b>	<b>4.852</b>	<b>14.611</b>		<b>9.759</b>	<b>4.852</b>
<b>Excess</b>		<b>7.36</b>	<b>4.32</b>	<b>11.68</b>		<b>7.36</b>	<b>1.624</b>
<b>% Excess</b>		<b>43%</b>	<b>47%</b>	<b>44%</b>		<b>43%</b>	<b>25%</b>
<b>Total Excess</b>	<b>8.984</b>						
	<b>61%</b>						

**EXCESS CAPACITY****Closing: Long Beach & Pearl Harbor**

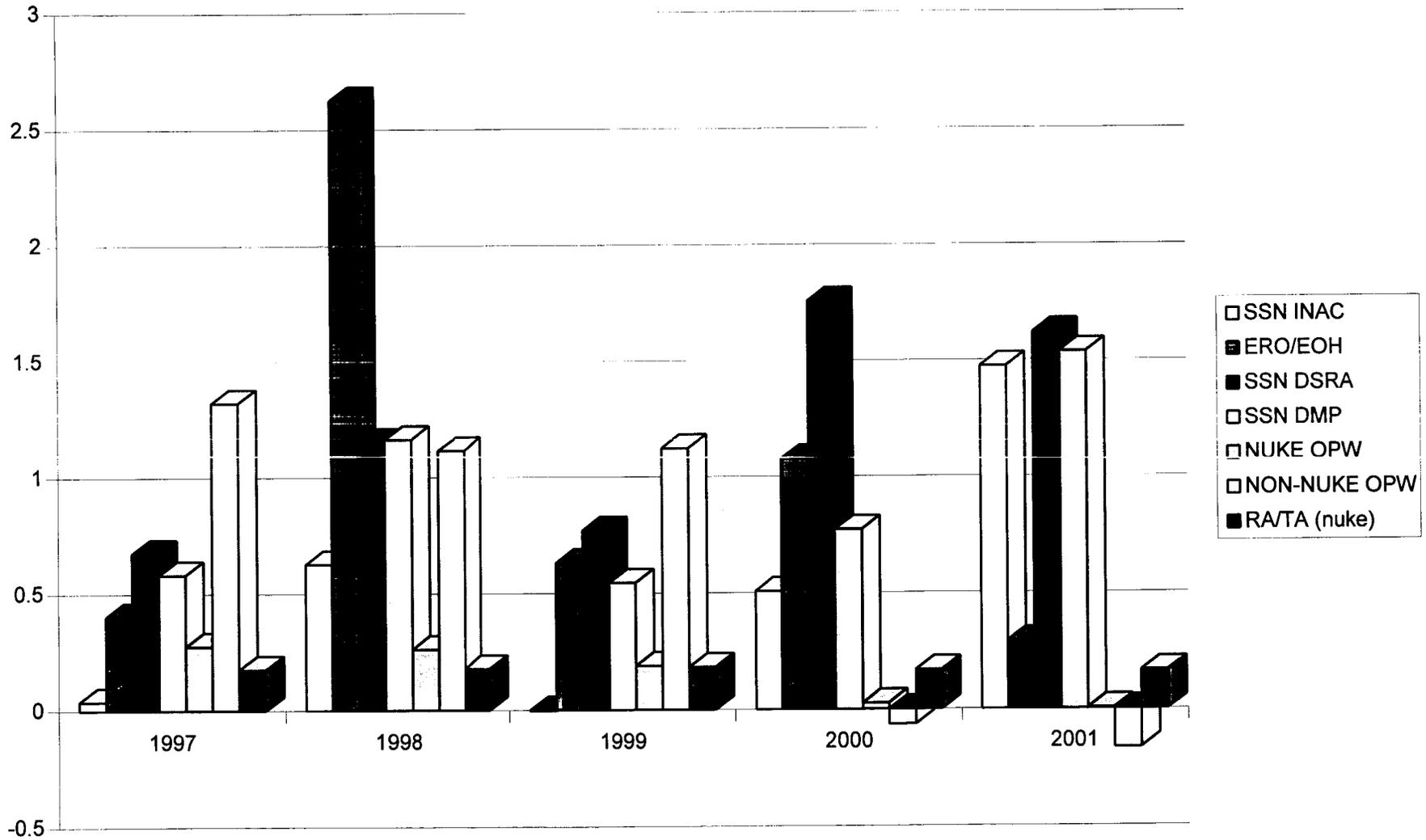
	Open/Close		Non-Nuke	Total		Nuke	Non-Nuke
Long Beach	0	0	2.696	2.696		0	0
Portsmouth	1	3.686	0.378	4.064		3.686	0.378
Norfolk	1	4.965	3.051	8.016		4.965	3.051
Puget Sound	1	5.313	2.202	7.515		5.313	2.202
Pearl Harbor	0	3.155	0.845	4		0	0
<b>Total</b>		<b>17.119</b>	<b>9.172</b>	<b>26.291</b>		<b>13.964</b>	<b>5.631</b>
<b>CORE 2001</b>		<b>9.759</b>	<b>4.852</b>	<b>14.611</b>		<b>9.759</b>	<b>4.852</b>
<b>Excess</b>		<b>7.36</b>	<b>4.32</b>	<b>11.68</b>		<b>4.205</b>	<b>0.779</b>
<b>% Excess</b>		<b>43%</b>	<b>47%</b>	<b>44%</b>		<b>30%</b>	<b>14%</b>
<b>Total Excess</b>	<b>4.984</b>						
	<b>34%</b>						

**Excess Shipyard Capacity  
in Various Closure Scenarios**

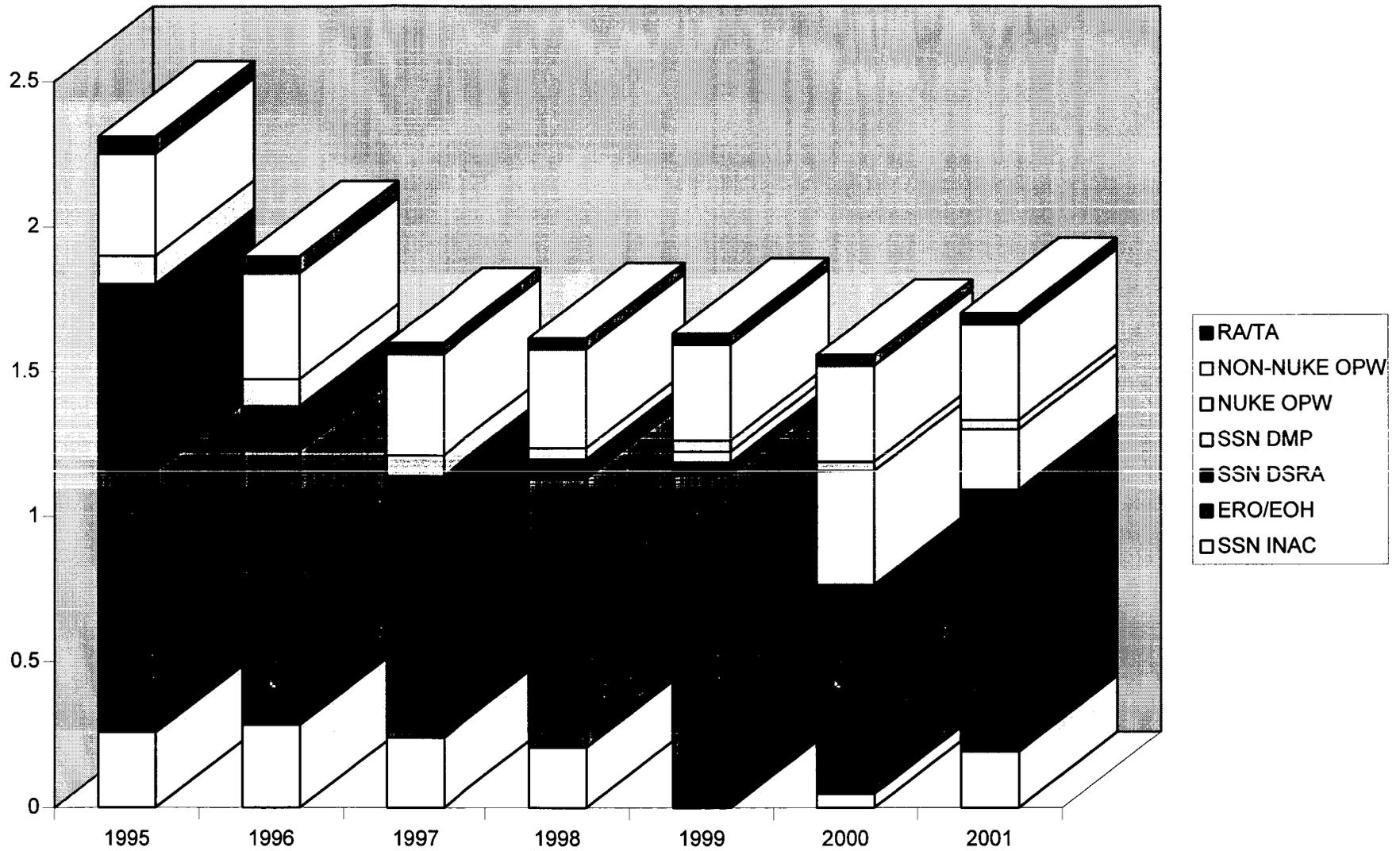


Pres	7.36	4.32									
LB+P	3.674	1.246									
LB	7.36	1.624									
LB+PH	4.205	0.779									

**NNSY absorbtion of PNSY work, by workpackage type**



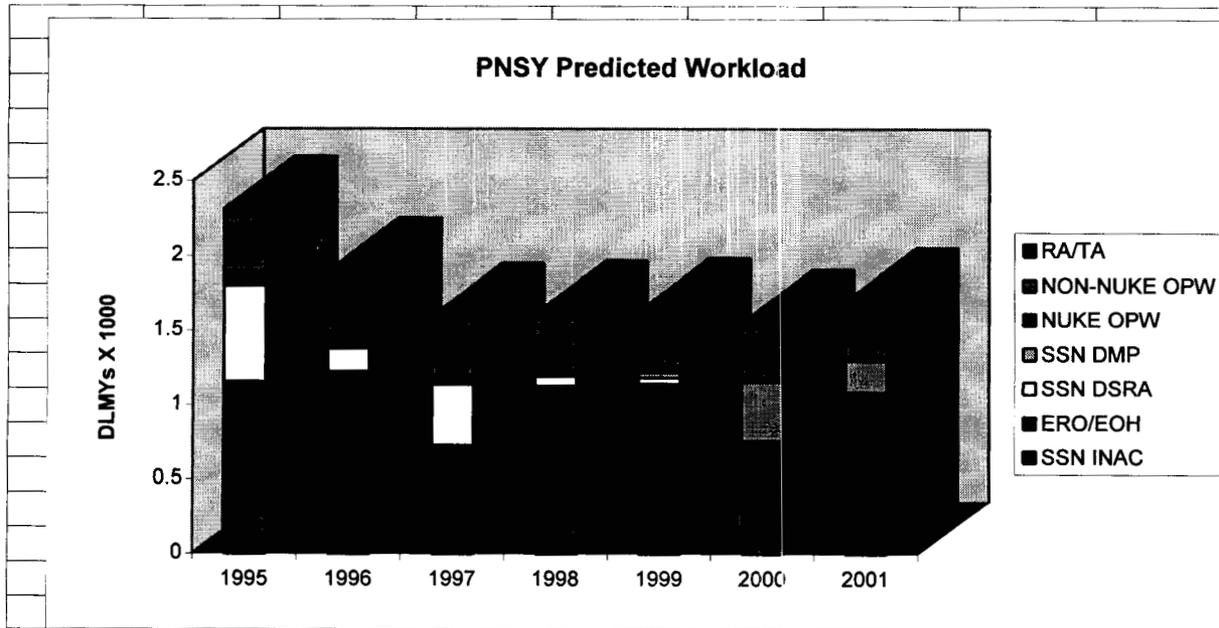
### Portsmouth Scheduled Workload



			PNSY				
	1995	1996	1997	1998	1999	2000	2001
SSN INAC	0.258	0.284	0.24	0.206	0.002	0.048	0.192
ERO/EOH	0.901	0.945	0.494	0.926	1.145	0.717	0.9
SSN DSRA	0.645	0.152	0.406	0.065	0.04	0	0
SSN DMP	0	0	0	0	0.037	0.392	0.209
NUKE OPW	0.097	0.094	0.071	0.039	0.039	0.032	0.032
NON-NUKE OPW	0.352	0.365	0.35	0.341	0.331	0.331	0.331
RA/TA	0.059	0.059	0.039	0.039	0.039	0.039	0.039
<b>SUM</b>	<b>2.312</b>	<b>1.899</b>	<b>1.6</b>	<b>1.616</b>	<b>1.633</b>	<b>1.559</b>	<b>1.703</b>

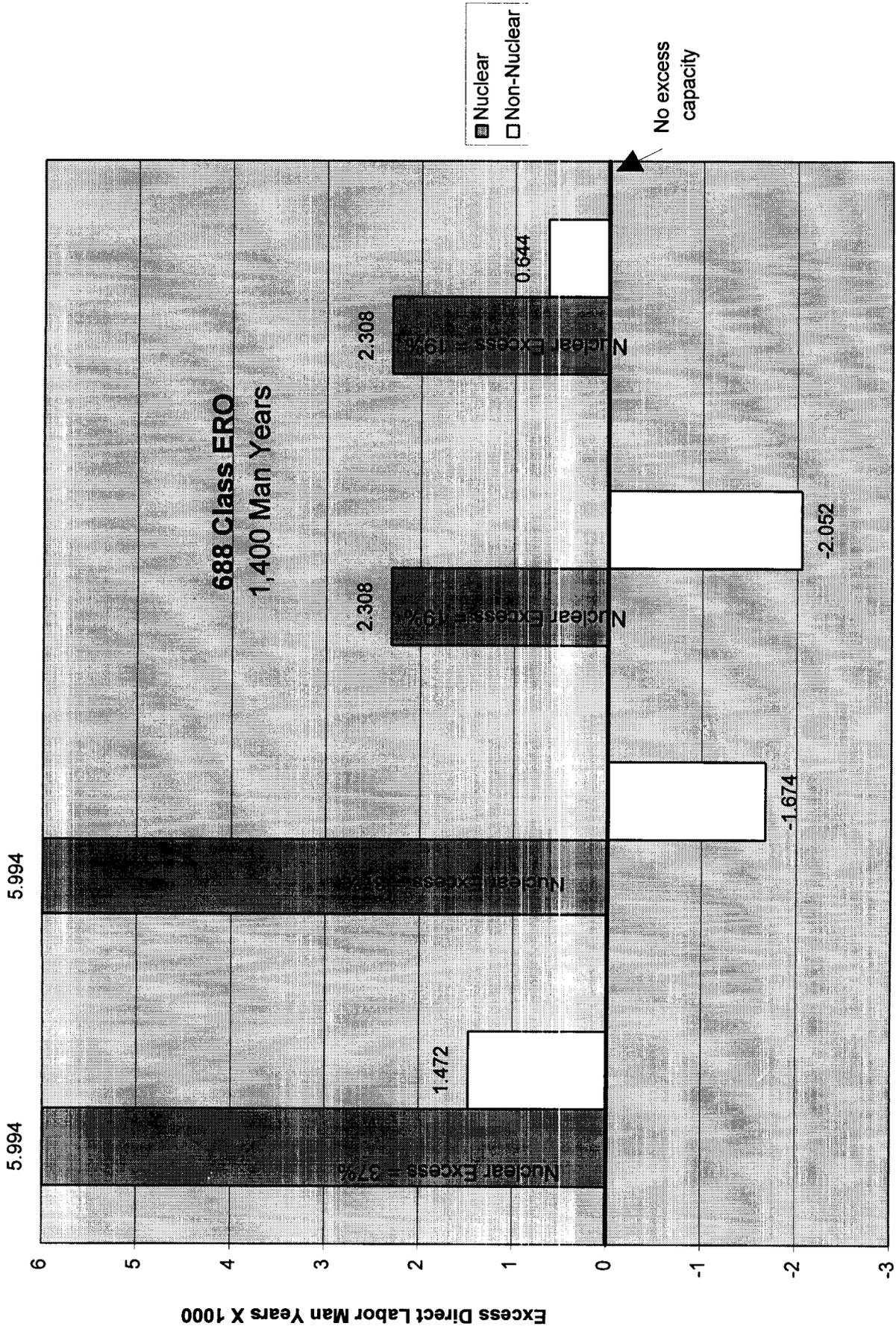
	1997	1998	1999	2000				
SSN INAC	0.24	0.278	0.206	0.833	0.002	0	0.048	0.555
ERO/EOH	0.494	0.896	0.926	3.551	1.145	1.776	0.717	1.793
SSN DSRA	0.406	1.08	0.065	1.216	0.04	0.81	0	1.756
SSN DMP	0	0.582	0	1.164	0.037	0.582	0.392	1.164
NUKE OPW	0.071	0.346	0.039	0.3	0.039	0.228	0.032	0.058
NON-NUKE OPW	0.35	1.671	0.341	1.457	0.331	1.454	0.331	0.267
RA/TA (nuke)	0.039	0.214	0.039	0.216	0.039	0.222	0.039	0.207
<b>SUM</b>	<b>1.6</b>	<b>5.067</b>	<b>1.616</b>	<b>8.737</b>	<b>1.633</b>	<b>5.072</b>	<b>1.559</b>	<b>5.8</b>
	1997	1998	1999	2000	2001			
SSN INAC	0.038	0.627	-0.002	0.507	1.474			
ERO/EOH	0.402	2.625	0.631	1.076	0.291			
SSN DSRA	0.674	1.151	0.77	1.756	1.621			
SSN DMP	0.582	1.164	0.545	0.772	1.537			
NUKE OPW	0.275	0.261	0.189	0.026	0.004			
NON-NUKE OPW	1.321	1.116	1.123	-0.064	-0.165			
RA/TA (nuke)	0.175	0.177	0.183	0.168	0.165			

2001	
0.192	1.666
0.9	1.191
0	1.621
0.209	1.746
0.032	0.036
0.331	0.166
0.039	0.204
<b>1.703</b>	<b>6.63</b>



This sheet contains the Navy certified data on which the book is based.			
	Nuke	Non-Nuke	Total
Long Beach	0	2.696	2.696
Portsmouth	3.686	0.378	4.064
Norfolk	4.965	3.051	8.016
Puget Sound	4.333	1.887	6.22
Pearl Harbor	3.01	0.99	4
SRF Guam	0	0.45	0.45
<b>Total</b>	<b>15.994</b>	<b>9.452</b>	<b>25.446</b>
<b>CORE 2001</b>	10	7.98	17.98
<b>Excess</b>	5.994	1.472	7.466
<b>% Excess</b>	37%	16%	29%

# Excess Naval Shipyard Capacity FY 2001 In Various Scenarios



Excess Direct Labor Man Years X 1000

5.994

5.994

6

5

4

3

2

1

0

-1

-2

-3

688 Class ERO  
1,400 Man Years

■ Nuclear  
□ Non-Nuclear

No excess capacity

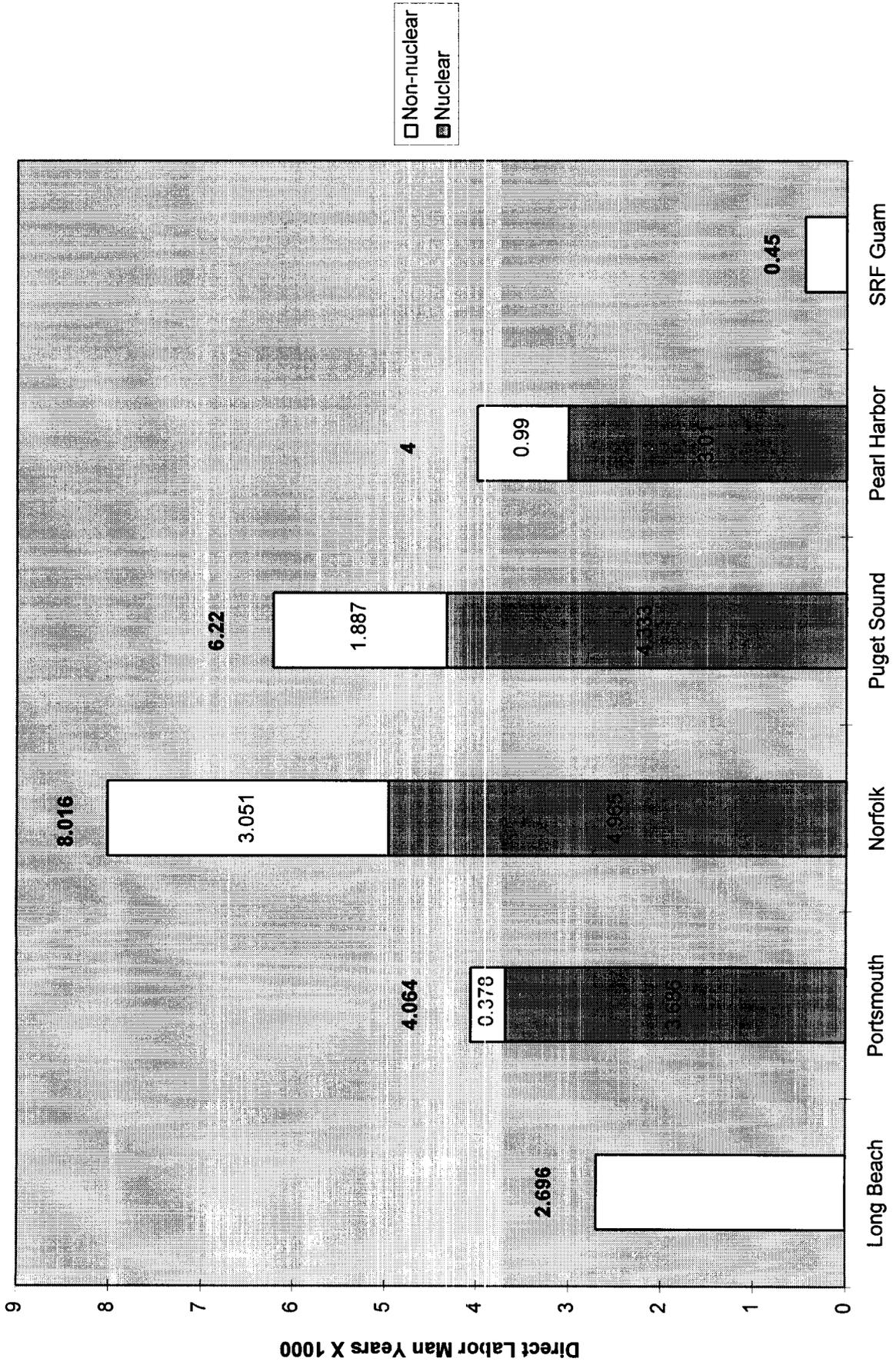
Present (Prior to BRAC)

Close: Long Beach Guam (DoD Proposal)

Close: Long Beach Portsmouth Guam

Close: Portsmouth Guam

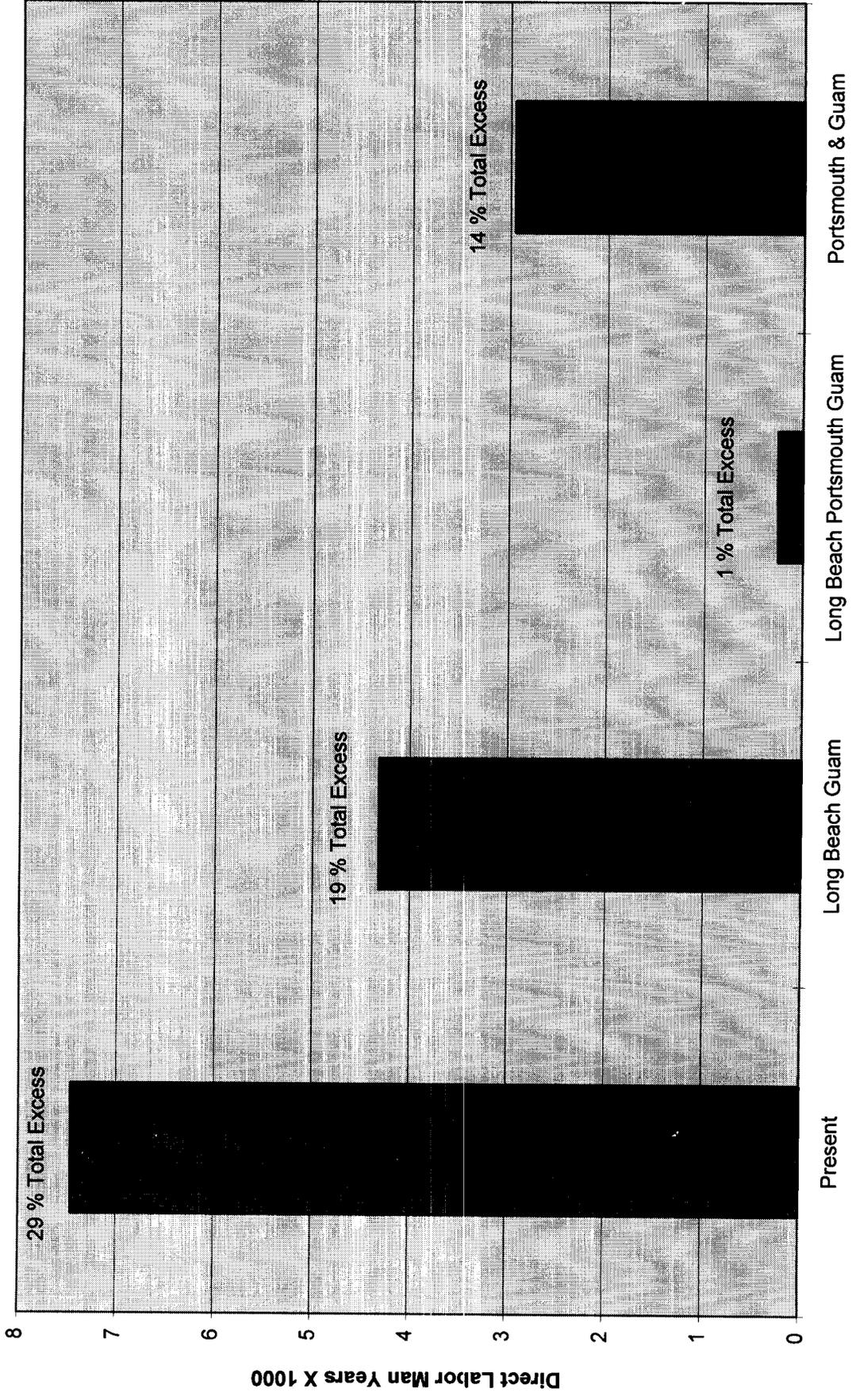
# Naval Shipyard Maximum Potential Capacity: Individual Shipyards FY 2001



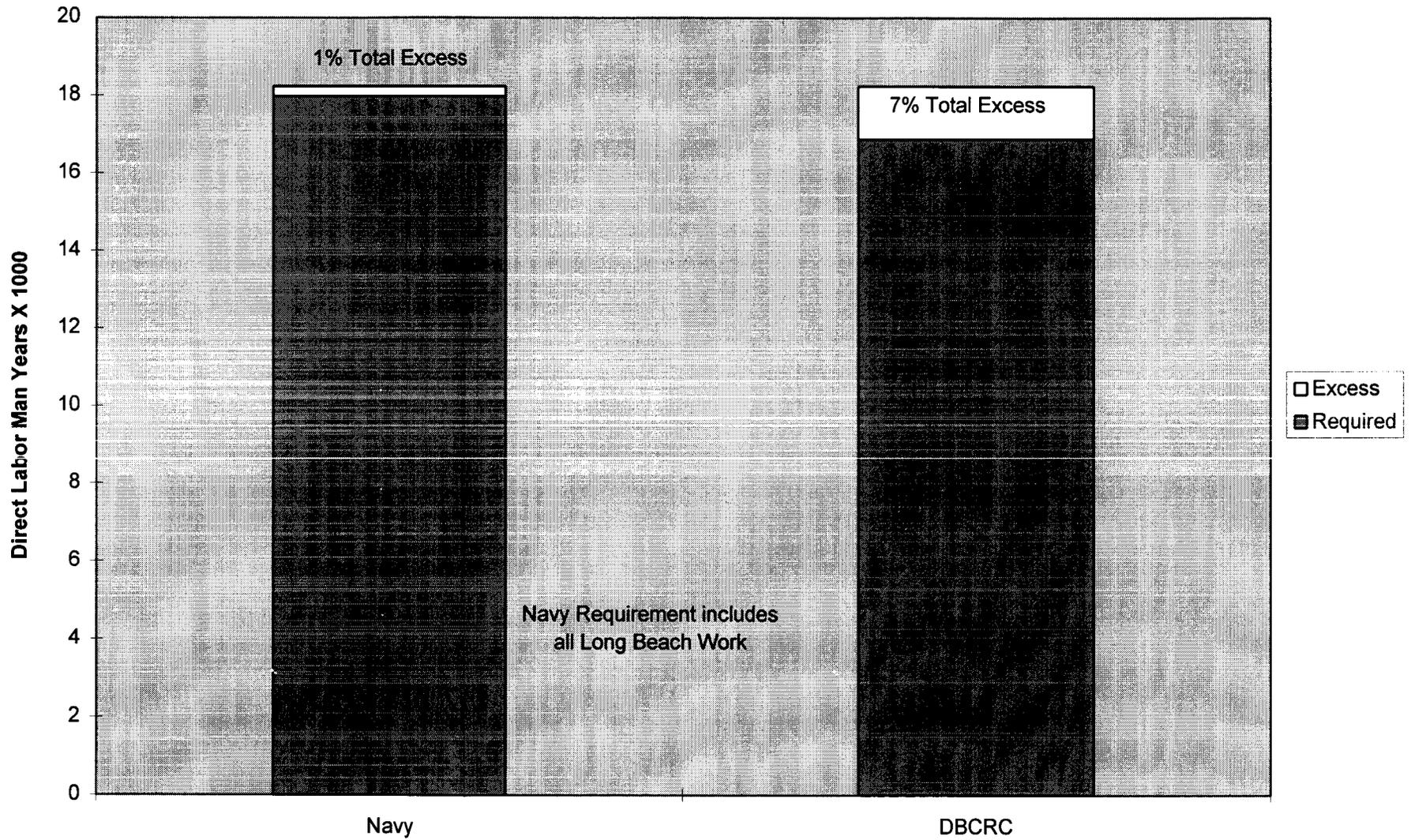
Source: Navy Certified Data

Chart3

### Total Excess Capacity



**Excess Total Capacity:  
Long Beach, Portsmouth & Guam Close**



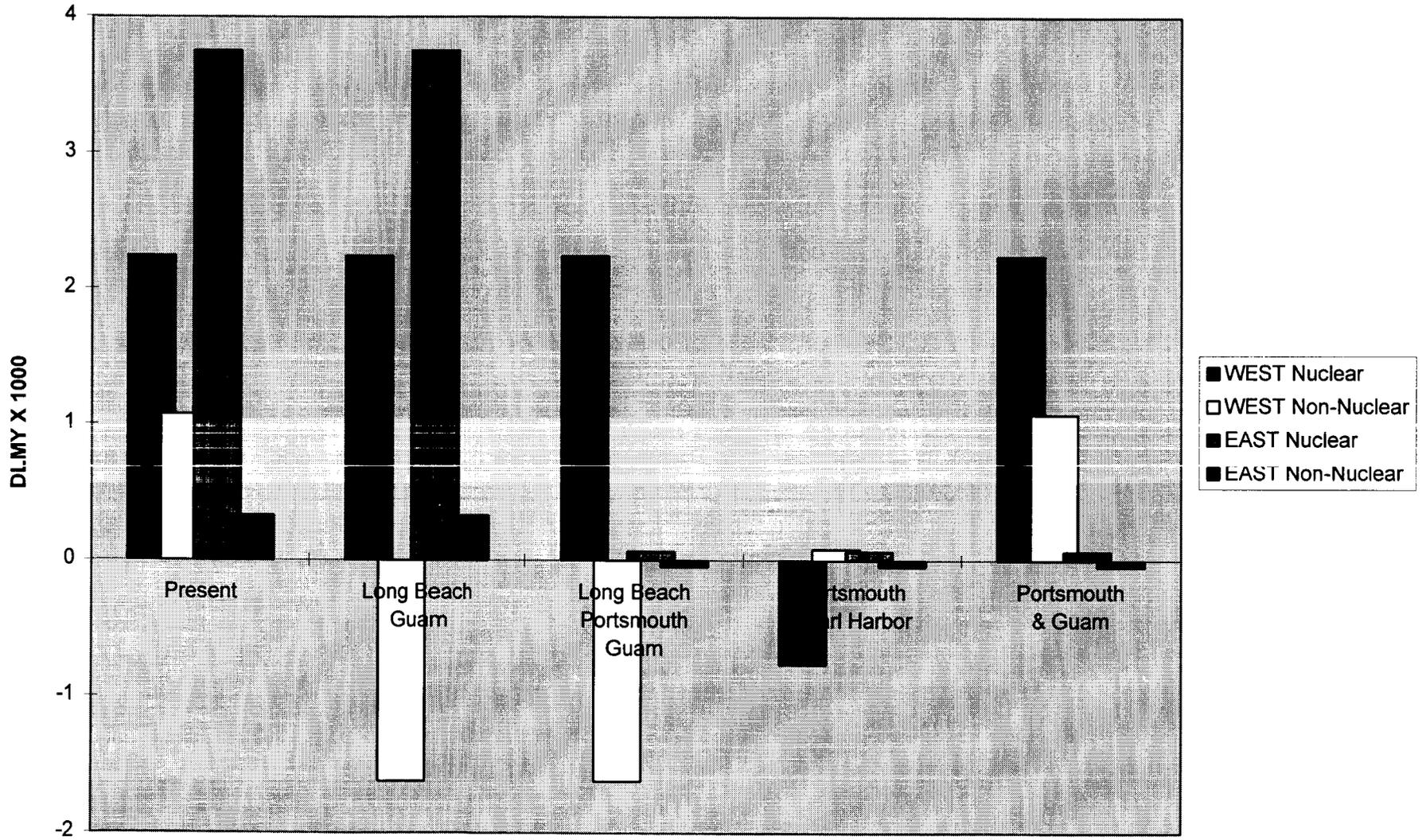
EXCESS CAPACITY						
Present						
	Open/Close	Nuke	Non-Nuke	Total	Nuke	Non-Nuke
Long Beach	1	0	2.696	2.696	0	2.696
Portsmouth	1	3.686	0.378	4.064	3.686	0.378
Norfolk	1	4.965	3.051	8.016	4.965	3.051
Puget Sound	1	4.333	1.887	6.22	4.333	1.887
Pearl Harbor	1	3.01	0.99	4	3.01	0.99
SRF Guam	1	0	0.45	0.45	0	0.45
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>	<b>15.994</b>	<b>9.452</b>
<b>Predicted 2001</b>		10	7.98	17.98	10	7.98
<b>Excess</b>		5.994	1.472	7.466	<b>5.994</b>	<b>1.472</b>
<b>% Excess</b>		37%	16%	29%	<b>37%</b>	<b>16%</b>
Total Excess	7.466					
	29%					
EXCESS CAPACITY						
Closing: Long Beach, Guam & Portsmouth						
	Open/Close	Nuke	Non-Nuke	Total	Nuke	Non-Nuke
Long Beach	0	0	2.696	2.696	0	0
Portsmouth	0	3.686	0.378	4.064	0	0
Norfolk	1	4.965	3.051	8.016	4.965	3.051
Puget Sound	1	4.333	1.887	6.22	4.333	1.887
Pearl Harbor	1	3.01	0.99	4	3.01	0.99
SRF Guam	0	0	0.45	0.45	0	0
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>	<b>12.308</b>	<b>5.928</b>
<b>Predicted 2001</b>		10	7.98	17.98	10	7.98
<b>Excess</b>		5.994	1.472	7.466	<b>2.308</b>	<b>-2.052</b>
<b>% Excess</b>		37%	16%	29%	<b>19%</b>	<b>-35%</b>
Total Excess	0.256					
	1%					

EXCESS CAPACITY						
Closing: Long Beach & Guam						
	Open/Close	Nuke	Non-Nuke	Total	Nuke	Non-Nuke
Long Beach	0	0	2.696	2.696	0	0
Portsmouth	1	3.686	0.378	4.064	3.686	0.378
Norfolk	1	4.965	3.051	8.016	4.965	3.051
Puget Sound	1	4.333	1.887	6.22	4.333	1.887
Pearl Harbor	1	3.01	0.99	4	3.01	0.99
SRF Guam	0	0	0.45	0.45	0	0
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>	<b>15.994</b>	<b>6.306</b>
<b>Predicted 2001</b>		10	7.98	17.98	10	7.98
<b>Excess</b>		5.994	1.472	7.466	<b>5.994</b>	<b>-1.674</b>
<b>% Excess</b>		37%	16%	29%	<b>37%</b>	<b>-27%</b>
Total Excess	4.32					
	19%					
EXCESS CAPACITY						
Closing: Portsmouth & Pearl Harbor						
	Open/Close	Nuke	Non-Nuke	Total	Nuke	Non-Nuke
Long Beach	1	0	2.696	2.696	0	2.696
Portsmouth	0	3.686	0.378	4.064	0	0
Norfolk	1	4.965	3.051	8.016	4.965	3.051
Puget Sound	1	4.333	1.887	6.22	4.333	1.887
Pearl Harbor	0	3.01	0.99	4	0	0
SRF Guam	1	0	0.45	0.45	0	0.45
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>	<b>9.298</b>	<b>8.084</b>
<b>Predicted 2001</b>		10	7.98	17.98	10	7.98
<b>Excess</b>		5.994	1.472	7.466	<b>-0.702</b>	<b>0.104</b>
<b>% Excess</b>		37%	16%	29%	<b>-8%</b>	<b>1%</b>
Total Excess	-0.598					
	-3%					

**EXCESS CAPACITY****Closing: Portsmouth & Guam**

	Open/Close	Nuke	Non-Nuke	Total	Nuke	Non-Nuke
Long Beach	1	0	2.696	2.696	0	2.696
Portsmouth	0	3.686	0.378	4.064	0	0
Norfolk	1	4.965	3.051	8.016	4.965	3.051
Puget Sound	1	4.333	1.887	6.22	4.333	1.887
Pearl Harbor	1	3.01	0.99	4	3.01	0.99
SRF Guam	0	0	0.45	0.45	0	0
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>	<b>12.308</b>	<b>8.624</b>
<b>Predicted 2001</b>		10	7.98	17.98	10	7.98
<b>Excess</b>		5.994	1.472	7.466	<b>2.308</b>	<b>0.644</b>
<b>% Excess</b>		37%	16%	29%	<b>19%</b>	<b>7%</b>
Total Excess	2.952					
	14%					
This table summarizes data for the above scenarios. Scenario names must be updated, but all numbers will adjust based on inputs to above scenarios. Chart will update automatically, but						
		Nuclear	Non-Nuclear	%Nuclear Excess		
Present	Present	5.994	1.472	37%		
LB+GM	Long Beach	5.994	-1.674	37%		
LB+P+G	Long Beach	2.308	-2.052	19%		
P,GM	Portsmouth &	2.308	0.644	19%		
		Total		%Total xs		
	Present	7.466	0	29		
	Long Beach	4.32	1.11	19		
	Long Beach	0.256	1.109	1		
	Portsmouth &	2.952	0	14		

### Excess Capacity by Coast



**EXCESS CAPACITY**

**Present**

	Open/Close	Nuke	Non-Nuke	Total	Nuke	Non-Nuke
Long Beach	1	0	2.696	2.696	0	2.696
Puget Sound	1	4.333	1.887	6.22	4.333	1.887
Pearl Harbor	1	3.01	0.99	4	3.01	0.99
<b>West Coast</b>		<b>7.343</b>	<b>5.573</b>	<b>12.916</b>	<b>7.343</b>	<b>5.573</b>
Portsmouth	1	3.686	0.378	4.064	3.686	0.378
Norfolk	1	4.965	3.051	8.016	4.965	3.051
<b>East Coast</b>		<b>8.651</b>	<b>3.429</b>	<b>12.08</b>	<b>8.651</b>	<b>3.429</b>
SRF Guam	1	0	0.45	0.45	0	0.45
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>		
<b>Predicted 2001, West</b>		5.1	4.5	9.6	5.1	4.5
<b>Predicted 2001, East</b>		4.9	3.1	8	4.9	3.1
<b>Excess, West</b>		2.243	1.073	3.316	2.243	1.073
<b>Excess, East</b>		3.751	0.329	4.08	3.751	0.329
<b>% Excess, West</b>		31%	19%	26%	31%	19%
<b>% Excess, East</b>		43%	10%	34%	43%	10%

**EXCESS CAPACITY**  
**Closing: Long Beach & Guam**

	Open/Close	Nuke	Non-Nuke	Total	Nuke	Non-Nuke
Long Beach	0	0	2.696	2.696	0	0
Puget Sound	1	4.333	1.887	6.22	4.333	1.887
Pearl Harbor	1	3.01	0.99	4	3.01	0.99
<b>West Coast</b>		<b>7.343</b>	<b>5.573</b>	<b>12.916</b>	<b>7.343</b>	<b>2.877</b>
Portsmouth	1	3.686	0.378	4.064	3.686	0.378
Norfolk	1	4.965	3.051	8.016	4.965	3.051
<b>East Coast</b>		<b>8.651</b>	<b>3.429</b>	<b>12.08</b>	<b>8.651</b>	<b>3.429</b>
SRF Guam	0	0	0.45	0.45	0	0
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>		
<b>Predicted 2001, West</b>		5.1	4.5	9.6	5.1	4.5
<b>Predicted 2001, East</b>		4.9	3.1	8	4.9	3.1
<b>Excess, West</b>		2.243	1.073	3.316	2.243	-1.623
<b>Excess, East</b>		3.751	0.329	4.08	3.751	0.329
<b>% Excess, West</b>		31%	19%	26%	31%	-56%
<b>% Excess, East</b>		43%	10%	34%	43%	10%

**EXCESS CAPACITY**

Closing: Long Beach, Guam &amp; Portsmouth

	Open/Close	Nuke	Non-Nuke	Total		Nuke	Non-Nuke
Long Beach	0	0	2.696	2.696		0	0
Puget Sound	1	4.333	1.887	6.22		4.333	1.887
Pearl Harbor	1	3.01	0.99	4		3.01	0.99
<b>West Coast</b>		<b>7.343</b>	<b>5.573</b>	<b>12.916</b>		<b>7.343</b>	<b>2.877</b>
Portsmouth	0	3.686	0.378	4.064		0	0
Norfolk	1	4.965	3.051	8.016		4.965	3.051
<b>East Coast</b>		<b>8.651</b>	<b>3.429</b>	<b>12.08</b>		<b>4.965</b>	<b>3.051</b>
SRF Guam	0	0	0.45	0.45		0	0
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>			
<b>Predicted 2001, West</b>		5.1	4.5	9.6		5.1	4.5
<b>Predicted 2001, East</b>		4.9	3.1	8		4.9	3.1
<b>Excess, West</b>		2.243	1.073	3.316		2.243	-1.623
<b>Excess, East</b>		3.751	0.329	4.08		0.065	-0.049
<b>% Excess, West</b>		31%	19%	26%		31%	-56%
<b>% Excess, East</b>		43%	10%	34%		1%	-2%

**EXCESS CAPACITY**

Closing: Portsmouth &amp; Pearl Harbor

	Open/Close	Nuke	Non-Nuke	Total		Nuke	Non-Nuke
Long Beach	1	0	2.696	2.696		0	2.696
Puget Sound	1	4.333	1.887	6.22		4.333	1.887
Pearl Harbor	0	3.01	0.99	4		0	0
<b>West Coast</b>		<b>7.343</b>	<b>5.573</b>	<b>12.916</b>		<b>4.333</b>	<b>4.583</b>
Portsmouth	0	3.686	0.378	4.064		0	0
Norfolk	1	4.965	3.051	8.016		4.965	3.051
<b>East Coast</b>		<b>8.651</b>	<b>3.429</b>	<b>12.08</b>		<b>4.965</b>	<b>3.051</b>
SRF Guam	1	0	0.45	0.45		0	0.45
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>			
<b>Predicted 2001, West</b>		5.1	4.5	9.6		5.1	4.5
<b>Predicted 2001, East</b>		4.9	3.1	8		4.9	3.1
<b>Excess, West</b>		2.243	1.073	3.316		-0.767	0.083
<b>Excess, East</b>		3.751	0.329	4.08		0.065	-0.049
<b>% Excess, West</b>		31%	19%	26%		-18%	2%
<b>% Excess, East</b>		43%	10%	34%		1%	-2%

**EXCESS CAPACITY**  
Closing: Portsmouth & Guam

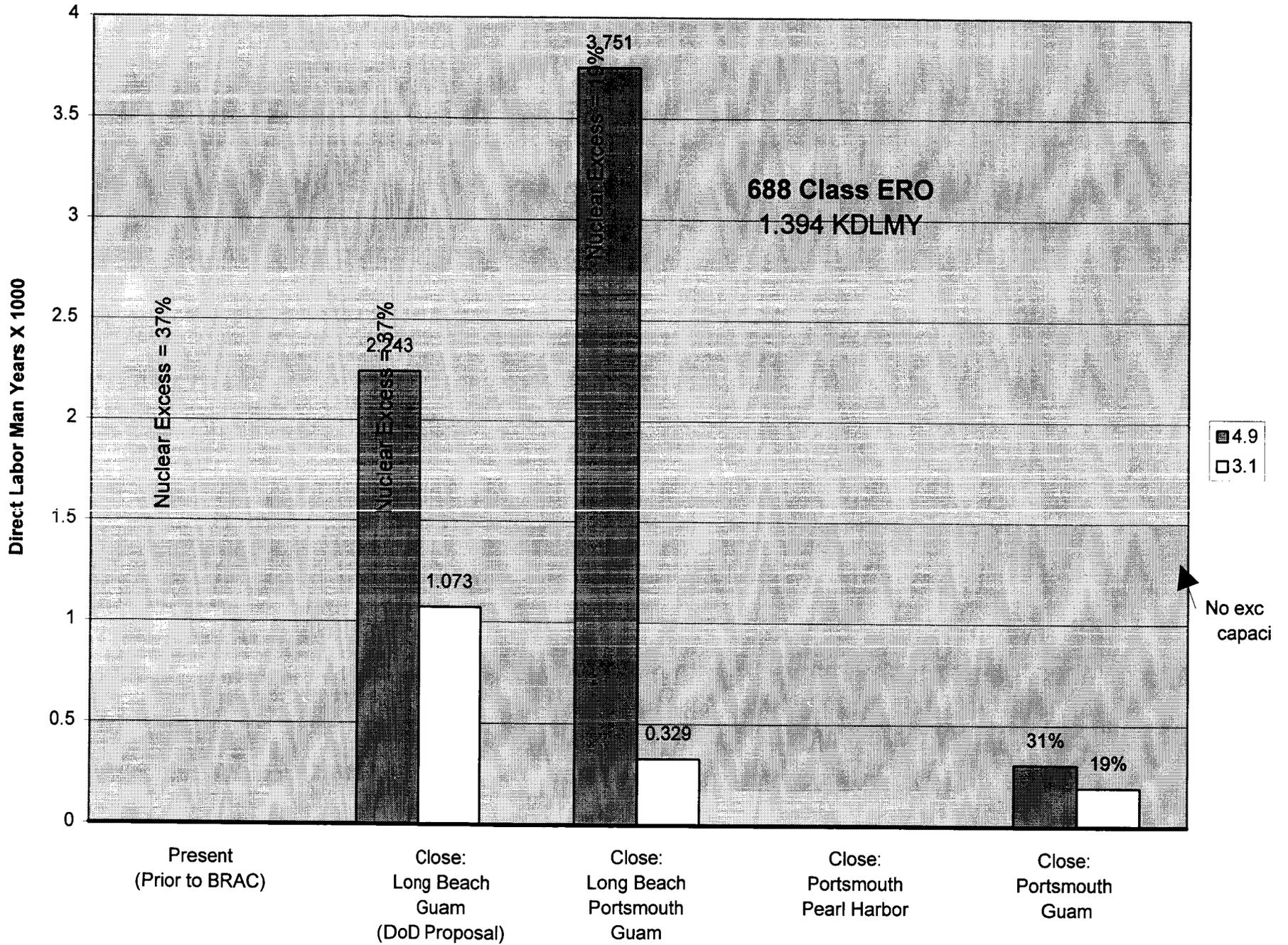
	Open/Close	Nuke	Non-Nuke	Total	Nuke	Non-Nuke
Long Beach	1	0	2.696	2.696	0	2.696
Puget Sound	1	4.333	1.887	6.22	4.333	1.887
Pearl Harbor	1	3.01	0.99	4	3.01	0.99
<b>West Coast</b>		<b>7.343</b>	<b>5.573</b>	<b>12.916</b>	<b>7.343</b>	<b>5.573</b>
Portsmouth	0	3.686	0.378	4.064	0	0
Norfolk	1	4.965	3.051	8.016	4.965	3.051
<b>East Coast</b>		<b>8.651</b>	<b>3.429</b>	<b>12.08</b>	<b>4.965</b>	<b>3.051</b>
SRF Guam	0	0	0.45	0.45	0	0
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>		
<b>Predicted 2001, West</b>		5.1	4.5	9.6	5.1	4.5
<b>Predicted 2001, East</b>		4.9	3.1	8	4.9	3.1
<b>Excess, West</b>		2.243	1.073	3.316	2.243	1.073
<b>Excess, East</b>		3.751	0.329	4.08	0.065	-0.049
<b>% Excess, West</b>		31%	19%	26%	31%	19%
<b>% Excess, East</b>		43%	10%	34%	1%	-2%

This table summarizes data for the above scenarios. Scenario names must be updated, but all numbers will adjust based on inputs to above scenarios.

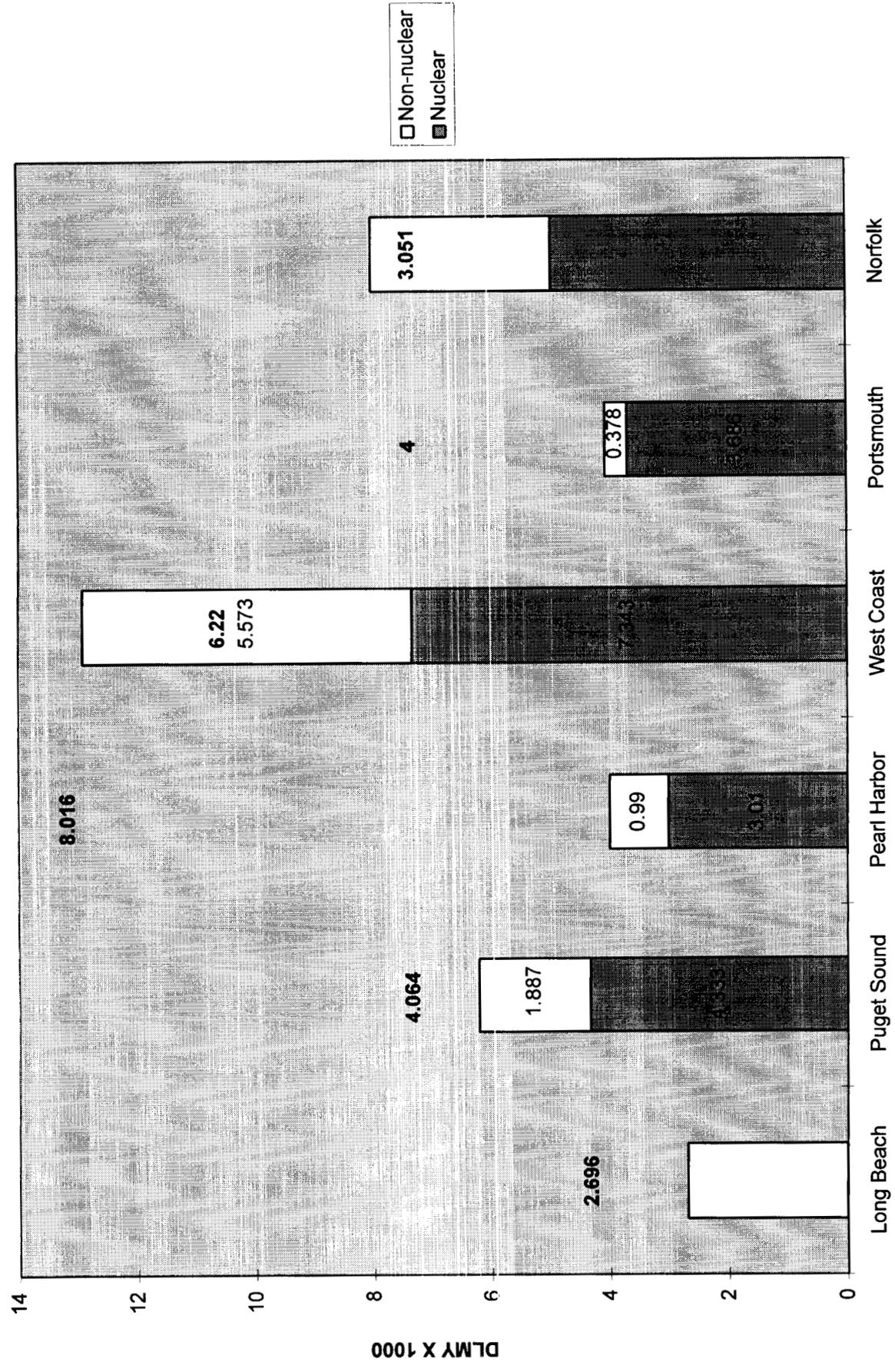
		WEST	WEST	EAST	EAST	
		Nuclear	Non-Nucle	Nuclear	Non-Nuclear	%Nuclear Excess
Present	Present	2.243	1.073	3.751	0.329	0%
LB+GM	Long Beach	2.243	-1.623	3.751	0.329	0%
LB+P+G	Long Beach	2.243	-1.623	0.065	-0.049	Nuke
P+PH	Portsmouth P	-0.767	0.083	0.065	-0.049	0%
P,GM	Portsmouth &	2.243	1.073	0.065	-0.049	0%

# Excess Shipyard Capacity FY 2001

in Various Scenarios



**Shipyard Maximum Potential Capacity: Individual Shipyards  
FY 2001**

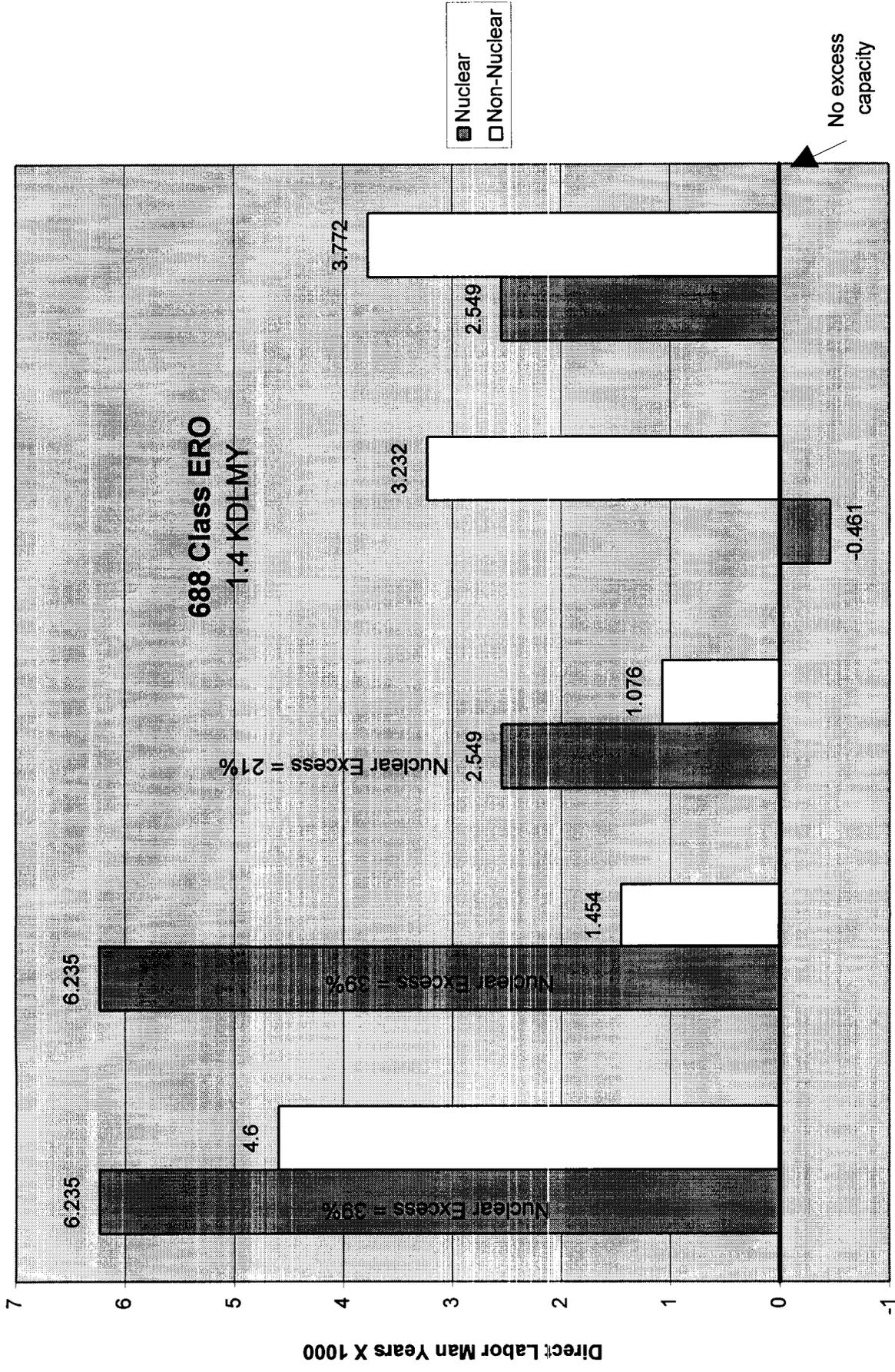


Source: Navy Certified Data

Sheet1

This sheet contains the Navy certified data on which this book is based.		
	Nuke	Non-Nuke
Long Beach	0	2.696
Puget Sound	4.333	1.887
Pearl Harbor	3.01	0.99
<b>West Coast</b>	<b>7.343</b>	<b>5.573</b>
Portsmouth	3.686	0.378
Norfolk	4.965	3.051
<b>East Coast</b>	<b>8.651</b>	<b>3.429</b>
SRF Guam	0	0.45
<b>Total</b>	<b>15.994</b>	<b>9.452</b>
<b>Predicted 2001, West</b>	5.1	4.5
<b>Predicted 2001, East</b>	4.9	3.1
<b>Excess, West</b>	2.243	1.073
<b>Excess, East</b>	3.751	0.329

**Excess CORE Shipyard Capacity FY 2001**  
in Various Scenarios



Direct Labor Man Years X 1000

7  
6  
5  
4  
3  
2  
1  
0  
-1

Present  
(Prior to BRAC)

Close:  
Long Beach  
Guam  
(DoD Proposal)

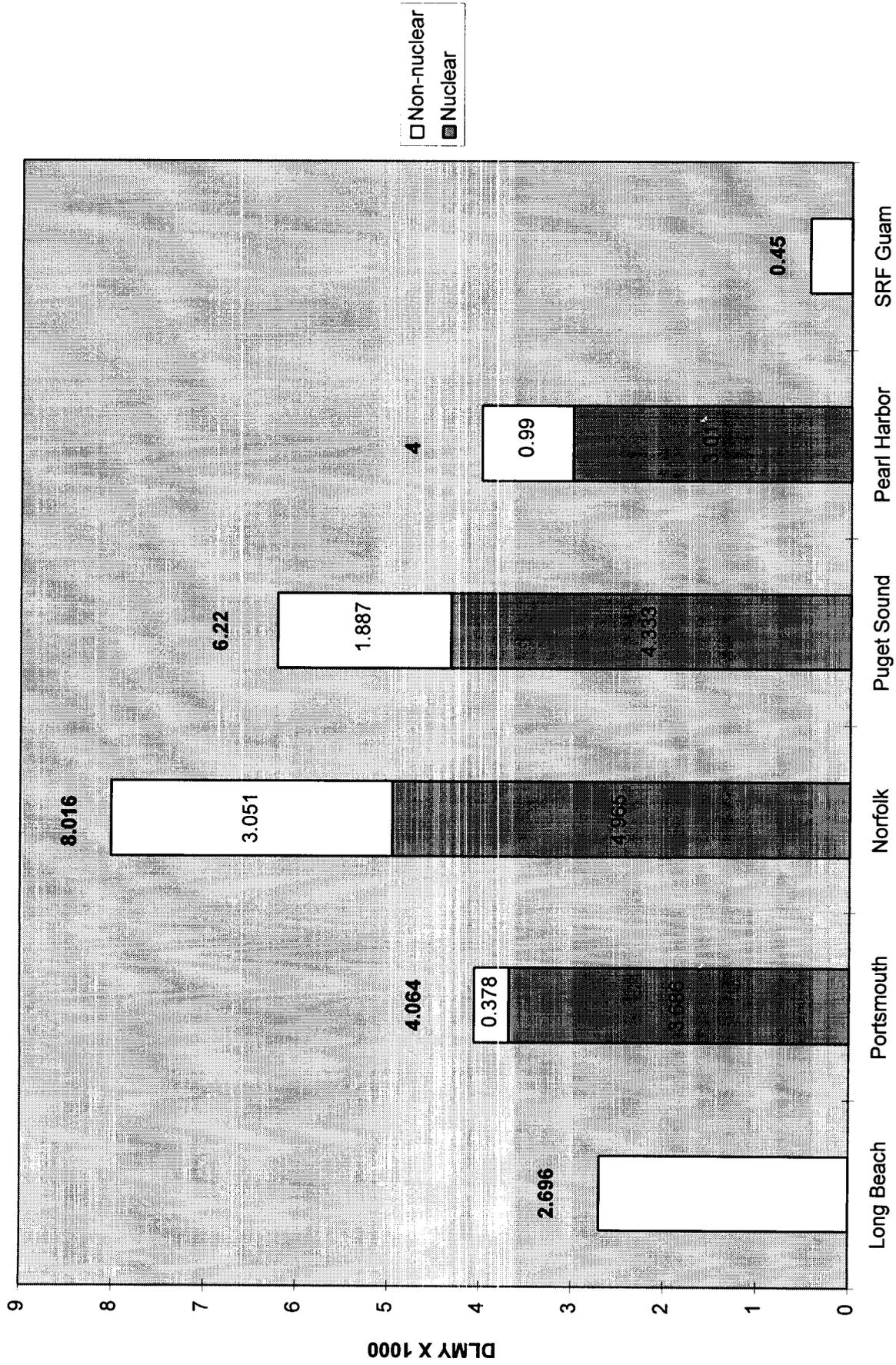
Close:  
Long Beach  
Portsmouth  
Guam

Close:  
Portsmouth  
Pearl Harbor

Close:  
Portsmouth  
Guam

■ Nuclear  
□ Non-Nuclear

# Shipyard Maximum Potential Capacity: Individual Shipyards FY 2001



Source: Navy Certified Data

	Nuke	Nbn-Nuke
Long Beach	0	2.696
Portsmouth	3.686	0.378
Norfolk	4.965	3.051
Puget Sound	4.333	1.887
Pearl Harbor	3.01	0.99
SRF Guam	0	0.45
<b>Total</b>	<b>15.994</b>	<b>9.452</b>
<b>CORE 2001</b>	<b>9.759</b>	<b>4.852</b>

EXCESS CAPACITY						
Present						
	Open/Close	Nuke	Non-Nuke	Total	Nuke	N
Long Beach	1	0	2.696	2.696	0	
Portsmouth	1	3.686	0.378	4.064	3.686	
Norfolk	1	4.965	3.051	8.016	4.965	
Puget Sound	1	4.333	1.887	6.22	4.333	
Pearl Harbor	1	3.01	0.99	4	3.01	
SRF Guam	1	0	0.45	0.45	0	
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>	<b>15.994</b>	
<b>CORE 2001</b>		9.759	4.852	14.611	9.759	
<b>Excess</b>		6.235	4.6	10.835	<b>6.235</b>	
<b>% Excess</b>		39%	49%	43%	<b>39%</b>	
Total Excess	10.835					
	74%					
EXCESS CAPACITY						
Closing: Long Beach, Guam & Portsmouth						
	Open/Close	Nuke	Non-Nuke	Total	Nuke	N
Long Beach	0	0	2.696	2.696	0	
Portsmouth	0	3.686	0.378	4.064	0	
Norfolk	1	4.965	3.051	8.016	4.965	



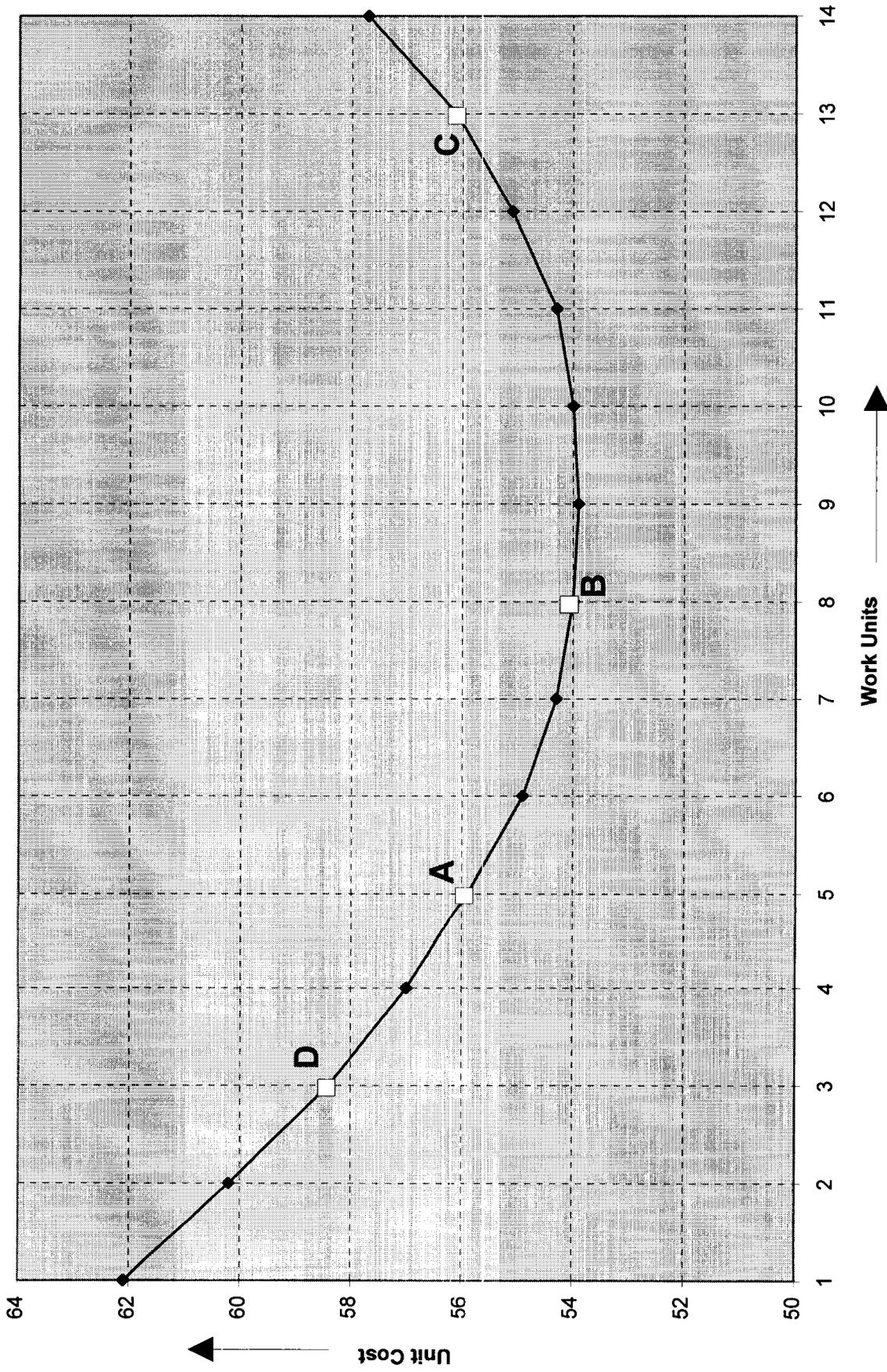
EXCESS CAPACITY						
Closing: Long Beach & Guam						
	Open/Close	Nuke	Non-Nuke	Total	Nuke	N
Long Beach	0	0	2.696	2.696	0	
Portsmouth	1	3.686	0.378	4.064	3.686	
Norfolk	1	4.965	3.051	8.016	4.965	
Puget Sound	1	4.333	1.887	6.22	4.333	
Pearl Harbor	1	3.01	0.99	4	3.01	
SRF Guam	0	0	0.45	0.45	0	
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>	<b>15.994</b>	
<b>CORE 2001</b>		9.759	4.852	14.611	9.759	
<b>Excess</b>		6.235	4.6	10.835	<b>6.235</b>	
<b>% Excess</b>		39%	49%	43%	<b>39%</b>	
Total Excess	7.689					
	53%					
EXCESS CAPACITY						
Closing: Portsmouth & Pearl Harbor						
	Open/Close	Nuke	Non-Nuke	Total	Nuke	N
Long Beach	1	0	2.696	2.696	0	
Portsmouth	0	3.686	0.378	4.064	0	
Norfolk	1	4.965	3.051	8.016	4.965	
Puget Sound	1	4.333	1.887	6.22	4.333	
Pearl Harbor	0	3.01	0.99	4	0	
SRF Guam	1	0	0.45	0.45	0	
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>	<b>9.298</b>	
<b>CORE 2001</b>		9.759	4.852	14.611	9.759	
<b>Excess</b>		6.235	4.6	10.835	<b>-0.461</b>	
<b>% Excess</b>		39%	49%	43%	<b>-5%</b>	



EXCESS CAPACITY						
Closing: Portsmouth & Guam						
	Open/Close	Nuke	Non-Nuke	Total	Nuke	N
Long Beach	1	0	2.696	2.696	0	
Portsmouth	0	3.686	0.378	4.064	0	
Norfolk	1	4.965	3.051	8.016	4.965	
Puget Sound	1	4.333	1.887	6.22	4.333	
Pearl Harbor	1	3.01	0.99	4	3.01	
SRF Guam	0	0	0.45	0.45	0	
<b>Total</b>		<b>15.994</b>	<b>9.452</b>	<b>25.446</b>	<b>12.308</b>	
<b>CORE 2001</b>		<b>9.759</b>	<b>4.852</b>	<b>14.611</b>	<b>9.759</b>	
<b>Excess</b>		<b>6.235</b>	<b>4.6</b>	<b>10.835</b>	<b>2.549</b>	
<b>% Excess</b>		<b>39%</b>	<b>49%</b>	<b>43%</b>	<b>21%</b>	

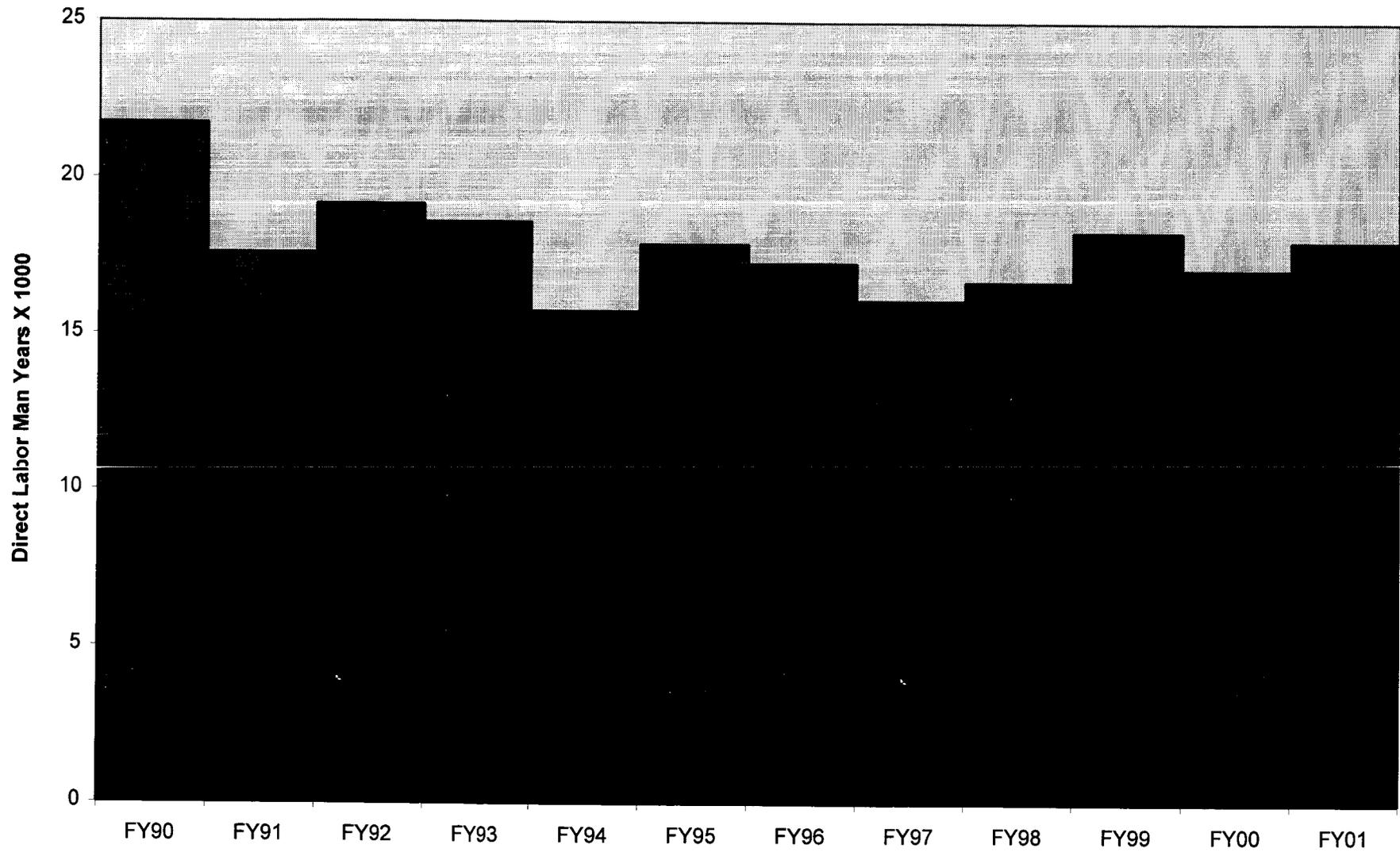


Depot Econometric Curve

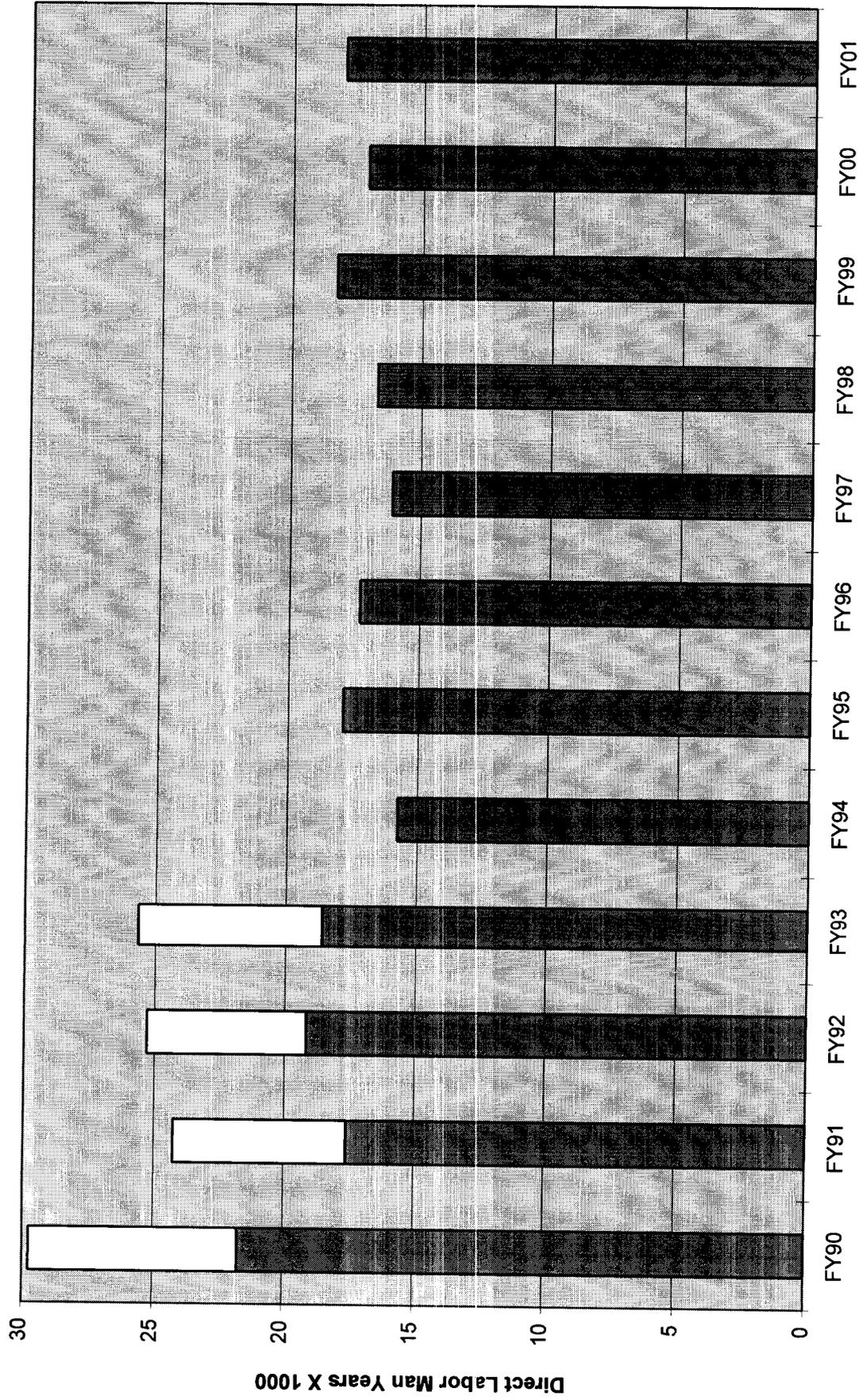




### Shipyard Workload



# Total Shipyard Workload



Source: Navy 1995 Certified Data (CNSY/INSY based on 1993 Certified Data)

HISTORY.XLS

Shipyard	Work Typ	86	87	88	89	90	91	92
LBeach	OPW	0.373	0.327	0.549	0.414	0.303	0.317	0.321
	RATA	0.249	0.173	0.21	0.185	0.164	0.147	0.107
	NonNuke	1.388	1.033	1.088	1.12	0.922	0.305	0.593
	NonNuke	0.479	0.33	0.459	0	0.005	0.545	0.584
	NonNuke	0	0	0	0	0	0.001	0.219
	NonNuke	0	0	0	0	0	0.082	0
	NonNuke	0	0	0.009	0.337	0.22	0.154	0.119
	NonNuke	0.087	0.503	0.125	0.086	0.263	0.059	0.076
	NonNuke I	0	0	0	0	0.038	0.1	0.018
Ports	SSBN ER	0.083	0.148	0	0.035	0.142	0.145	0.035
	SSBN RO	1.524	1.508	0.94	0.338	0.065	0	0
	SSN INAC	0	0.051	0.18	0.031	0.176	0	0
	SSN ROH	1.799	1.371	1.713	2.115	1.732	0.987	0.351
	SSN EOH	0	0	0	0	0	0.015	0.225
	SSN DSR	0.109	0.222	0.363	0.028	0.133	0.023	0.533
	SSN DMP	0	0	0.069	0.905	0.879	1.022	0.976
	OPW	0.626	0.627	0.722	0.537	0.65	0.566	0.717
	RATA	0.082	0.088	0.101	0.035	0.075	0.135	0.061
Pearl	SSN INAC	0.204	0.173	0.194	0.11	0.064	0.213	0.298
	SSN ROH	1.504	1.625	1.583	1.235	0.85	0.342	0.06
	SSN DSR	0.201	0.187	0.336	0.096	0	0	0.274
	SSN DMP	0	0	0.012	0.604	0.543	0.631	0.912
	NonNuke	0.456	0.154	0.094	0.397	0.084	0.486	0.129
	NonNuke	0	0	0.014	0.093	0.054	0	0
	NonNuke	0	0	0	0	0	0.014	0.091
	NonNuke	0	0.165	0.001	0.077	0.309	0.07	0.262
	NonNuke	0.147	0.104	0.071	0	0	0.059	0.124
	SCO	0	0	0	0	0.004	0.234	0
	OPW	0.395	0.401	0.39	0.312	0.355	0.237	0.2
	RATA	0.199	0.155	0.176	0.175	0.205	0.168	0.171
Puget	CVN COH	0	0	0	0.068	1.608	1.565	0.439
	CVN DSR	0	0	0	0.13	0.674	0	0.117
	CVN EDS	0	0	0	0	0	0	0.008
	CVN SRA	0.011	0.223	0.212	0.068	0	0.019	0.627
	SSBN INA	0	0	0.004	0.149	0.2	0.278	0.336
	SSBN RO	0.007	0.684	0.664	0.243	0	0	0
	SSBN EO	0	0	0	0	0.004	0.025	0.036
	SSBN INA	0.12	0.205	0.372	0.309	0.582	0.541	0.753
	SSN ROH	3.43	3.562	2.662	2.657	2.241	0.417	0
	SSN DSR	0.088	0.04	0.075	0.071	0.065	0.1	0.003
	CGN INA	0	0	0	0	0.029	0.06	0.534
	CGN COH	1.203	0.269	0.999	0.137	1.043	1.031	0.478
	CGN DSR	1.126	0.203	0	0.36	0.027	0.054	0.354
	NonNuke	0.17						
NonNuke	0	0	0	0	0	0.065	0.121	

HISTORY.XLS

	SCO	0	0	0	0	0	0	0
	NonNuke I	0	0	0	0	0	0.001	0.118
	OPW	1.296	1.104	0.792	0.852	0.924	0.78	0.656
	RATA	0	0	0	0	0	0	0.244
Norfolk	CVN DSR	0	0	0	0	0	0.04	0.814
	CVN SRA	0.352	0.002	0.018	0.404	0.082	0.317	0
	SSN INAC	0	0	0	0	0	0	0
	SSN ROH	1.748	1.315	1.692	1.777	1.218	0.652	0.106
	SSN DSR	0.255	0.372	0.338	0.288	0.373	0.584	0.202
	SSN DMP	0	0	0.005	0.512	1.071	0.257	0.573
	CGN INA	0	0	0	0	0	0	0
	CGN COH	0.983	0.867	0.02	0.032	0.192	0.839	2.052
	CGN DSR	0.117	0.059	0.488	0.032	0.542	0.283	0.824
	NonNuke	0.839	0.297	0.669	0	0	0	0.057
	NonNuke	0.033	1.483	2.015	1.252	0	0	0
	NonNuke	0	0	0	0.07	0.008	0	0.065
	NonNuke	0.001	0.16	0.05	0.075	0.103	0	0
	NonNuke	0	0	0.001	0.112	0.028	0.109	0.319
	NonNuke	0.466	0.509	0.192	0.192	0.368	0.56	0.363
	NonNuke I	0	0	0	0	0.112	0.148	0.025
	OPW	0.98	0.949	0.865	0.894	1.013	0.968	0.932
	RATA	0.655	0.64	0.523	0.63	1.011	0.863	0.567
		23.785	22.288	22.055	20.579	21.753	17.613	19.179
Charleston	SSBN INA					48127	7791	22753
	SSBN ERP					69685	46277	24015
	SSBN ROH					80561	197892	93866
	SSN INAC					549	33266	11633
	SSN ROH					407847	204178	43703
	SSN DSRA					29283	16053	25109
	SSN DMP					0	365	31208
	NonNuke ROH							8327
	NonNuke DPMA						10960	24028
	NonNuke PMA					16301	4884	9956
	NonNuke DSRA					38023	49611	12920
	NonNuke SRA					14637	6373	11777
	SCO					0	0	464
	OPW					348571	303269	403276
Mare Isl.	CVN SRA					0	0	18000
	SSBN INAC					0	100	34055
	SSN INAC					45895	66300	50096
	SSN ROH					554983	222404	98392
	SSN DSRA					111861	31748	44250
	SSN DMP					35834	93227	159485
	CGN DSRA					0	296	36364
	NonNuke ROH					0	856	9587
	NonNuke PMA					912	24429	3026

HISTORY.XLS

	OPW/RATA				206212	349435	358340
					2009281	1669714	1534630
					8.005104	6.652247	6.114064
					FY90	FY91	FY92
					21.753	17.613	19.179
					8.005104	6.652247	6.114064
					29.7581	24.26525	25.29306

SHIPYARD WORKLOAD HISTORY 86-94

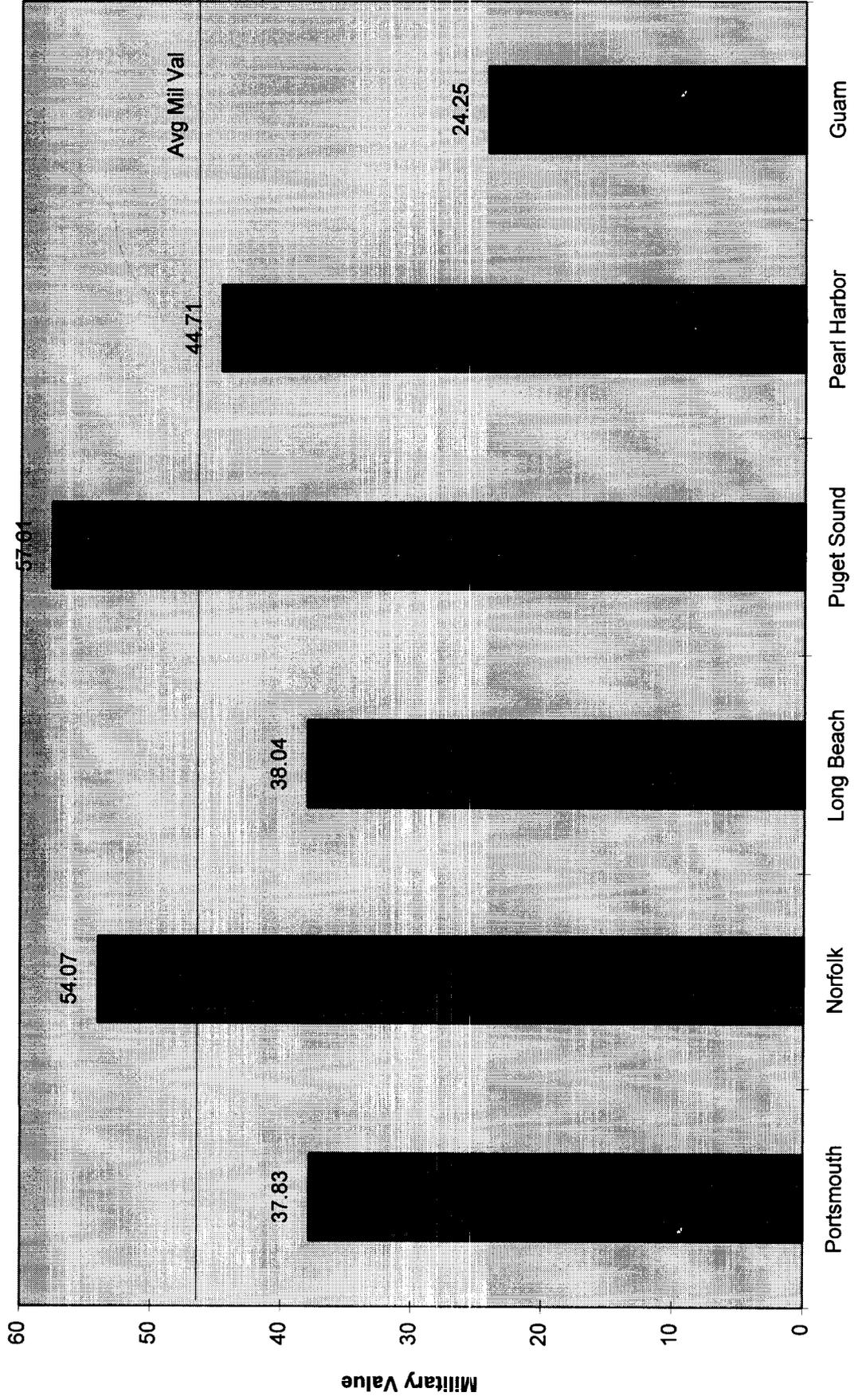
94	0.307	0.362
93	0.077	0.077
	0.063	0.063
	0.079	0.553
	0.705	0.28
	0	0.261
	0	0
	0.17	0.425
	0.224	0.204
	0.073	0.077
	0	0
	0	0
	0.011	0
	0	0.167
	1.235	0.962
	0.019	0.132
	0.341	0.823
	0.416	0.473
	0.058	0.07
	0.178	0.245
	0	0
	0.255	0.278
	0.324	0.878
	0.691	0.355
	0	0
	0	0
	0	0
	0.122	0.122
	0.031	0.031
	0	0
	0.169	0.211
	0.07	0.146
	0	0
	0.016	0
	1.24	0.108
	0.047	0
	1.171	1.249
	0	0
	0.769	0.438
	0.002	0.743
	0.071	0.185
	0.123	1.241
	0	0.131
	0.013	0
	0	0.011



HISTORY.XLS

411255								
1768219								
7.044697								
FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01
18.609	15.759	17.9	17.3	16.1	16.7	18.3	17.1	18
7.044697	0	0	0	0	0	0	0	0
25.6537	15.759	17.9	17.3	16.1	16.7	18.3	17.1	18

### Naval Shipyards Military Value



Portsmouth	37.83	46.45
Norfolk	54.07	46.45
Long Beach	38.04	46.45
Puget Sound	57.61	46.45
Pearl Harbor	44.71	46.45
Guam	24.25	46.45
NSY Avg	46.45	46.45

Chart1

any,  
here  
have been  
requested  
marks

Chart1

**NNSY absorption of PNSY work, by workpackage type**

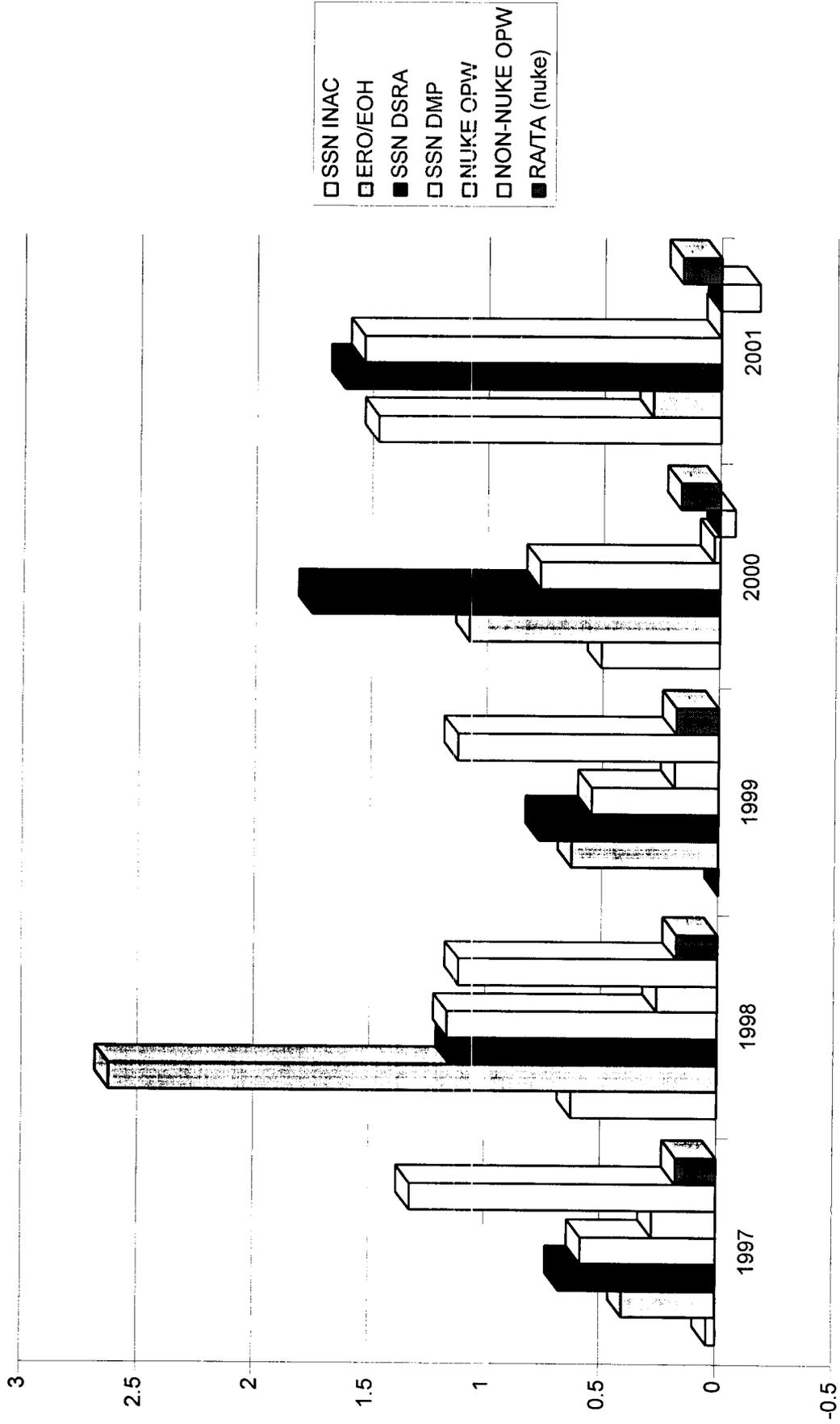
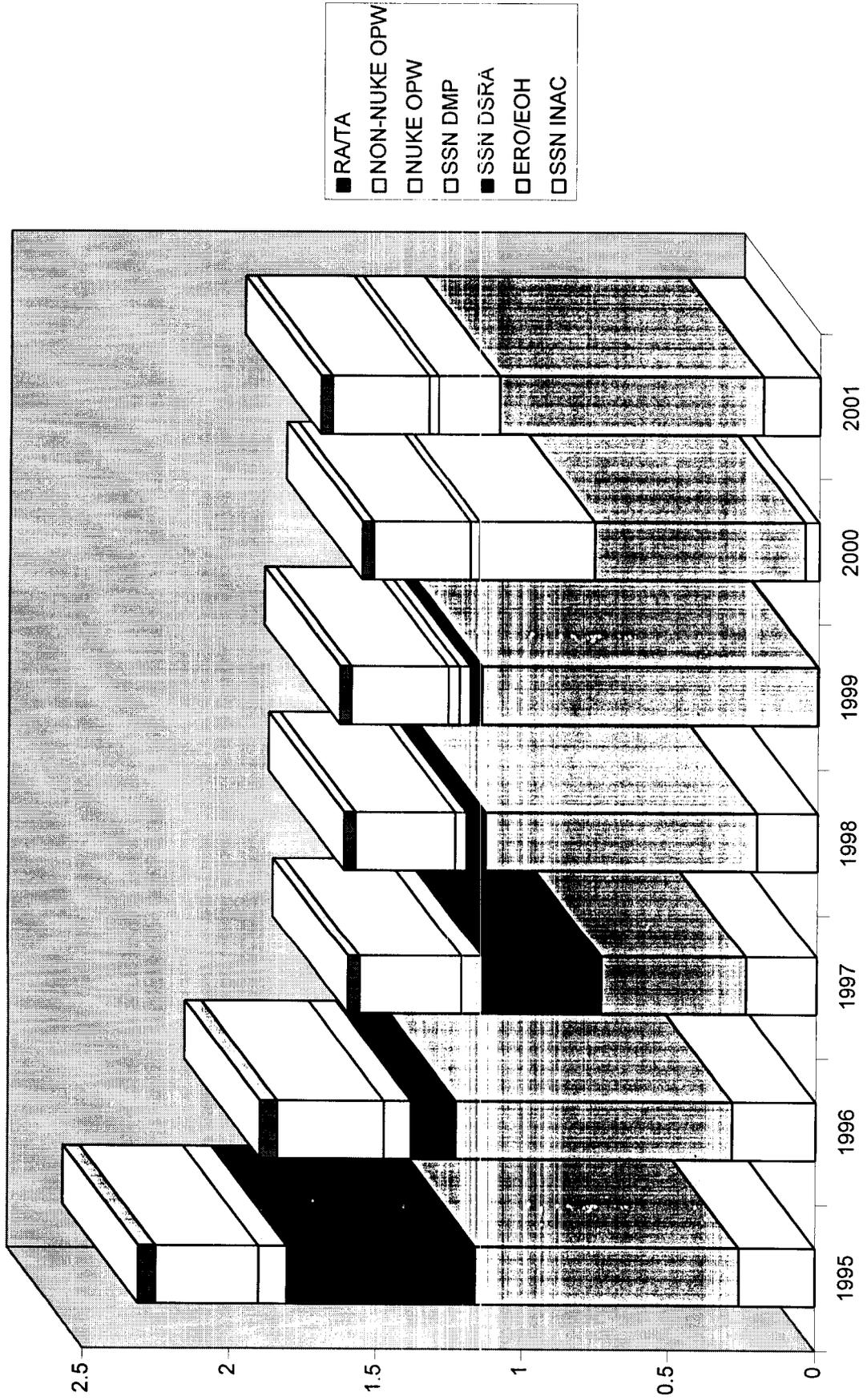


Chart2

### Portsmouth Scheduled Workload

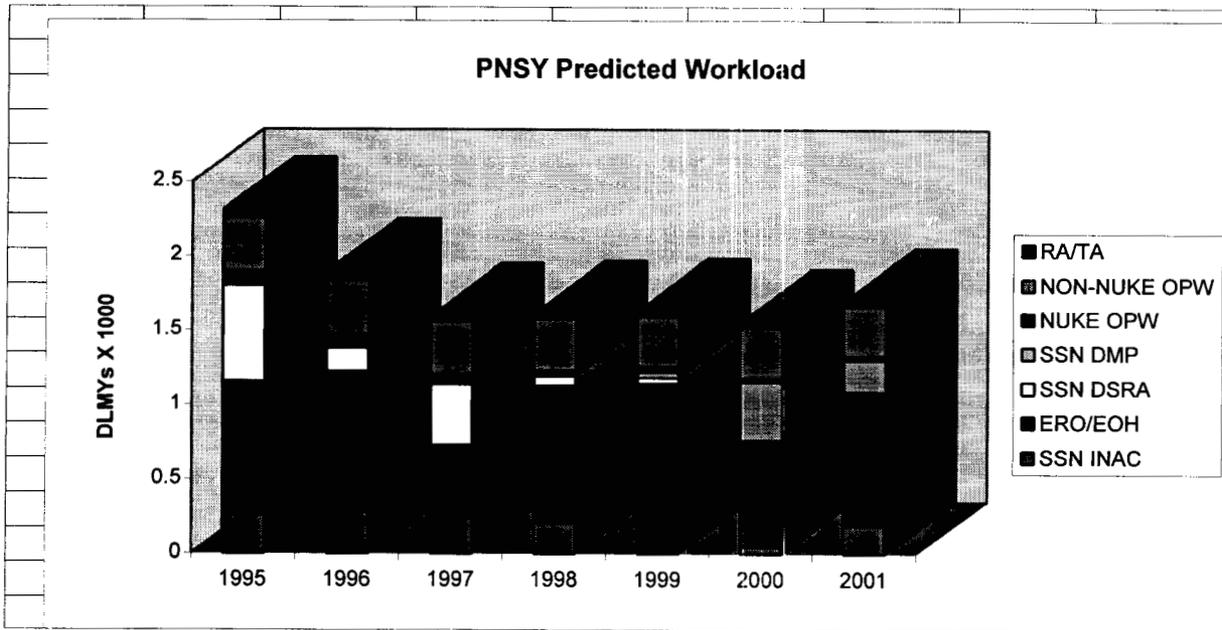


Sheet1

			PNSY					
	1995	1996	1997	1998	1999	2000	2001	
SSN INAC	0.258	0.284	0.24	0.206	0.002	0.048	0.192	
ERO/EOH	0.901	0.945	0.494	0.926	1.145	0.717	0.9	
SSN DSRA	0.645	0.152	0.406	0.065	0.04	0	0	
SSN DMP	0	0	0	0	0.037	0.392	0.209	
NUKE OPW	0.097	0.094	0.071	0.039	0.039	0.032	0.032	
NON-NUKE OPW	0.352	0.365	0.35	0.341	0.331	0.331	0.331	
RA/TA	0.059	0.059	0.039	0.039	0.039	0.039	0.039	
<b>SUM</b>	<b>2.312</b>	<b>1.899</b>	<b>1.6</b>	<b>1.616</b>	<b>1.633</b>	<b>1.559</b>	<b>1.703</b>	

	1997		1998		1999		2000	
SSN INAC	0.24	0.278	0.206	0.833	0.002	0	0.048	0.555
ERO/EOH	0.494	0.896	0.926	3.551	1.145	1.776	0.717	1.793
SSN DSRA	0.406	1.08	0.065	1.216	0.04	0.81	0	1.756
SSN DMP	0	0.582	0	1.164	0.037	0.582	0.392	1.164
NUKE OPW	0.071	0.346	0.039	0.3	0.039	0.228	0.032	0.058
NON-NUKE OPW	0.35	1.671	0.341	1.457	0.331	1.454	0.331	0.267
RA/TA (nuke)	0.039	0.214	0.039	0.216	0.039	0.222	0.039	0.207
<b>SUM</b>	<b>1.6</b>	<b>5.067</b>	<b>1.616</b>	<b>8.737</b>	<b>1.633</b>	<b>5.072</b>	<b>1.559</b>	<b>5.8</b>
	1997	1998	1999	2000	2001			
SSN INAC	0.038	0.627	-0.002	0.507	1.474			
ERO/EOH	0.402	2.625	0.631	1.076	0.291			
SSN DSRA	0.674	1.151	0.77	1.756	1.621			
SSN DMP	0.582	1.164	0.545	0.772	1.537			
NUKE OPW	0.275	0.261	0.189	0.026	0.004			
NON-NUKE OPW	1.321	1.116	1.123	-0.064	-0.165			
RA/TA (nuke)	0.175	0.177	0.183	0.168	0.165			

2001	
0.192	1.666
0.9	1.191
0	1.621
0.209	1.746
0.032	0.036
0.331	0.166
0.039	0.204
<b>1.703</b>	<b>6.63</b>





IMPACT ON THE MAINE/NEW HAMPSHIRE SEACOAST ECONOMY  
OF CLOSING PORTSMOUTH NAVAL SHIPYARD

September 30, 1994

JOHN R. McKERNAN, JR., GOVERNOR  
STATE OF MAINE

STEPHEN MERRILL, GOVERNOR  
STATE OF NEW HAMPSHIRE

**PREPARED BY:**

**THE STATE OF MAINE**

**John R. McKernan, Jr., Governor**

Stephen J. Adams, Director  
State Planning Office

Laurie G. Lachance, State Economist  
State Planning Office

Michael Montagna  
State Planning Office

**THE STATE OF NEW HAMPSHIRE**

**Stephen Merrill, Governor**

William Bartlett, Commissioner  
Resources & Economic Development

Norman Storrs, Director  
Division of Economic Development

Jeffrey Taylor, Director  
Office of State Planning

**IMPACT ON THE MAINE/NEW HAMPSHIRE SEACOAST ECONOMY  
OF CLOSING PORTSMOUTH NAVAL SHIPYARD**

TABLE OF CONTENTS

INTRODUCTION .....	1
PORTSMOUTH NAVAL SHIPYARD IN THE REGIONAL ECONOMY .....	2
Economic Impact of Portsmouth Naval Shipyard .....	2
Other Economic Impacts .....	4
THE ECONOMIC CONTEXT: A WEAK SEACOAST ECONOMY .....	5
Severe Recession/Anemic Recovery .....	5
Impact of Recent Defense Cutbacks .....	6
ENVIRONMENTAL AND INFRASTRUCTURE ISSUES .....	7
Environmental Considerations .....	7
Infrastructure Considerations .....	8
CONCLUSIONS .....	10

## INTRODUCTION

During 1994 the Department of the Navy is conducting a review of naval military installations in conjunction with the Defense Base Closure and Realignment Act of 1990. The evaluation prepared by the Navy will provide a basis for recommended base closures and realignments to be considered by the Secretary of Defense and the Base Closure Commission during 1995.

In the interest of insuring a thorough and accurate assessment of Portsmouth Naval Shipyard, the States of New Hampshire and Maine have updated the analysis of the economic contribution of Portsmouth Naval Shipyard to the regional economy that was originally done in 1992. Estimates of economic impacts were developed with the use of the IMPLAN regional economic impact model developed by the U.S. Forest Service.

It is clear from this analysis that the closure of Portsmouth Naval Shipyard would deal a devastating blow to the Maine and New Hampshire economies from which they would not soon recover. Portsmouth Naval Shipyard is a critical component of the Seacoast economy, supporting 10,765 jobs and \$595 million in income in the two States. **The loss of the Shipyard would lead to a direct decline of 6% in the employment base of the three-county Seacoast region.**

While an essential element in our nation's defense, the Shipyard also serves as the essential support in a region recovering from a recent economic recession. The closure of Portsmouth Naval Shipyard would not only lead to the immediate loss of 5,900 jobs, but would significantly undermine the slow economic recovery currently taking place in the region. The recent recession cost the region 88,000 jobs from 1988 to 1992, and the closure of Pease Air Force Base and Loring Air Force Base has significantly dampened the recovery.

Finally, serious environmental and infrastructure impacts would accompany the loss of the Shipyard. Closure could raise the cost to the Federal Government for remediation of environmental hazards. These same conditions could significantly hinder meaningful civilian reuse of the facility.

Given the dramatic implications of any decision regarding the future of Portsmouth Naval Shipyard, it behooves the Departments of the Navy and Defense to give full and fair consideration to both economic and environmental impacts in its Base Closure and Realignment deliberations. The analysis presented here seeks to inform those decisions, and highlight to the Departments of Navy and Defense issues of special concern regarding Portsmouth Naval Shipyard.

# PORTSMOUTH NAVAL SHIPYARD IN THE REGIONAL ECONOMY

## ECONOMIC IMPACT OF PORTSMOUTH NAVAL SHIPYARD

Portsmouth Naval Shipyard is among the largest employers in Maine and New Hampshire and the single largest employer in the seacoast region (York County, Maine and Rockingham and Stafford Counties in New Hampshire). It provided 5,942 federal civilian jobs and \$241 million in direct salaries during 1993. Shipyard purchases of goods and services totaled \$47.3 million in the same year, with \$6.3 million spent within Maine and New Hampshire. Since the mid-1970's capital improvements at the Shipyard have averaged \$8 million per year.<sup>1</sup>

Estimates of direct and indirect employment, income and population levels associated with the closure of the Shipyard were derived through the use of the IMPLAN regional modeling system. Closure impacts were based upon 1991-1993 shipyard employment, payroll, purchases and construction expenditures noted above. The results of the IMPLAN analysis were combined with work force levels at the Shipyard to derive total employment and income losses. For the purposes of this analysis impacts were estimated for the Maine/New Hampshire economic region and the Seacoast regional economy, defined here as York County, Maine and Rockingham and Stafford Counties, New Hampshire.

**TABLE 1**  
**ECONOMIC CONTRIBUTION OF PORTSMOUTH NAVAL SHIPYARD: 1993**  
**MAINE/NEW HAMPSHIRE REGION**

<u>IMPACTS</u>	<u>EMPLOYEE EARNINGS</u>	<u>PROPERTY INCOME*</u>	<u>TOTAL INCOME</u>	<u>STATE# PRODUCT</u>	<u>JOBS</u>	<u>POPULATION</u>
DIRECT	\$240.85	\$154.51	\$395.36	\$395.36	5,942	12,111
TOTAL INDIRECT	\$9.89	\$7.82	\$17.71	\$19.93	401	795
PURCHASES	\$5.14	\$4.55	\$9.69	\$11.28	201	399
CONSTRUCTION	\$4.75	\$3.26	\$8.02	\$8.65	200	396
INDUCED	\$97.98	\$83.62	\$181.59	\$211.35	4,422	9,013
TOTAL	\$348.72	\$245.94	\$594.66	\$626.64	10,765	21,918

Dollar Figures reported in millions

Source: Maine State Planning Office. Estimates developed with IMPLAN Model.

\* Property Income = Dividends, interest, rental income, imputed rental income and proprietors' income.

# State Product = Net value of industry output. Represents contribution to Gross State Product.

Source: Seacoast Shipyard Association.

The closure of Portsmouth Naval Shipyard would clearly land a crippling blow to the Maine and New Hampshire economies. The elimination of 5,942 of the best paying jobs in the seacoast economy and \$395 million in related income would be accompanied by the loss of an additional 4,823 jobs and nearly \$200 million in annual income. **Totaling 10,765 jobs and \$594.7 million in personal income, this loss would contribute to the further contraction of the region's economic base.** In fact, the loss of Portsmouth Naval Shipyard would shatter an already weak economy, forcing the exodus of about 22,000 of the region's citizens, including some of its most skilled and highest paid workers. Table 1 summarizes the economic impacts of the closure of Portsmouth Naval Shipyard on the Maine-New Hampshire economy.

The economic impacts of the closure of Portsmouth Naval Shipyard would be even more severe on the Seacoast region of York County, Maine and Rockingham and Stafford Counties, New Hampshire. **Total employment losses in this three-county region associated with a shipyard closure are estimated at 9,991, about 10% of all jobs in the region.** Similarly, \$573.7 million in annual income, or 5.3% of total regional income, will be lost from the Seacoast economy, as shown in Table 2. This three-county region will also suffer the withdrawal of nearly 22,400 of its citizens, 4.4% of the region's population, as a result of the massive employment losses.

**TABLE 2  
ECONOMIC CONTRIBUTION OF PORTSMOUTH NAVAL SHIPYARD: 1993  
SEACOAST REGION (YORK, ROCKINGHAM & STAFFORD COUNTIES)**

<u>IMPACTS</u>	<u>EMPLOYEE EARNINGS</u>	<u>PROPERTY INCOME*</u>	<u>TOTAL INCOME</u>	<u>STATE<sup>#</sup> PRODUCT</u>	<u>JOBS</u>	<u>POPULATION</u>
DIRECT	\$221.31	\$141.99	\$363.31	\$363.31	5,549	12,374
TOTAL INDIRECT PURCHASES	\$10.93	\$9.80	\$20.73	\$22.12	360	881
CONSTRUCTION	\$5.43	\$6.04	\$11.47	\$12.86	180	441
	\$5.50	\$3.76	\$9.26	\$9.26	179	441
INDUCED	\$102.06	\$87.55	\$189.61	\$220.69	4,083	9,113
TOTAL	\$334.31	\$239.34	\$573.65	\$606.12	9,991	22,368

Source: Maine State Planning Office. Estimates developed with IMPLAN Model.

\* Property Income = Dividends, interest, rental income, imputed rental income and proprietors' income.

# State Product = Net value of industry output. Represents contribution to Gross State Product.

## OTHER ECONOMIC IMPACTS

In addition to the job and income effects estimated above, the closure of Portsmouth Naval Shipyard would burden the region's remaining residents and businesses with **added costs of utilities and public services** in the face of diminished incomes and property values. For example, the shutdown of the Shipyard and loss of associated industrial, commercial and residential electric utility customers would result in a **base revenue loss of between \$3 million and \$5 million**. This amount would have to be recovered through higher rates to residential and business customers. An even more severe revenue loss would be faced by the local water district which serves the Shipyard.

Similarly, the cost of State and municipal services will have to be born by a smaller base of taxpayers. **Local governments could lose as much as 8% of property tax revenue** from commercial and residential losses associated with a closure of Portsmouth Naval Shipyard. These lost utility and tax revenues will force increases in local rates, weakening the competitive position of area businesses and further reducing the discretionary income of remaining households and businesses, jeopardizing even more jobs in the region.

The Port of Portsmouth is a critical component of the Seacoast economy. Loss of the Shipyard will not only eliminate an important user of the Port, but will hinder efforts to retain and improve Port facilities. Moreover, a shutdown of Portsmouth Naval Shipyard could impact the ability of the Port to continue to obtain Federal assistance for necessary channel improvements. Thus, ongoing operations of this important part of the economic infrastructure, as well as current expansion plans, could be seriously jeopardized by the closure of Portsmouth Naval Shipyard.

Finally, as discussed below, there are a number of potential environmental barriers to the full and timely civilian re-use of Portsmouth Naval Shipyard. The presence of hazardous waste sites and historic buildings could restrict and slow commercial or other civilian activities at the Shipyard. Such delays and restrictions to utilizing the resources at the Shipyard would greatly impede meaningful remediation of harmful economic impacts associated with a closure.

# THE ECONOMIC CONTEXT: A WEAK SEACOAST ECONOMY

## SEVERE RECESSION \ ANEMIC RECOVERY

The economies of Maine and New Hampshire are still reeling from the effects of a protracted regional recession. As Figure 1 illustrates, the two state region suffered an extraordinary employment decline of 8.2% from 1989 through early 1992. Over 88,000 jobs disappeared during that two and a half year period with major losses occurring in the relatively high-wage manufacturing and construction sectors. Even more disturbing is the fact that after two and a half years of rebound, the region has only recovered two-thirds (56,000) of the jobs that had been lost, making this one of the slowest recoveries on record.

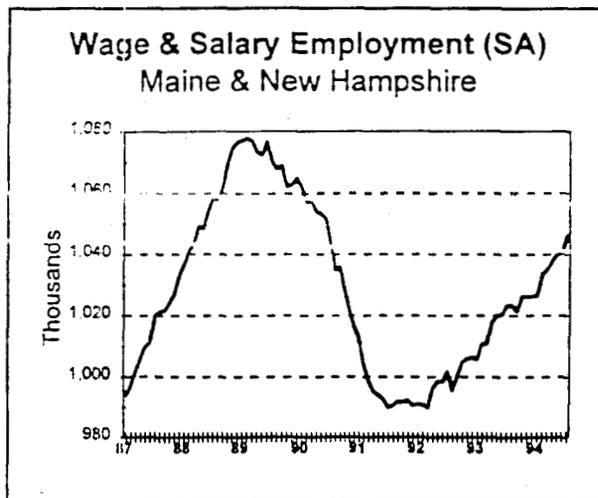


Figure 1

A similar pattern of decline has infected the Seacoast economy. Wage and salary employment in the three-county region dropped from 109,000 in 1989 to 99,000 by 1991, an 8.3% drop representing a loss of 10,000 jobs. The most current data for the Portsmouth/Kittery Labor Market Area, displayed in Figure 2, indicate that less than half of the job losses (only 4,300 jobs) have been recouped as of late 1994. Thus, while the downturn in the Seacoast economy was very similar to that experienced in the two state region as a whole, the Seacoast's recovery has been even more anemic than that of the larger region.

While its job level has also been shrinking, the Shipyard has provided an important measure of stability in an otherwise turbulent economy. Even without the closure of Portsmouth Naval Shipyard, the regional economy is not expected to fully recover from the current economic downturn until 1996. Economic activity in the two-state region will continue to show weak performance through much of the 1990's. (see Figure 3) In fact, annual job gains will average 2.3% during most of the 1990's, less than half the pace enjoyed during the last half of the 1980's.

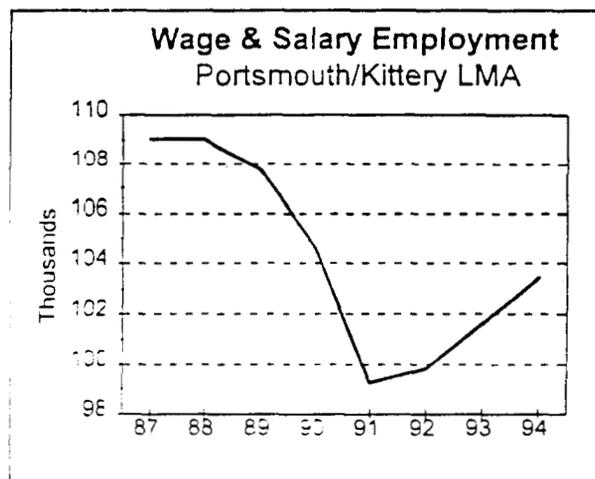


Figure 2

## IMPACT OF RECENT DEFENSE CUTBACKS

In addition to the regional recession, Maine and New Hampshire have suffered from significant defense cutbacks in recent years. Pease Air Force Base, just a few miles from the Shipyard, was closed in April of 1991 resulting in the loss of an estimated 7,600 jobs, \$109.3 million in direct payroll and \$35.2 million in annual purchases. Loring Air Force Base was closed in September 1994, eliminating 8,016 jobs, \$89.6 million in direct payroll and \$39.3 million in annual purchases.

Other losses related to defense cutbacks include 3,500 jobs at nearby Bath Iron Works, an estimated 3,800 job losses to smaller defense contractors, subcontractors and military facilities in the region, and a reduction of 2,800 Portsmouth Naval Shipyard jobs since 1989. These 10,100 defense jobs supported at least 6,500 indirect jobs around Maine and New Hampshire. Thus, Maine and New Hampshire have lost over 32,000 jobs to defense cuts since 1989. Table 3 offers an estimate of recent defense-related job losses in Maine and New Hampshire.

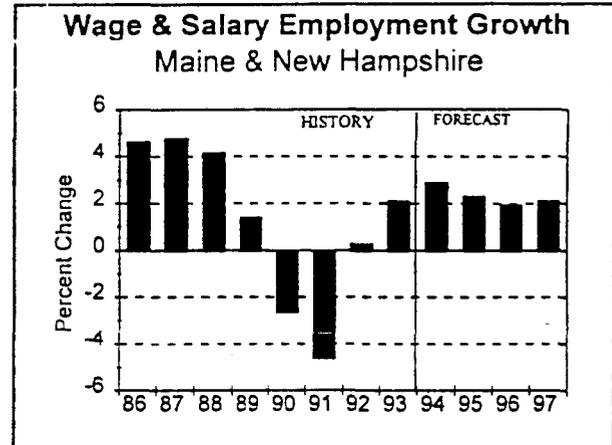


Figure 3

Table 3  
ESTIMATED DEFENSE-RELATED JOB LOSSES  
IN MAINE AND NEW HAMPSHIRE SINCE 1989

	<u>DIRECT</u>	<u>INDIRECT</u>	<u>TOTAL</u>
PEASE AIR FORCE BASE	4,550	3,048	7,598
LORING AIR FORCE BASE	4,800	3,216	8,016
BATH IRON WORKS	3,500	2,345	5,845
PORTSMOUTH NAVAL SHIPYARD	2,800	1,876	4,676
OTHER DEFENSE ACTIVITIES	<u>3,800</u>	<u>2,300</u>	<u>6,100</u>
<b>TOTAL</b>	<b>19,450</b>	<b>12,785</b>	<b>32,235</b>

## ENVIRONMENTAL AND INFRASTRUCTURE ISSUES

There are a number of environmental and infrastructure issues that must be given careful consideration in any assessment of the future of Portsmouth Naval Shipyard. The issues offered here are, by no means, exhaustive. Rather, they represent some of the concerns regarding the Portsmouth Naval Shipyard that should be given special attention by the Navy in its assessment of the Shipyard.

### ENVIRONMENTAL CONSIDERATIONS

#### RCRA, National Priority List and Hazardous Wastes Sites

The Navy, at Portsmouth Naval Shipyard, has undertaken an investigation of potential hazardous waste sites and possible sources of chemical contamination from past disposal activities at the Shipyard. Thirteen areas (Solid Waste Management Units) on the Shipyard have been investigated as required by the Resource Conservation and Recovery Act (RCRA). Additional investigations were conducted this summer to delineate areas of contamination and to better understand hydrogeology of the site. The Portsmouth Naval Shipyard was listed as a National Priorities (CERCLA) site on May 31, 1994.

On-shore and off-shore studies have been completed by the Navy and submitted to State and Federal officials for review and comment. On-shore investigations indicate soils contaminated with heavy metals, fuel oils, PCBs, and solvents. Low levels of volatile organic compounds have been detected in the groundwater.

The Navy has conducted extensive off-shore ecological studies to determine if contaminants are migrating from the Shipyard and adversely affecting biota, sediments, or surface water. Results of these investigations are currently being reviewed by appropriate State and Federal agencies. The Navy has completed an off-shore human health risk assessment based on the ecological estuarine studies and on the ingestions of biota from the estuary surrounding the Shipyard. The analysis of this risk assessment will be presented by the Navy in a public information workshop in the near future.

The fact that there is hazardous waste contamination of both the soil and the groundwater at the Portsmouth Naval Shipyard could hinder timely civilian re-use in the event of closure.

## Oil Spill Response

Oil spill response is especially problematic on the Piscataqua River. The Port of Portsmouth supports a substantial amount of commercial activity and currents in the River are among the strongest on the Eastern Seaboard. The U.S. Navy presence at Portsmouth Naval Shipyard has provided an element of the oil spill response team for that region. Closure of the Shipyard will clearly impact the capacity of the civilian authorities to respond to oil spills in these difficult waters.

## National Historic Register Sites

Portsmouth Naval Shipyard is home to a number of National Register of Historic Places sites. The Shipyard Historic District contains a remarkable and extensive collection of 19th Century industrial and residential structures of unusually fine design. Unfortunately, the Historic District is in close proximity to industrial facilities and oil storage tanks.

Studies related to the closure of the Philadelphia Navy Yard have cited the lack of an on-site, on-going maintenance program as a potential threat to historic sites there. **Closure of Portsmouth Naval Shipyard would place the historic sites there at similar risk of degradation.** Moreover, the co-location of historic residences and active industrial facilities at the Shipyard would greatly impede the civilian reuse of the Shipyard.

## **INFRASTRUCTURE CONSIDERATIONS**

### Port of Portsmouth

The Port of Portsmouth is a critical component of the Seacoast economy. Loss of the Shipyard will not only eliminate an important user of the Port, but will hinder efforts to retain and improve Port facilities. Moreover, a shutdown of Portsmouth Naval Shipyard could impact the ability of the Port to continue to obtain Federal assistance for necessary channel improvements. Thus, ongoing operations of this important part of the economic infrastructure, as well as current expansion plans, could be seriously jeopardized by the closure of Portsmouth Naval Shipyard.

### Infrastructure Capacity to Support of Current and Future Navy Mission

While closure of Portsmouth Naval Shipyard would have dramatic affects on the region's civilian economy, the infrastructure in place in the area is fully compatible with the ongoing mission of the Shipyard. In fact, recent improvements will allow the area to easily accommodate an expansion of that mission.

The transportation system supporting the Shipyard has easily accommodated the facility's operation. The recent closure of Pease Air Force Base has increased the capacity of the highway and public transportation systems in the area. Ready access to Interstate Highway 95 and U.S. Route 1, the Spaulding Turnpike in New Hampshire, and the Maine Turnpike all offer ample access to regions north, south and west of the Shipyard.

Other public infrastructure in the region enjoy abundant capacity to service current or increased demand. Waste disposal capacity in the area, for example, has seen a number of recent expansions. The Shipyard, itself has a relatively new industrial waste treatment plant on site. In addition, the Town of Kittery, and other communities in the region have recently upgraded their waste water treatment capacity. Health care facilities have been expanded in the City of Portsmouth, while school district capacity has been increased by the recent closure of Pease Air Force Base.

## CONCLUSIONS

This analysis has been prepared to provide decision makers with a thorough and accurate basis from which to evaluate the economic impact of the closure of Portsmouth Naval Shipyard. New Hampshire and Maine have already born more than their share of recent defense cutbacks. Pease Air Force Base in New Hampshire and Loring Air Force Base in Maine have been closed. Maine's Over-the-Horizon Backscatter Radar in Bangor has fallen under the defense budget ax as have 2,800 jobs at Portsmouth Naval Shipyard. Private defense contractors in both States continue to reduce work force levels in the face of procurement reductions, and National Guard force strengths continue to shrink in both States.

Closure of Portsmouth Naval Shipyard would have effects well beyond these economic impacts. Environmental hazards on the site and reductions in the capacity of the region to combat future environmental problems place at risk the quality of life of the Seacoast region in the face of a loss of the Shipyard. Moreover, existing environmental conditions could seriously hinder meaningful civilian re-use of the Shipyard in the event of its closure.

Portsmouth Naval Shipyard has long played a pivotal role in the Maine/New Hampshire economy. Today the Shipyard's role in shoring up the region's economy is more critical than ever. Recent waves of Defense cutbacks and the recent prolonged regional recession have dramatically weakened the Maine and New Hampshire economies. In fact, during 1991 more people left these two states than have entered. The region is better positioned than ever to support the current and future military mission at the Shipyard. However, the loss of Portsmouth Naval Shipyard would rapidly lead to the accelerated deterioration of economic and environmental conditions in Maine and New Hampshire, and especially in the Seacoast region.

EXCERPT

Portsmouth Naval Shipyard  
N00102

DATA CALL 65  
ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA

5. **Other Socio-Economic Impacts.** For each of the following areas, describe other recent (past 5 years), on-going or projected economic impacts (both positive and negative) on the geographic region defined by your response to question 1.b. (page 3), in the aggregate:

a. Loss of Major Employers:

Pease Air Force Base closed in April 1991 resulting in the loss of an estimated 7,000 jobs and \$167 million in personal income. Of the 7,000 jobs lost, 2,800 jobs were indirectly related to the closure while 4,200 were directly related.

Between 1989 and 1993, the number of employers in York County declined by 92. The declines occurred in all employment size-classes. Large layoffs occurred at a number of companies including:

Employment at the Portsmouth Naval Shipyard in Kittery has declined by over 3,600, with an additional estimated 650 person reduction in two weeks. Overall, this is a 51 percent reduction. This facility is the largest employer in York County.

Pratt & Whitney laid off 103 in January 1994.

George Newman & Co. laid off 40 in January 1994.

Duchess Shoe laid off 100 in March 1993.

Pratt & Whitney laid off 84 in January 1993.

Pratt & Whitney laid off 233 in November 1992.

Shape, Inc. laid off 150 in March 1992.

The future of the Pratt & Whitney and the Saco Defense plants remain in question, despite streamlining and recent layoffs. These facilities are among the largest employers in York County.

DATA CALL 65  
ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA

- York County's civilian labor force has declined by 3,500 in 1993. This follows three consecutive years of no growth. Resident employment declined to a six year low in 1993.
- Manufacturing employment declined by 11 % between 1988 and 1992 in York County. Inflation adjusted manufacturing wages declined by 4.4%.

\* With the closing of Loring Air Force base in September 1994, major Maine defense employers (Loring Air Force Base, Bath Iron Works, and Portsmouth Naval Shipyard) will have lost over 10,500 jobs (45%) since 1989.

- Approximately \$250 million in state income is being lost per year.
- Jobs have been lost in high wage areas with minimal offsetting growth in lower wage areas. The 1991 average annual wage for shipbuilding and repair was \$30,793 compared to \$19,117 for service workers and \$12,238 for retail workers.
- Many former defense workers are under-employed. Continuing downsizing in the defense industries have saturated the market with skilled craftsmen and professionals. Shipyard outplacement experience shows that most laid-off workers who remain in the seacoast area must accept a decrease in income and living standard. Workers must leave the area to receive comparable income.
- The Maine State Planning Office projects a net outward migration from the state of 40,000 people in the 1990s with 32,000 of that total attributable to defense cutbacks.

**Source of Data (5. Other Socio/Econ):**

KEYS Economic Future: Building Linkages and Building Capacity. May 1994.  
Defense Dependency - Impacts and Conversion Efforts in Maine. June 1994.  
Presentation to the Joint Select Committee on Housing & Economic Development by Joyce Benson, State Planning Office. April 1994.  
University of Southern Maine Forecast for York County May 1994.  
Defense Downsizing: The Economic Impacts in New England.  
Yolanda K. Kodrycki, Senior Economist, Federal Reserve Bank of Boston. June 1994.  
From Defense to Offense; Converting Maine's Economy. Presentation by Laurie G. Lachance, Maine State Economist. June 1994.  
"Competitor Buys Newington Mall; Owner of Fox Run Mall Pays \$5 million", Foster's Daily Democrat, 6 July 1994.  
Maine Department of Labor, Division of Economic Analysis and Research, Glenn Mills.

DATA CALL 65  
ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA

b. Introduction of New Businesses/Technologies:

Several small businesses have opened in the past few years in York County, but many more have closed. In New Hampshire the only introduction of new business is at the Pease International Tradeport, where Pease Air Force Base redevelopment is underway with limited success. Cell-Tec, an English Bio-Tech Firm, has established its USA Headquarters here. Also, the State Department has located a VISA Unit and Passport Center at Pease. Delta Business Express has renovated and is using the hanger location at Pease.

c. Natural Disasters:

None.

d. Overall Economic Trends:

\* Seacoast area continues to struggle to recover from closure of Pease Air Force Base:

- United Express Airlines, an anchor in the airport redevelopment effort, has ceased operations at Pease.
- The largely vacant Newington Mall, adjacent to Pease, which was constructed at a cost of \$27 million, has just been sold for \$5 million.
- BRAC 91 & 93 are causing a glut of facilities for redevelopment/conversion resulting in increased competition among states for few potential industries.

\* The regional economy is trailing the national economy out of the recession in large part due to on-going cuts in defense industries. (especially Portsmouth Naval Shipyard workforce reductions, Bath Iron Works workforce reductions, Pease Air Force Base closure and Loring Air Force Base closure.)

- The Maine income tax base has been reduced aggravating an already precarious State financial position.
- Public utilities are faced with decreased demand and large fixed costs resulting in increased rates for remaining customers and in utility company layoffs.
- The seacoast area has qualified for the government's Housing Assistance Program due to the substantial drop in real estate prices driven by Pease closure and the decrease in shipyard employment by over 50%. Cities and towns are struggling with the resulting adverse impact on their property tax bases which are the primary source of funding for education in Maine and New Hampshire.

**Mt. Auburn Associates**

**Defense Impact  
Analysis in  
Southern  
York County**

**FINAL REPORT**

**Submitted to:**

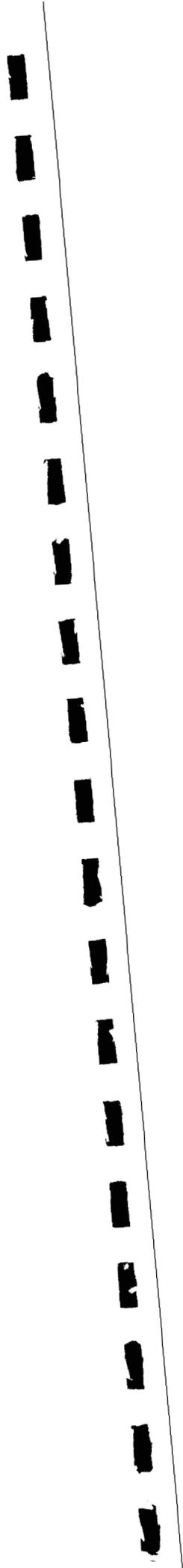
**The KEYS Coalition**

**Submitted by:**

**Mt. Auburn Associates**

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

**September 14, 1992**



## Acknowledgements

We gratefully acknowledge the support and cooperation of a number of people and organizations without whom much of the research leading to this report would not have been as successfully completed. First and foremost, the close involvement and direction provided by the members of the KEYS Coalition was of utmost importance. Their diligence and commitment to their respective towns, the entire region and the people of Southern Maine was always evident. In addition, the support of James Upham of the Southern Maine Regional Planning Commission was invaluable.

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

## Table of Contents

<b>Chapter 1</b>	<b>Introduction</b>	<b>1</b>
<b>Chapter 2</b>	<b>Economic Overview</b>	<b>4</b>
2.1	Economic Performance: The Economic Well-being of the Residents of Keys	4
2.2	Economic Environment: By Location of Employment	8
2.3	Conclusions	14
<b>Chapter 3</b>	<b>Defense Sector of the Regional Economy</b>	<b>40</b>
3.1	The Role of the Portsmouth Naval Shipyard in the Regional Economy	40
3.2	Economic Impacts Related to the Closing of Pease Air Force Base	53
3.3	Other Defense Contractors in York County	59
<b>Chapter 4</b>	<b>Conclusions</b>	<b>68</b>
4.1	The Impacts of Defense-related Employment Loss: A Review of the Literature	68
4.2	Short-term Impacts Related to Layoffs at the Naval Yard	70
4.3	Longer-term Impacts	75
4.4	Longer-term Opportunities	80
<b>Chapter 5</b>	<b>Resources</b>	<b>82</b>
5.1	Resource Needs for Economic Adjustment	82
5.2	Existing State and Local Resources	83
5.3	Gaps in Resources	89
<b>Chapter 6</b>	<b>Next Steps</b>	<b>91</b>
<b>Appendices</b>		<b>97</b>

## 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.

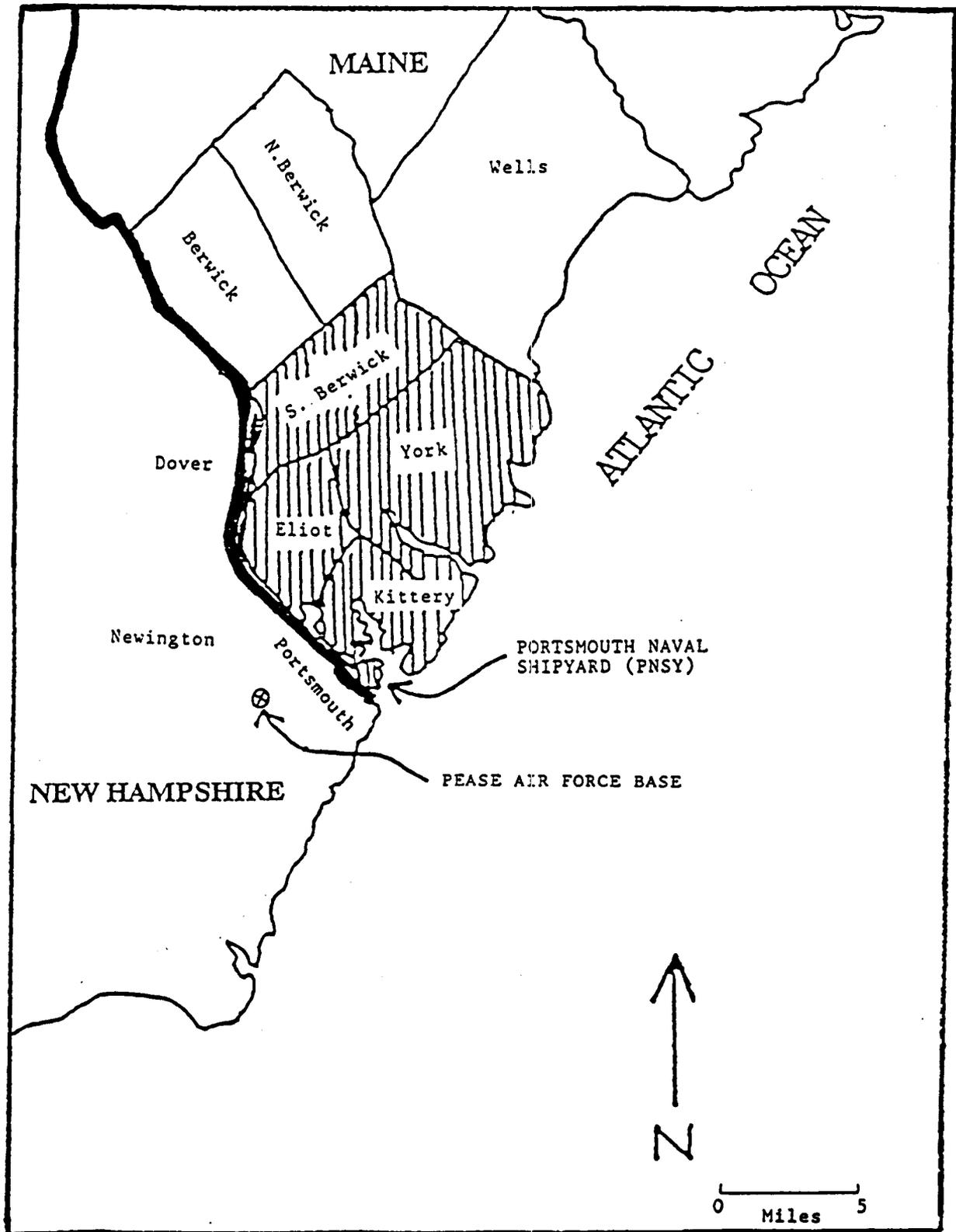
Recognizing that their towns are vulnerable to further job losses and the related social and economic impacts associated with those losses, the four towns of the KEYS region have formed a coalition to understand the economic impacts of the defense-related dislocations already experienced, as well as 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.<sup>1</sup>

- ♦ 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."

---

<sup>1</sup>The 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.

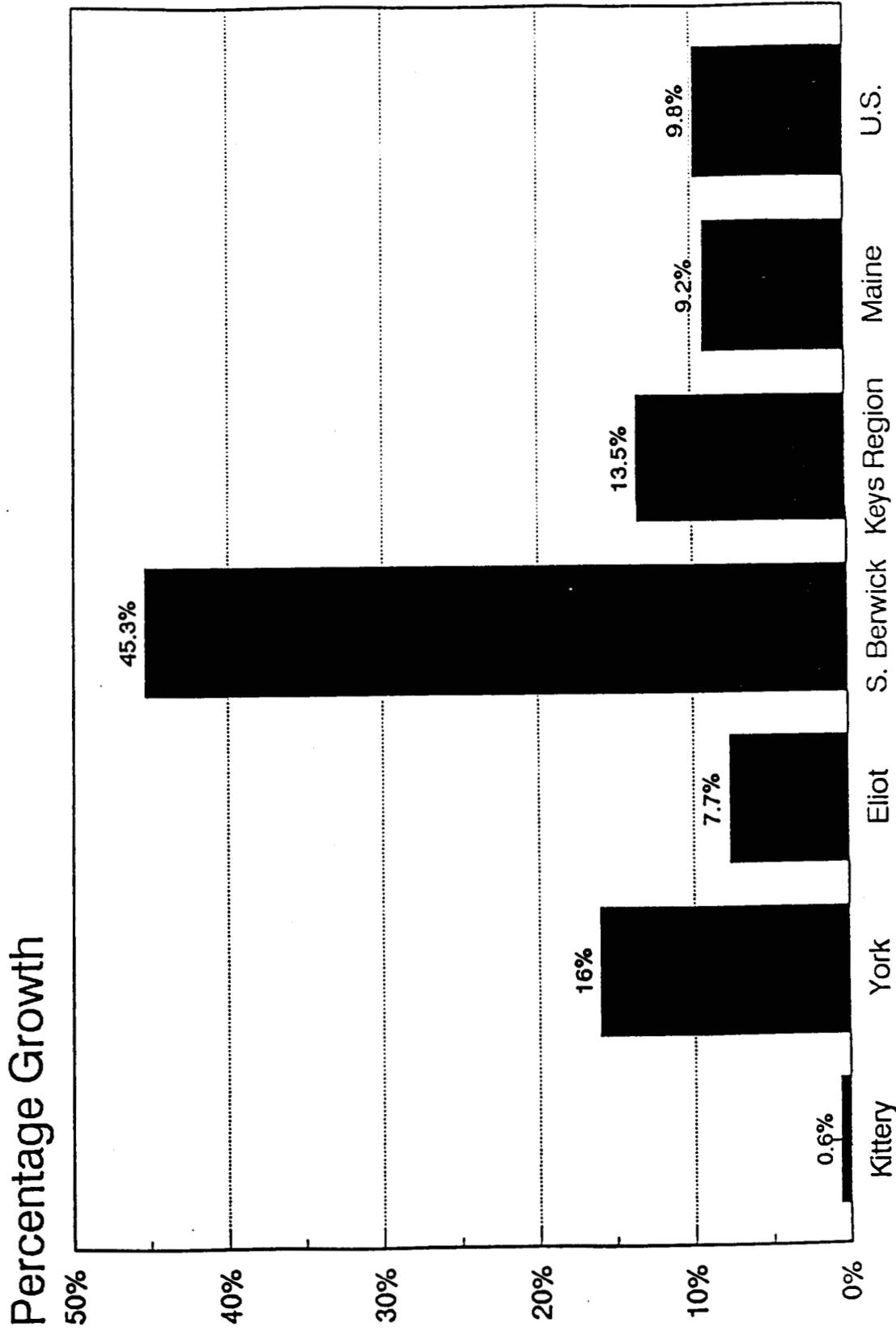
### 2.3 **Conclusions**

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

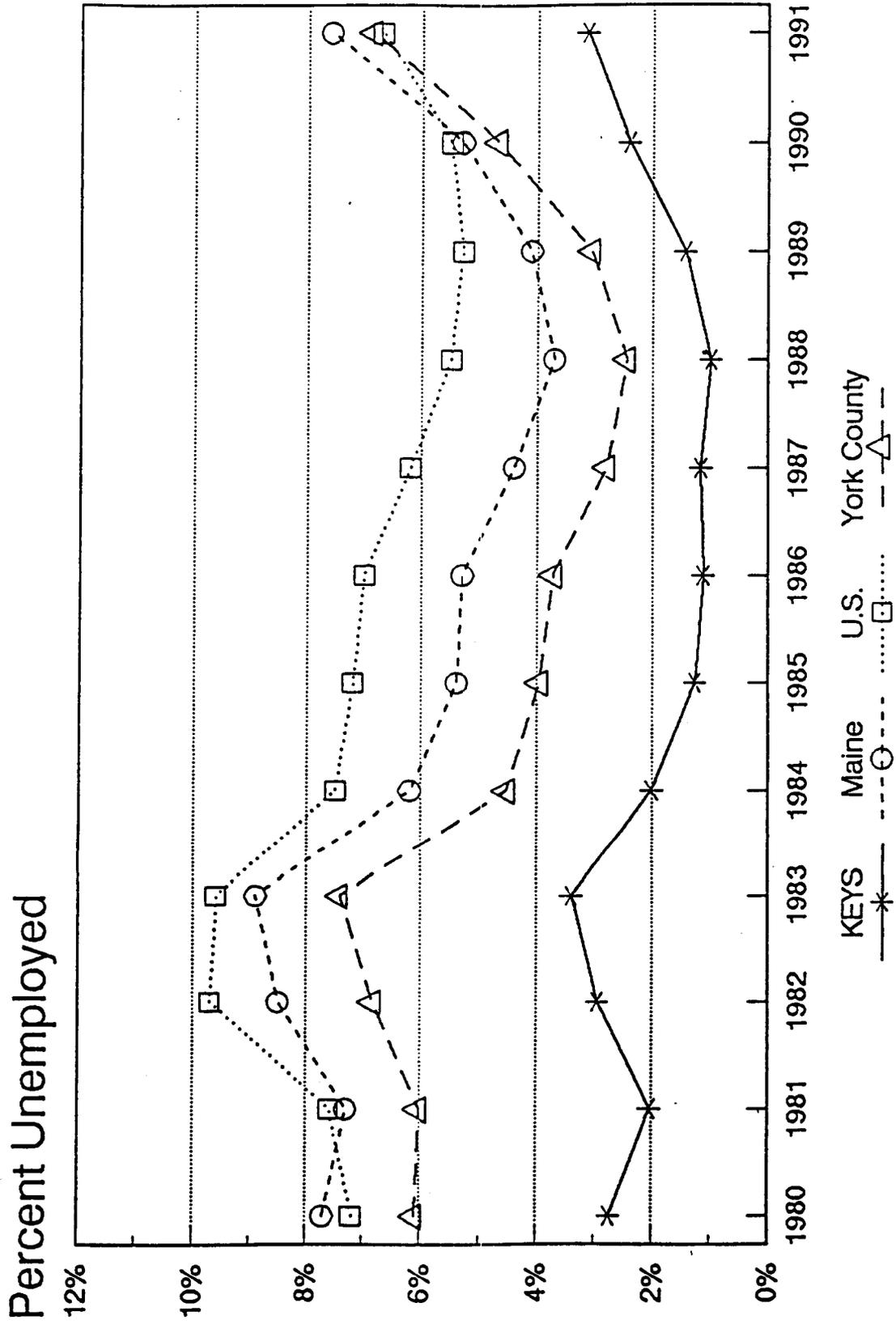
Chart 1



SOURCE: 1990 U.S. Census.

Chart 2

# Unemployment Rates



SOURCE: 1992, Maine Dept. of Labor

# Median Household Income: 1979 and 1989

In 1991 \$

Median Household Income

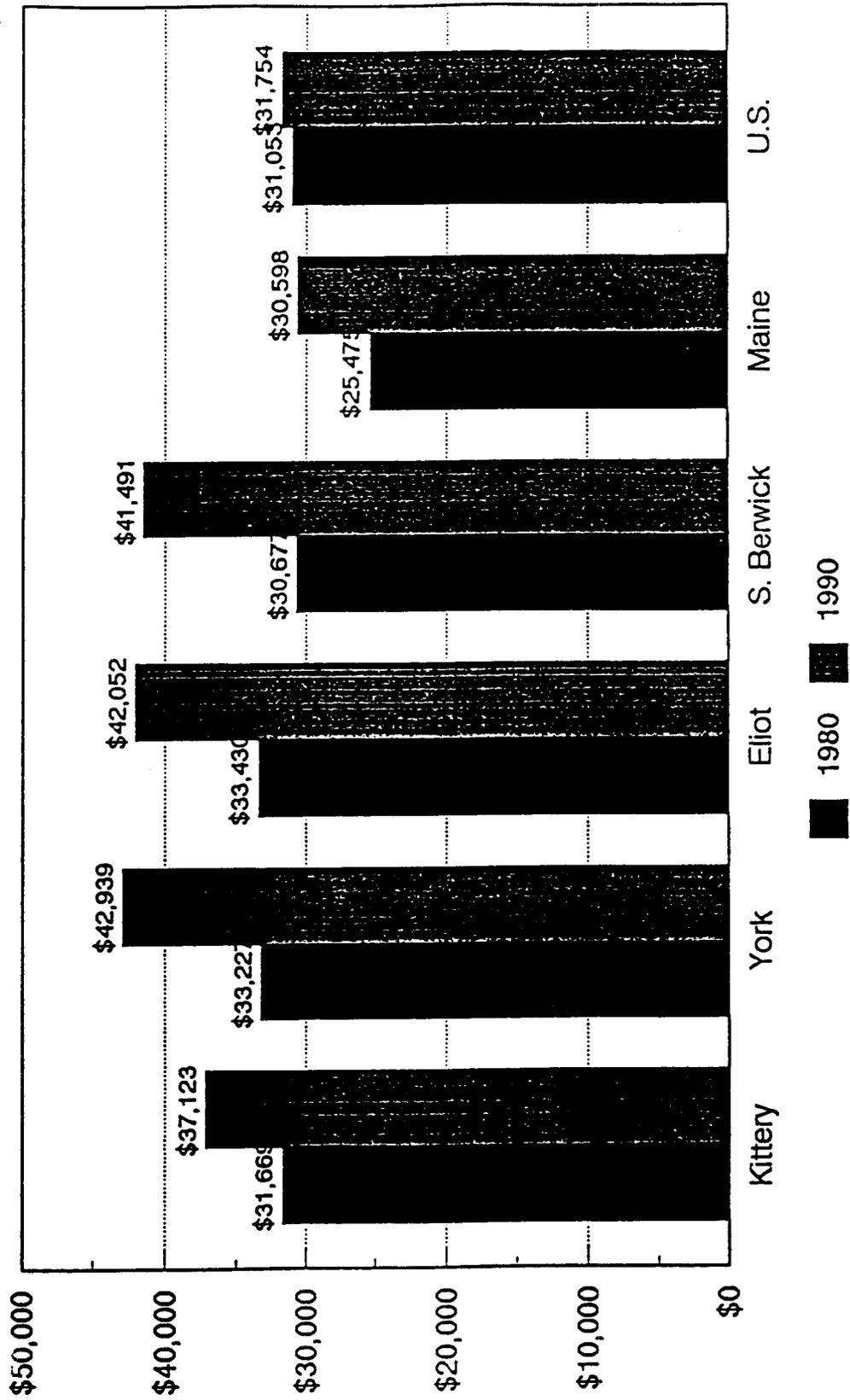
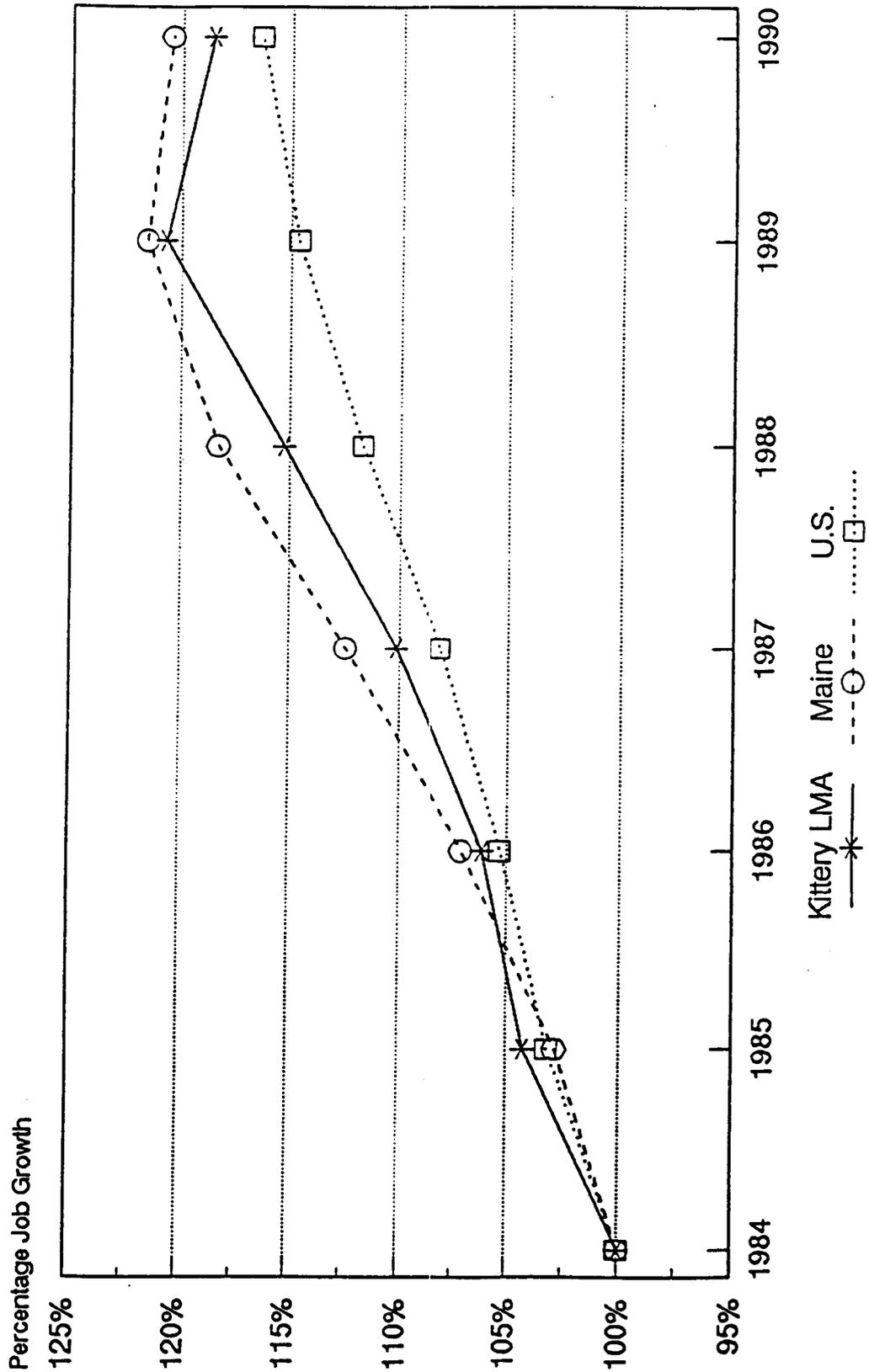


Chart 3

SOURCE: 1990, U.S. Census

# Total Employment Growth

Index 1984 = 100

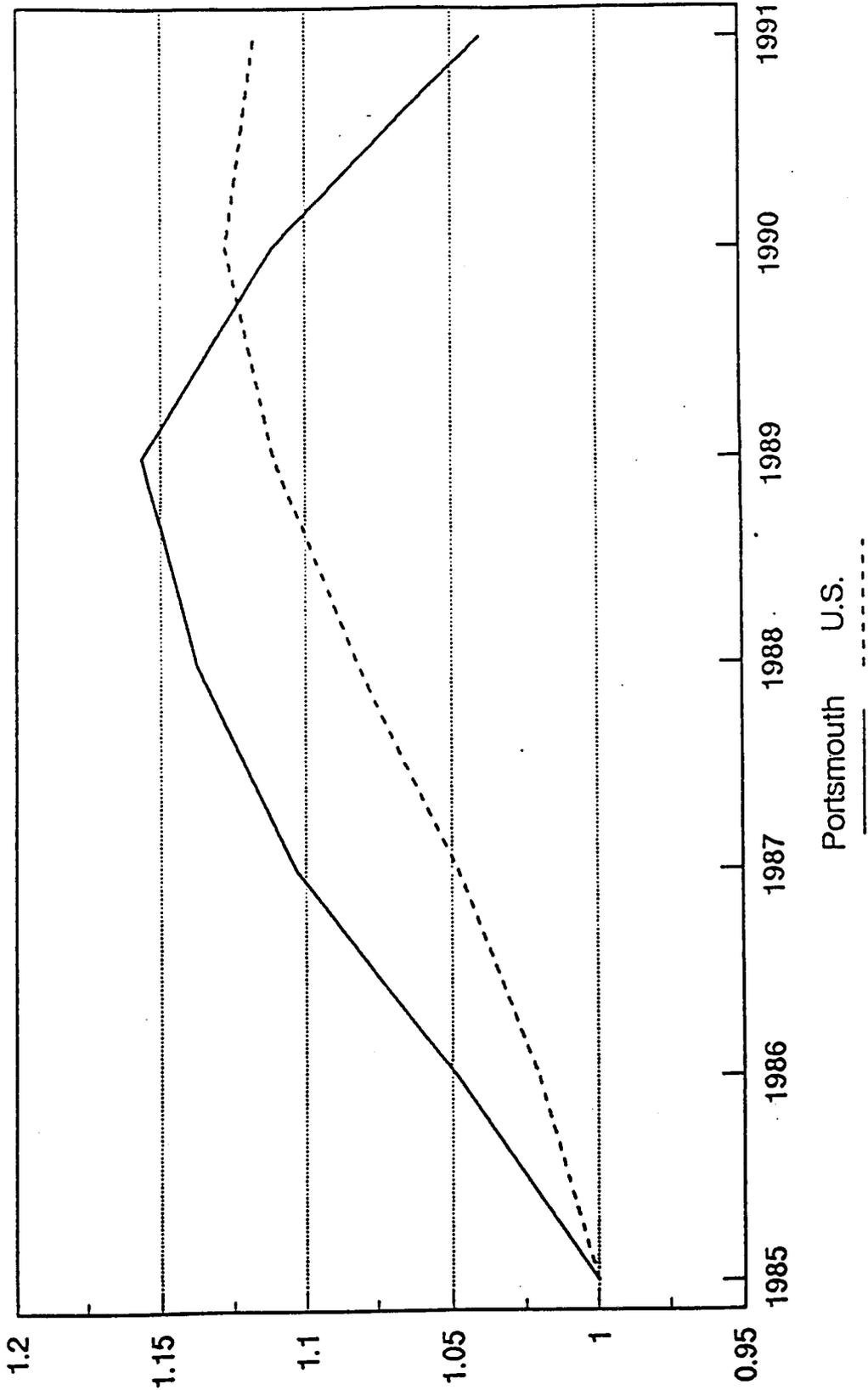


SOURCE: 1992, Maine Dept. of Labor

Chart 4

Chart 5

# Total Employment: Portsmouth MSA Index 1985=1



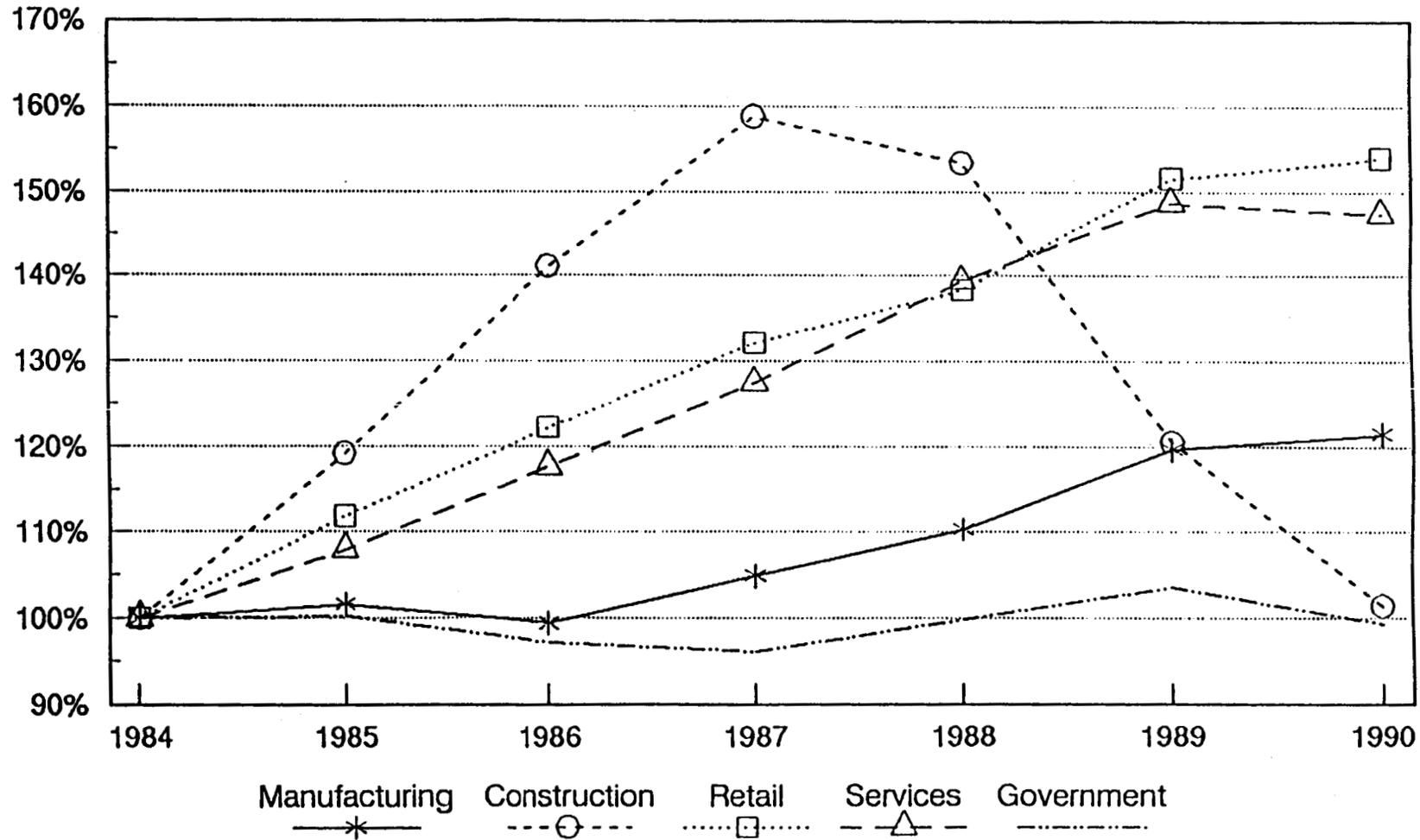
Portsmouth MSA Established in 1985

SOURCE: 1992, New Hampshire  
Dept. of Labor

# Job Growth By Sector: Kittery LMA

Index: 1984=100

Percentage Job Growth



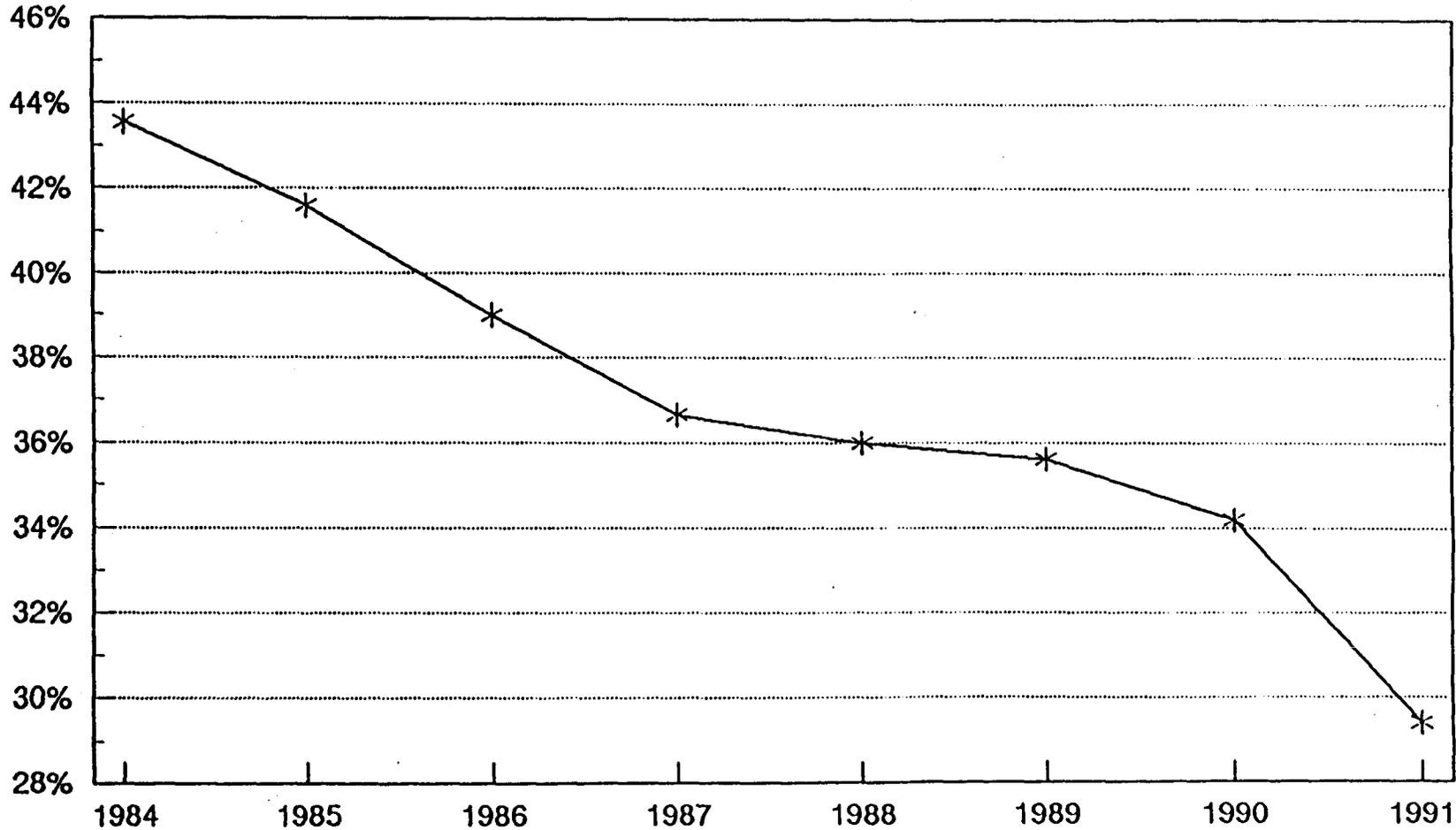
SOURCE: 1992, Maine Dept. of Labor

Chart 6

# Dependence on U.S. Government Employment

KEYS Labor Market Area

US jobs as % of total



Kittery LMA

—\*—

1991 is Preliminary September Data

SOURCE: 1992, Maine Dept.  
of Labor

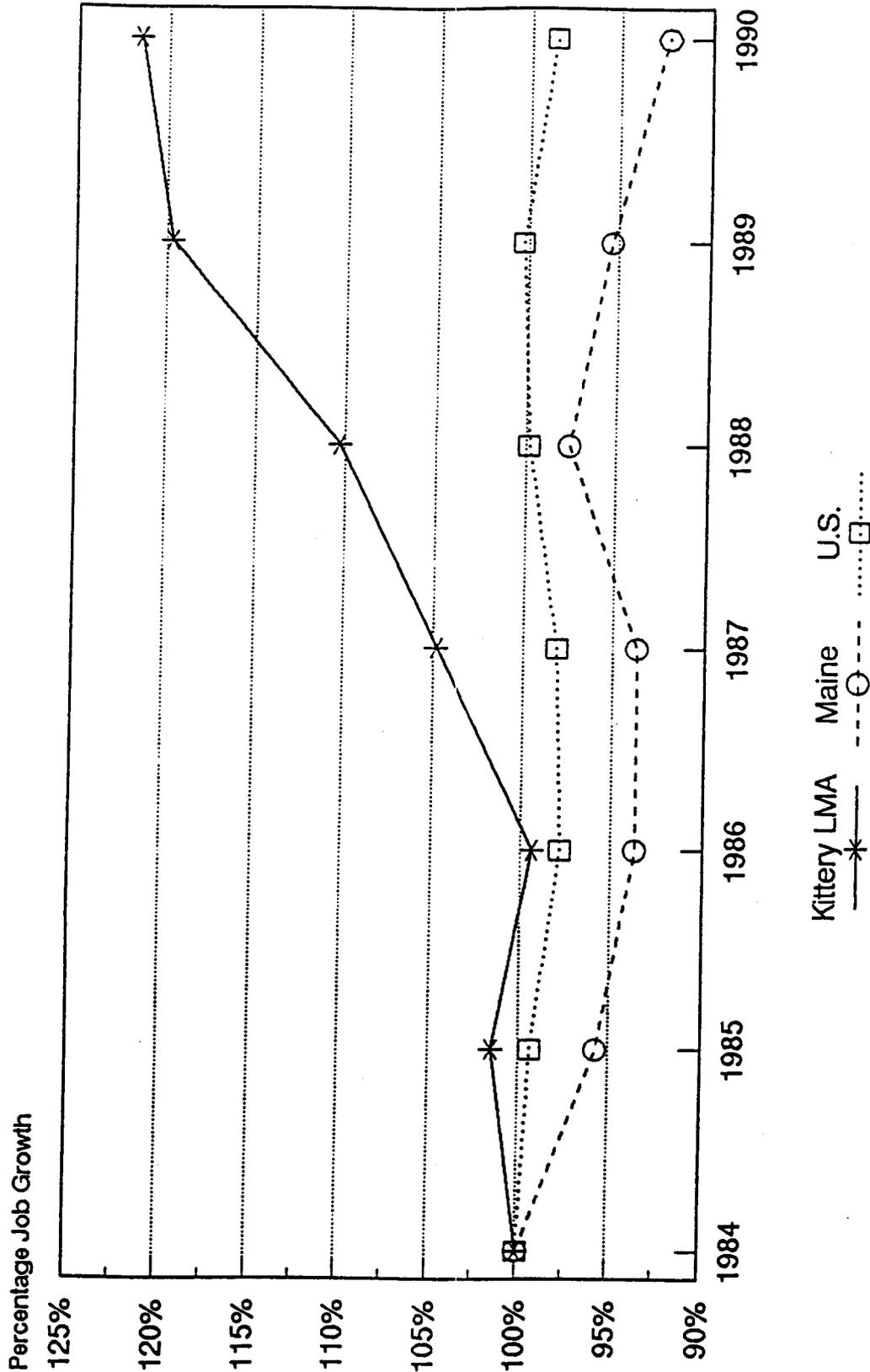
Chart 7

22

Mt. Auburn Associates

# Manufacturing Job Growth

Index: 1984=100

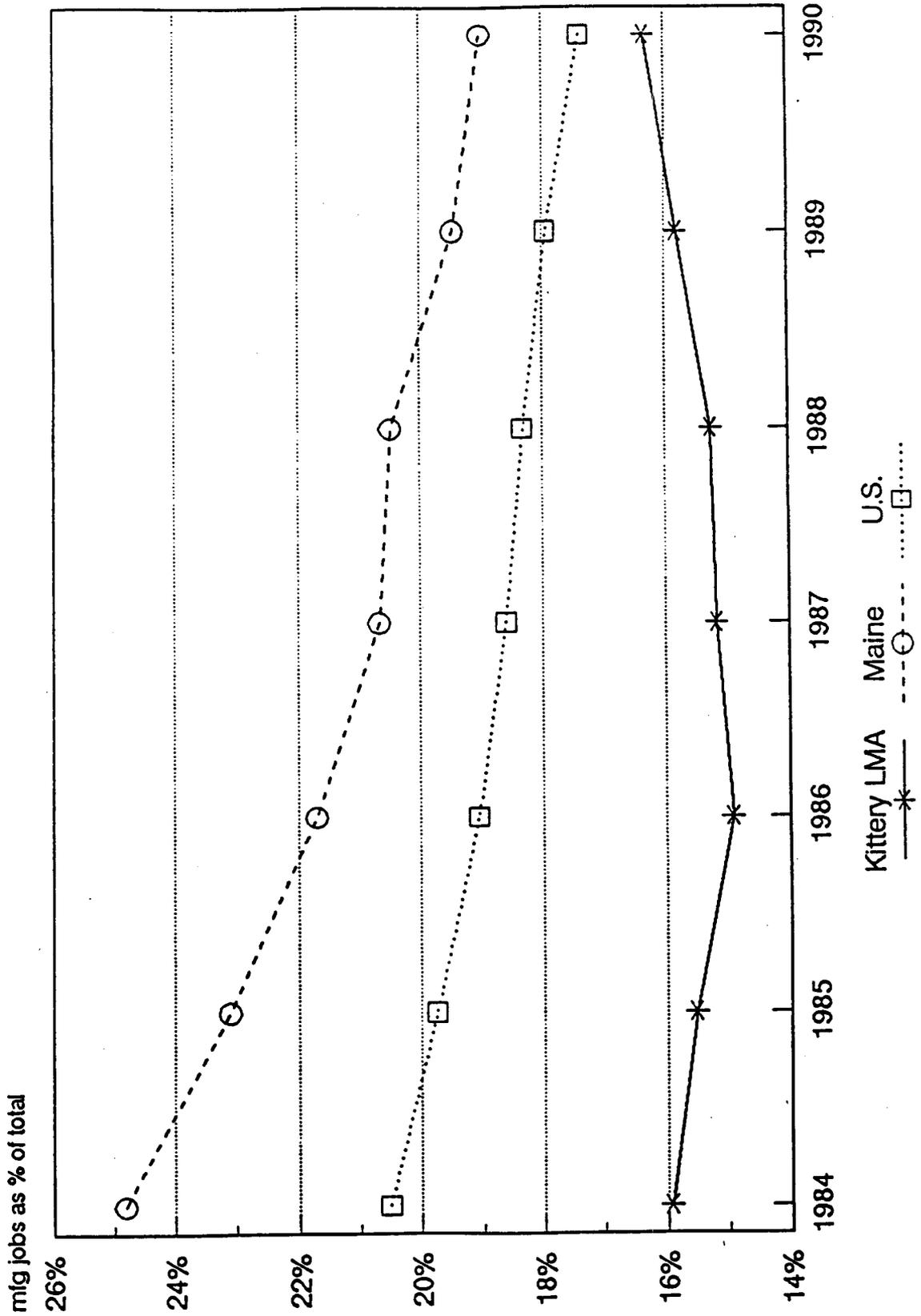


SOURCE: 1992, Maine Dept. of Labor

Chart 8

Chart 9

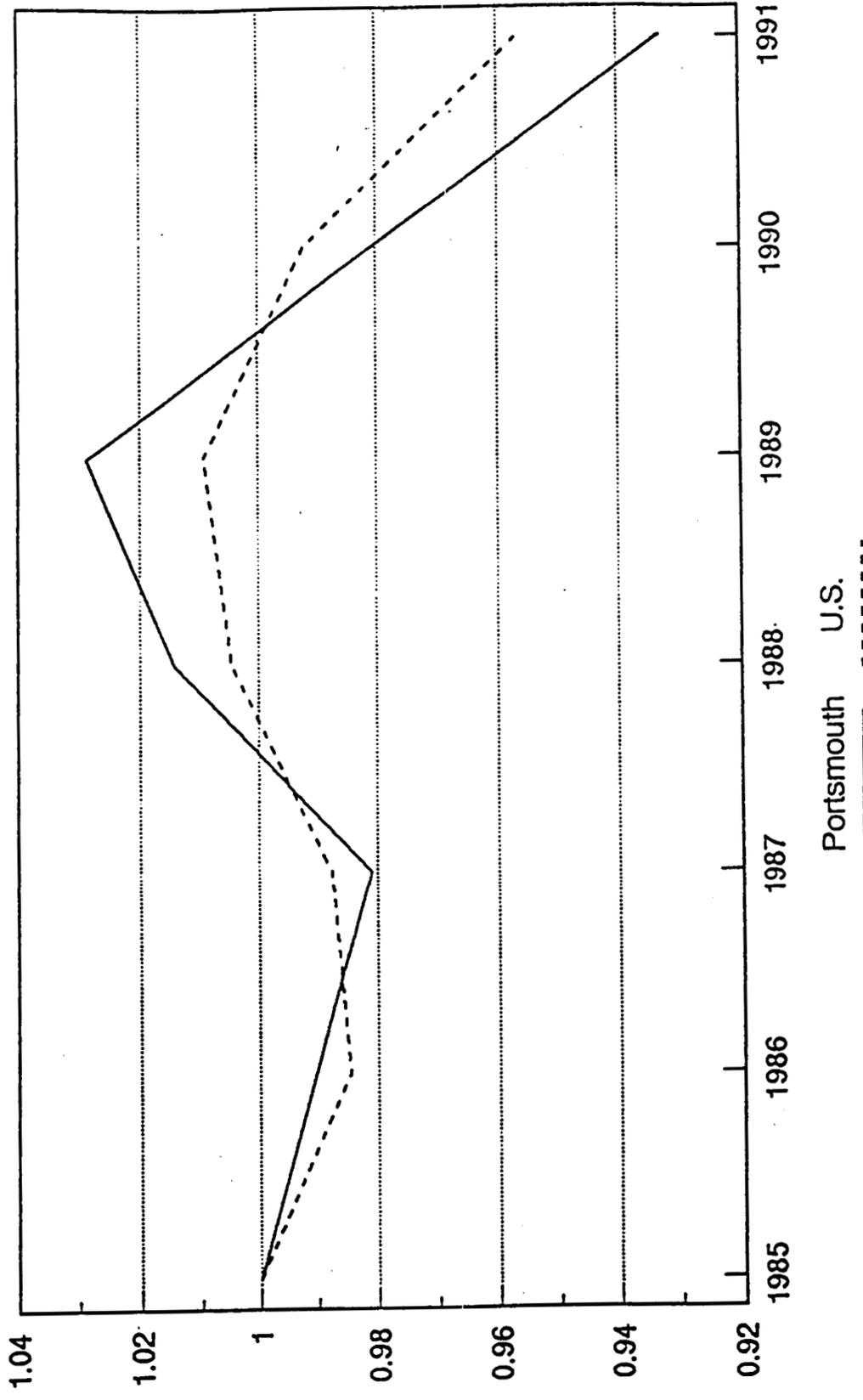
# Manufacturing Employment: Proportion of Total



SOURCE: 1992, Maine Dept. of Labor

Chart 10

# 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

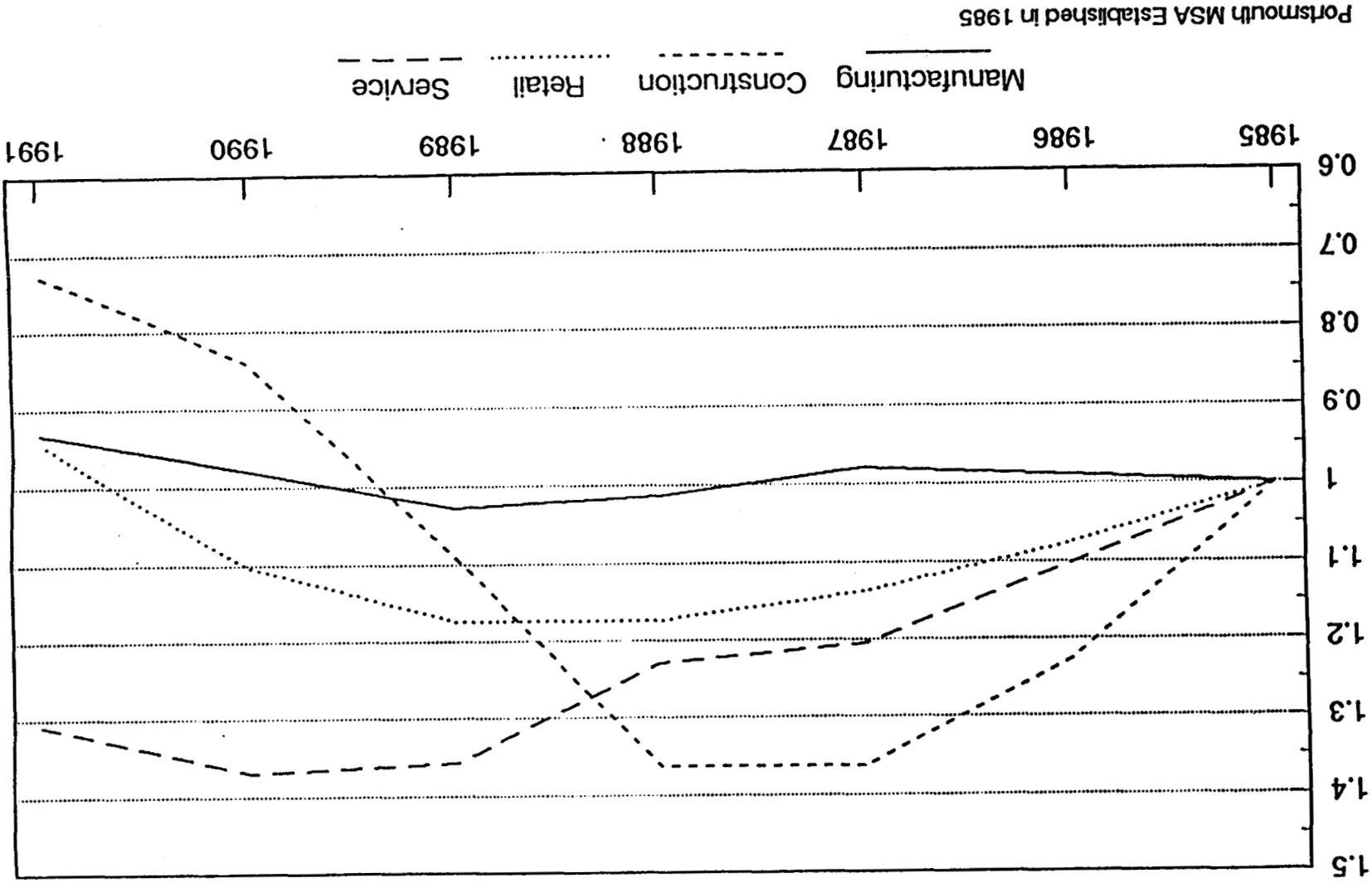


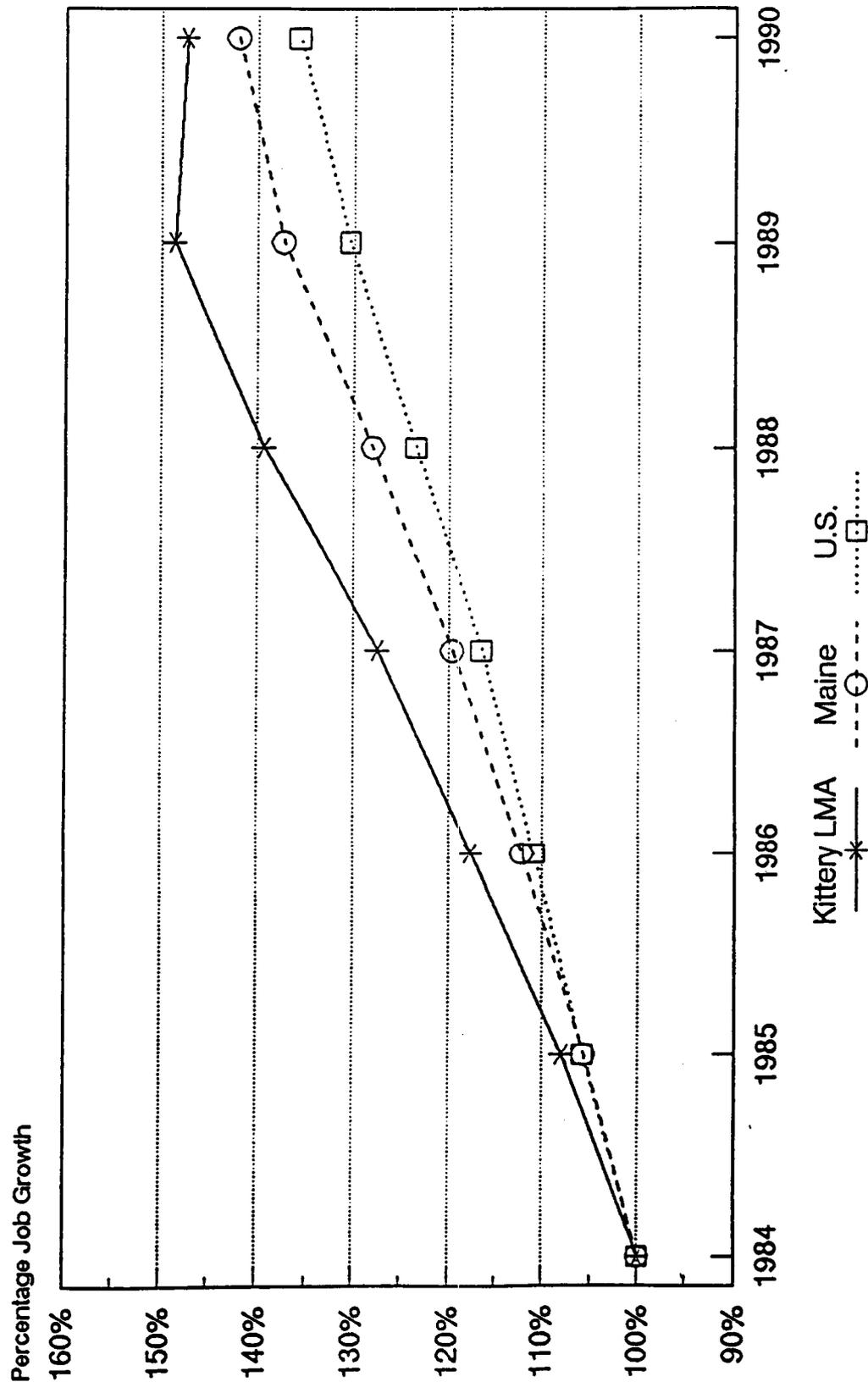
Chart 11

SOURCE: 1992, New Hampshire Dept. of Labor

Portsmouth MSA Established in 1985

# Job Growth in Services

Index: 1984=100

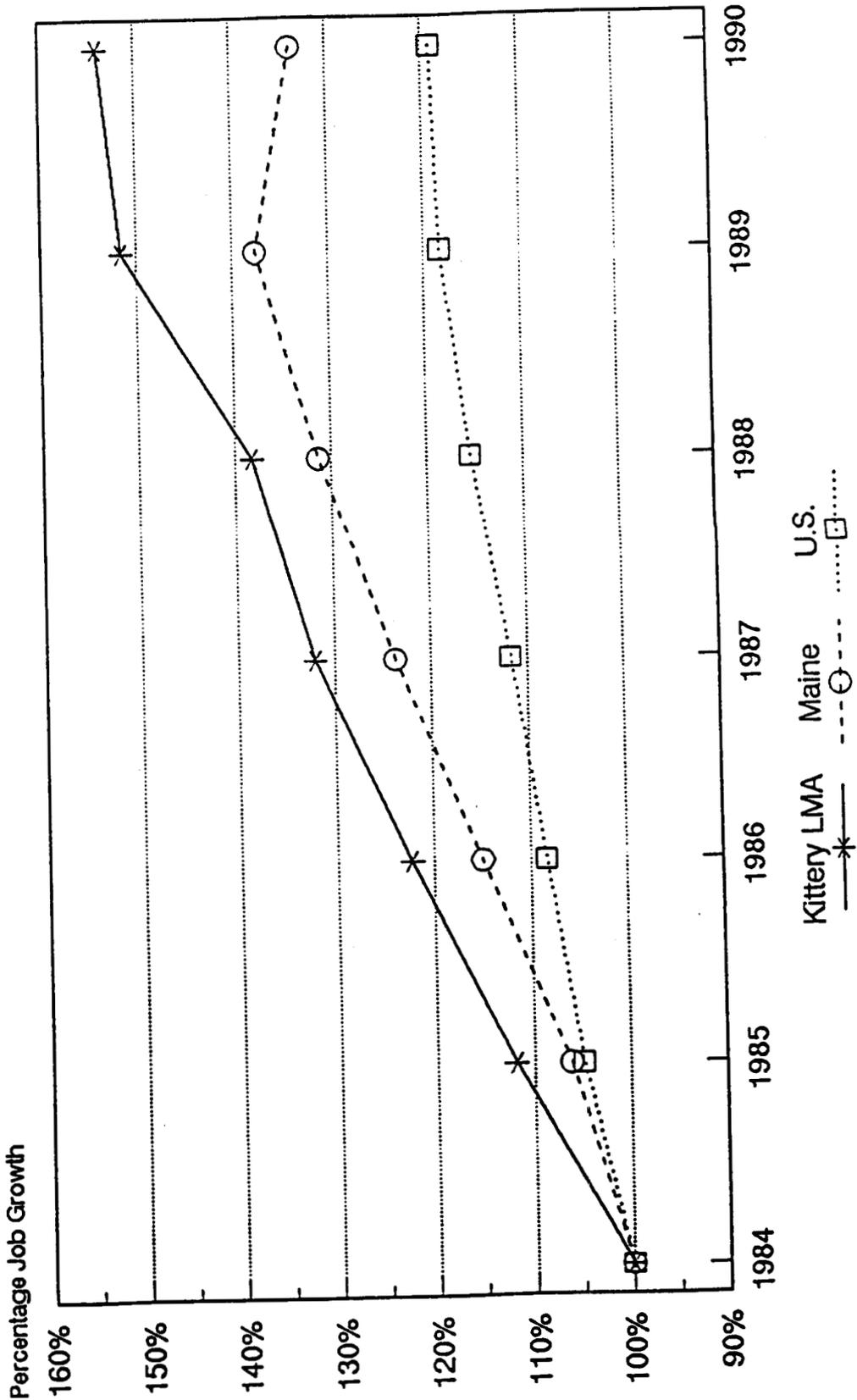


SOURCE: 1992, Maine Dept. of Labor

Chart 12

# Retail Job Growth

Index: 1984=100



SOURCE: 1992, Maine Dept. of Labor

Chart 13

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%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

SOURCE: U.S. Census, 1990.

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%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

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%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

SOURCE: U.S. Census, 1990.

Table 4

**EMPLOYMENT BY INDUSTRY**  
**Employed Residents 16 Years +**  
**(1990)**

	<b>KEYS</b>	<b>York Cty</b>	<b>Maine</b>	<b>U.S.</b>
<b>Agriculture/Forestry/ Fisheries</b>	2.5%	1.8%	2.8%	2.69%
<b>Mining</b>	0.1%	0.1%	0.1%	0.63%
<b>Construction</b>	8.4%	7.7%	7.3%	6.24%
<b>Manufacturing</b>	21.7%	26.0%	19.7%	17.69%
<b>Transportation</b>	3.0%	3.3%	3.4%	4.42%
<b>Communications/ Public Utilities</b>	2.2%	2.0%	2.2%	2.68%
<b>Wholesale Trade</b>	3.1%	3.1%	3.6%	4.38%
<b>Retail Trade</b>	18.9%	17.8%	18.4%	16.84%
<b>Finance/Insurance/ Real Estate</b>	7.2%	6.2%	5.6%	6.90%
<b>Business and Repair Services</b>	3.8%	3.2%	3.5%	4.82%
<b>Personal Services</b>	3.3%	3.5%	3.2%	3.17%
<b>Entertainment/ Recreation</b>	0.7%	0.9%	0.9%	1.41%
<b>Health Services</b>	6.6%	7.5%	9.2%	8.37%
<b>Educational Services</b>	7.9%	7.8%	9.4%	8.33%
<b>Other Professional Services</b>	5.5%	5.4%	6.2%	6.64%
<b>Public Administration</b>	5.2%	3.7%	4.4%	4.79%
<b>TOTAL</b>	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.

EMPTY.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.

EMPTYPE.WK1

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

	Kittery	Eliot	York	S.Berwick	KEYS	York Co.	Maine
<b>1990</b>							
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%
<b>1992</b>							
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%
<b>Change 90-92</b>							
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

Table 7

35

# GENERAL ASSISTANCE

KEYS (1990-92)

	Kittery	Eliot	York	S.Berwick	KEYS	York Co.	Maine
	January 1990						Avg. Monthly
GENERAL ASSISTANCE						(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)
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

Table 8

SOURCE: Maine Department of Human Services.

KEYSGA.WK1

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)
<b>Total</b>	<b>13,624</b>	<b>13,420</b>	<b>13,326</b>

Source: U.S. County Business Patterns

# Recent Economic Performance

Table 11

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

## 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 reach 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:

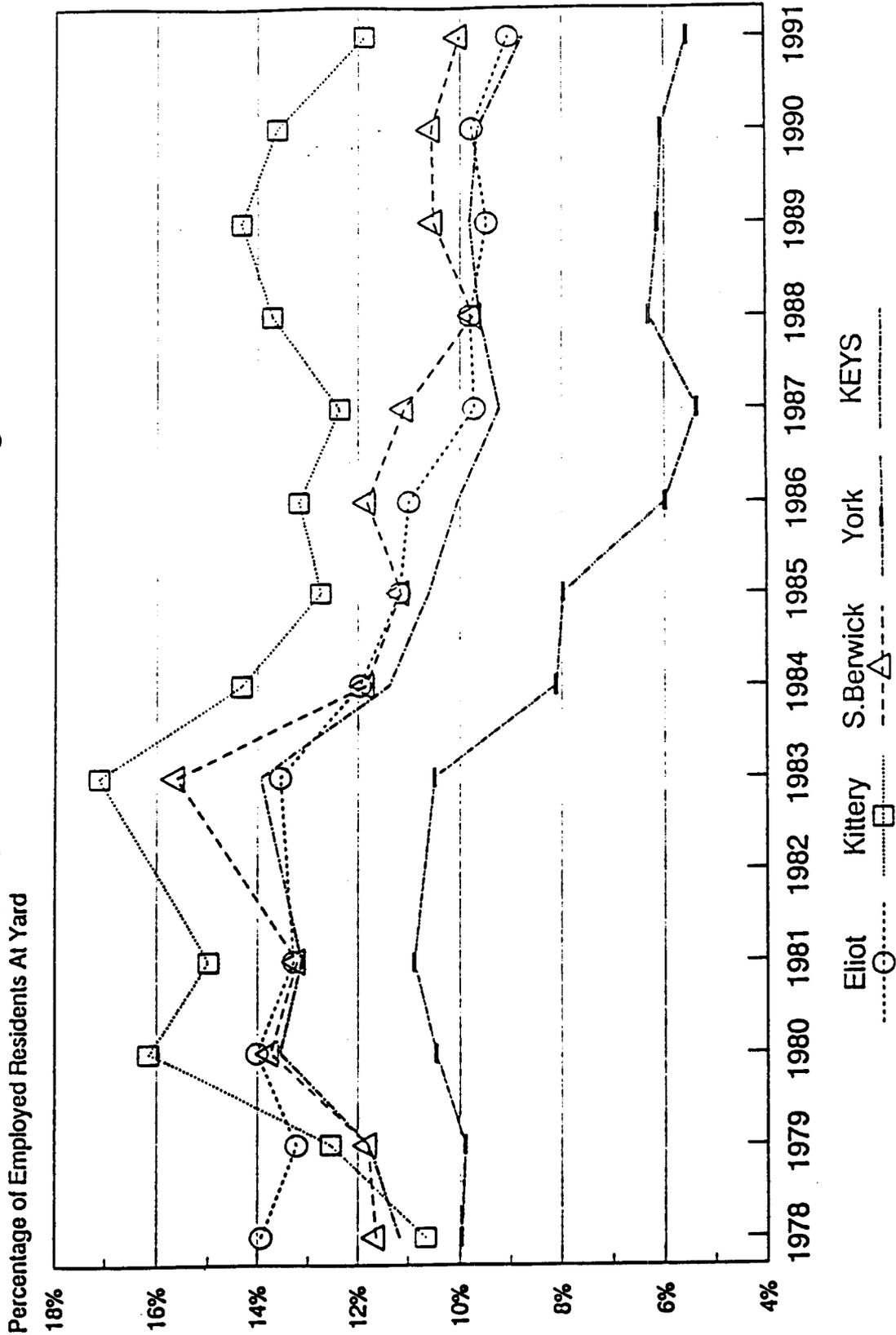
- ◆ a number of companies have already downsized. Companies began to feel the impact of declining defense spending two and three years ago. A number of the companies laid off workers at that time and have now stabilized;
- ◆ a few companies have already diversified. A number of the contractors and subcontractors 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.

Chart 14

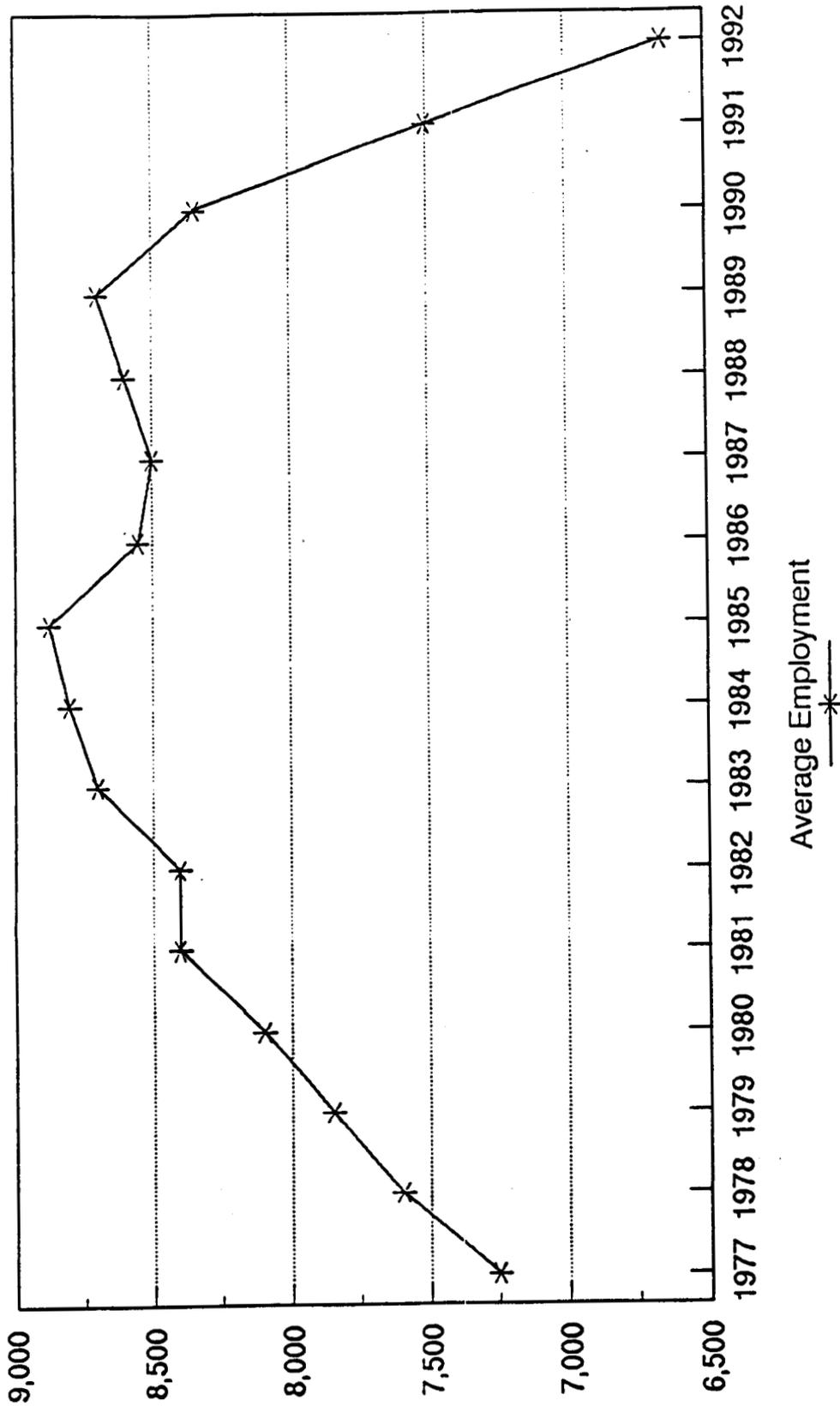
# Dependence on Navy Yard Employment % of Employed Residents Working At Yard



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

# Portsmouth Naval Shipyard

Average Employment: 1977-1992

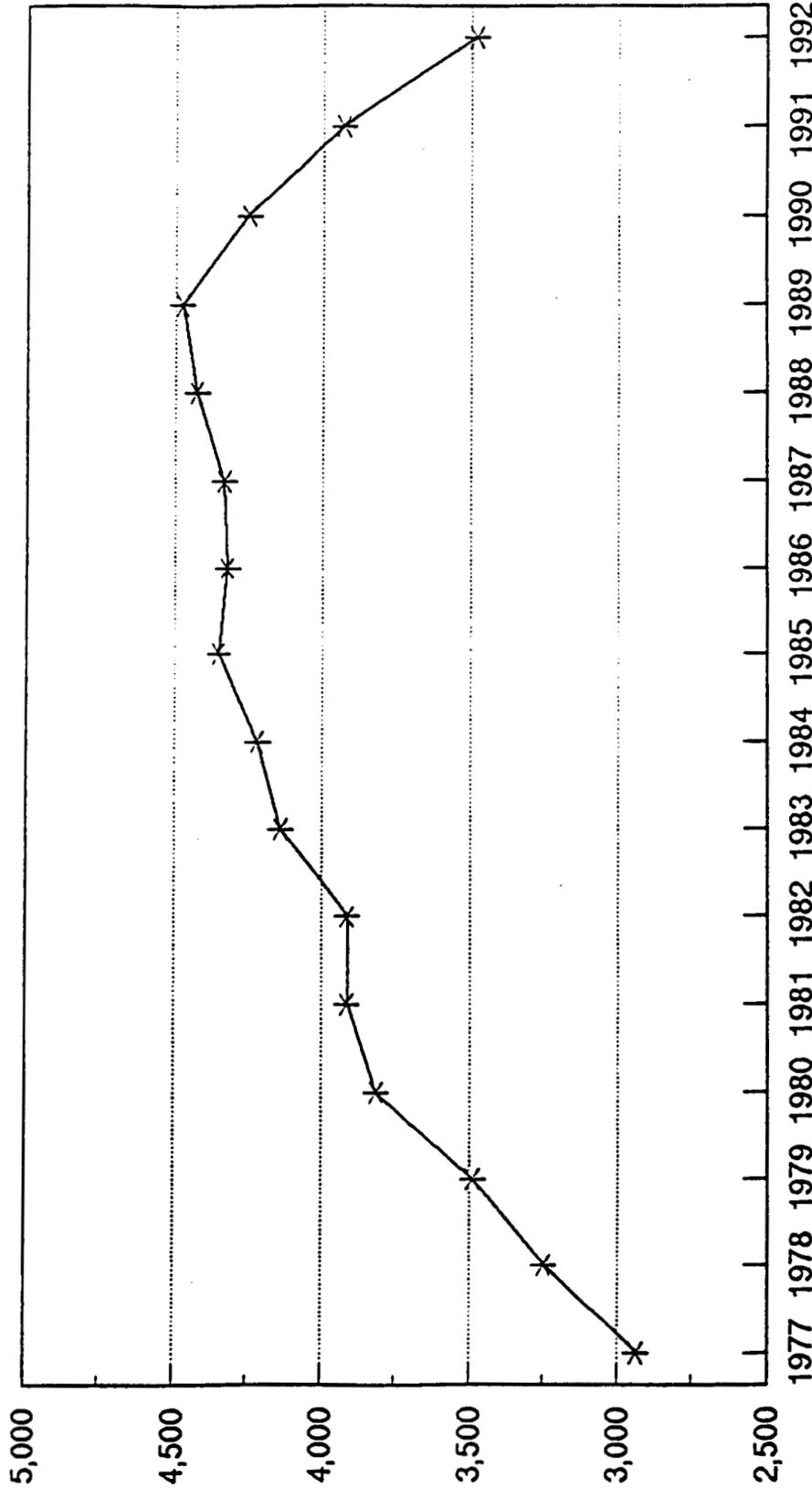


1992 is an estimate

SOURCE: 1992, Mt. Auburn Associates

# Portsmouth Naval Shipyard

Jobs in Maine: 1977-1992



Maine \*

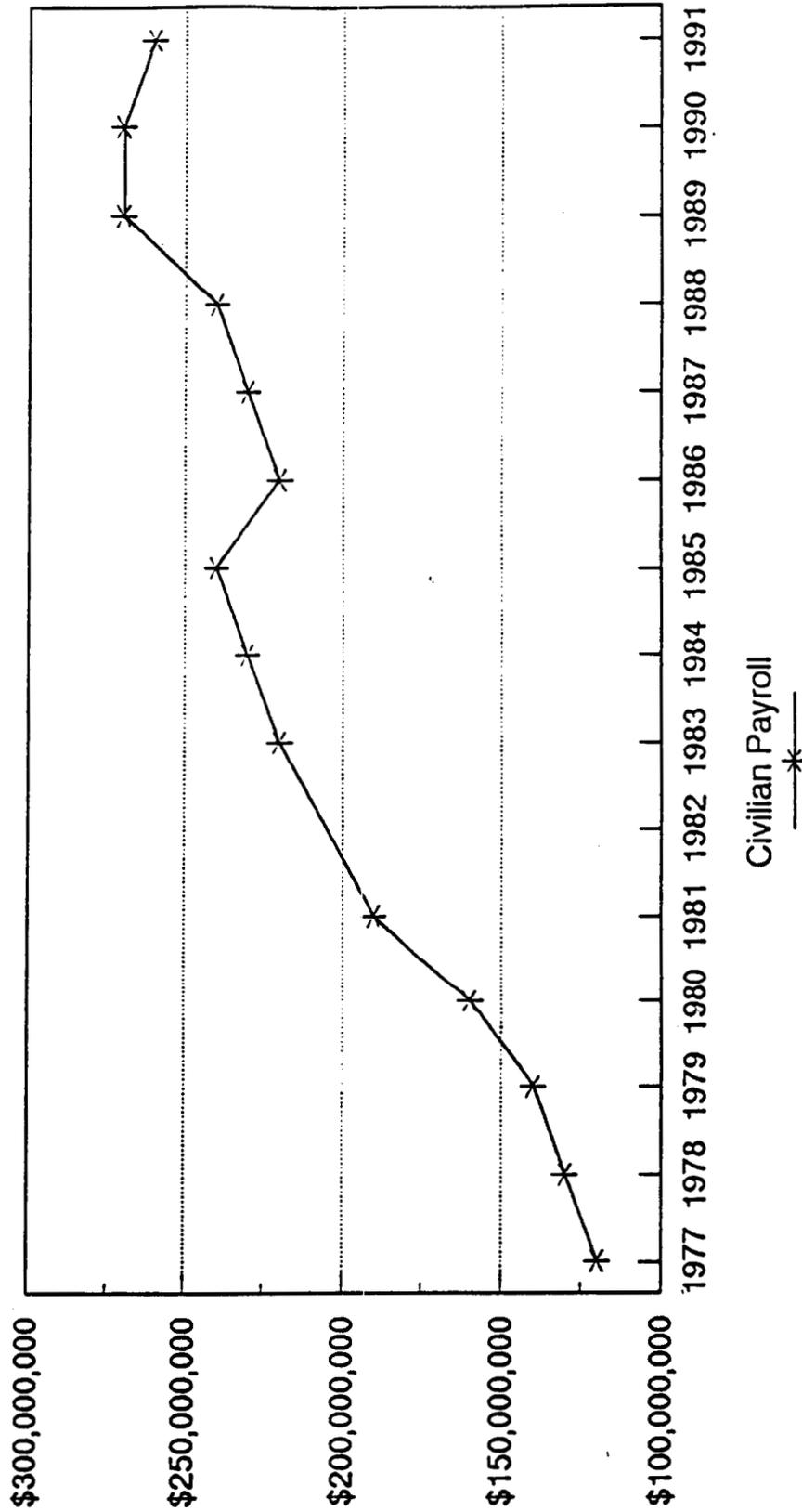
1992 is an estimate

SOURCE: 1991, Seacoast Shipyard Assoc.

Chart 16

# Civilian Payroll 1977-1991

Portsmouth Naval Shipyard  
Actual Dollars



SOURCE: 1991, Seacoast Shipyard Assoc.

Chart 17

# Civilian Payroll 1977-1991

Portsmouth Naval Shipyard

1991 \$

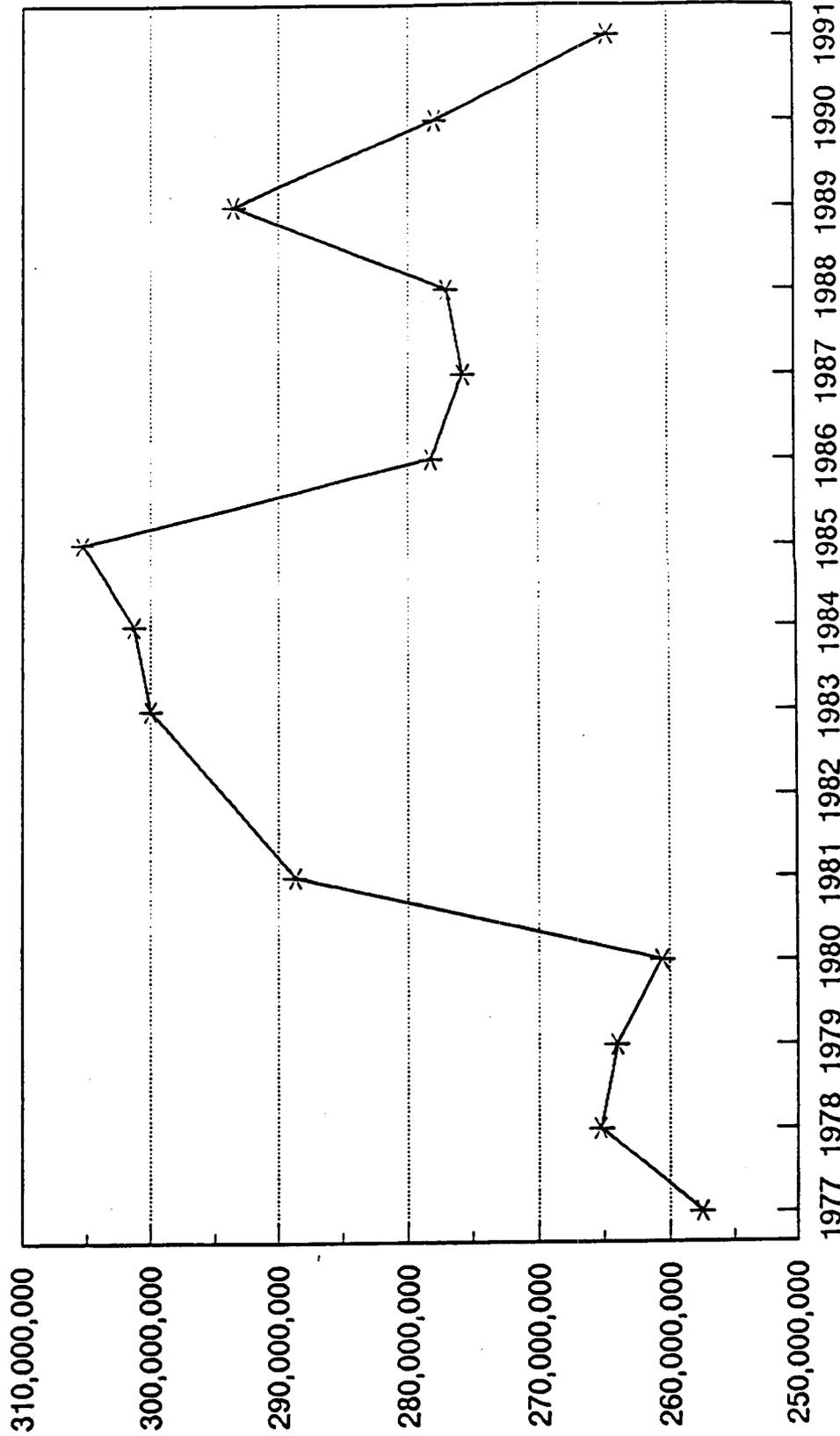


Chart 18

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;<sup>1</sup>
  - ◆ 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;<sup>2</sup>
  - ◆ 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;<sup>3</sup>
- 

<sup>1</sup>Task 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

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

<sup>3</sup>David 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;<sup>4</sup>
- ♦ high area unemployment rates increase the expected duration of joblessness, particularly for blue-collar and female workers.<sup>5</sup>

*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.

-----

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

<sup>5</sup>Paul 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 Planing 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
<b>May 1992 Layoffs</b>								
Kittery	51	8	54	114	\$1,018,490	\$145,664	\$1,181,983	\$2,946,137
Eliot	28	4	30	62	\$968,955	\$87,179	\$707,409	\$1,763,243
York	25	4	27	56	\$908,770	\$81,789	\$683,675	\$1,654,234
S.Berwick	30	5	32	67	\$993,619	\$89,426	\$725,640	\$1,808,685
<b>KEYS TOTAL</b>	<b>135</b>	<b>22</b>	<b>144</b>	<b>301</b>	<b>\$4,489,534</b>	<b>\$404,058</b>	<b>\$3,278,707</b>	<b>\$8,172,299</b>
Other Maine	179	29	191	399	\$6,732,061	\$605,885	\$4,916,424	\$12,254,371
Non-Maine	288	46	305	637	\$9,939,608	\$894,565	\$7,258,898	\$18,093,068
<b>GRAND TOTAL</b>	<b>600</b>	<b>96</b>	<b>640</b>	<b>1,336</b>	<b>\$21,161,202</b>	<b>\$1,904,508</b>	<b>\$15,454,026</b>	<b>\$38,519,736</b>
<b>DOWNSIZING</b>								
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
<b>KEYS TOTAL</b>	<b>315</b>	<b>50</b>	<b>338</b>	<b>702</b>	<b>\$10,485,669</b>	<b>\$943,710</b>	<b>\$7,657,684</b>	<b>\$19,087,063</b>
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
<b>GRAND TOTAL</b>	<b>1,400</b>	<b>224</b>	<b>1,494</b>	<b>3,118</b>	<b>\$49,707,510</b>	<b>\$4,473,676</b>	<b>\$36,301,395</b>	<b>\$90,482,580</b>
<b>FULL CLOSURE</b>								
Kittery	547	88	584	1218	\$18,812,583	\$1,693,132	\$13,738,829	\$34,244,545
Eliot	300	48	320	668	\$11,178,992	\$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
<b>KEYS TOTAL</b>	<b>1,440</b>	<b>230</b>	<b>1,537</b>	<b>3,207</b>	<b>\$51,989,287</b>	<b>\$4,678,766</b>	<b>\$37,965,585</b>	<b>\$94,630,638</b>
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
<b>GRAND TOTAL</b>	<b>6,400</b>	<b>1,024</b>	<b>6,830</b>	<b>14,254</b>	<b>\$248,242,333</b>	<b>\$22,071,810</b>	<b>\$179,100,476</b>	<b>\$446,414,619</b>

SOURCES: Employment and payroll data supplied by Seacoast 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
<b>MAY 1992 LAYOFFS</b>						
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%
<b>TOTAL KEYS</b>	<b>135</b>	<b>584</b>	<b>719</b>	<b>3.1%</b>	<b>3.8%</b>	<b>23.1%</b>
<b>DOWNSIZING</b>						
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%
<b>TOTAL KEYS</b>	<b>315</b>	<b>584</b>	<b>899</b>	<b>3.1%</b>	<b>4.8%</b>	<b>53.9%</b>
<b>FULL CLOSURE</b>						
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%
<b>TOTAL KEYS</b>	<b>1,440</b>	<b>584</b>	<b>2024</b>	<b>3.1%</b>	<b>10.8%</b>	<b>246.6%</b>

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)	(2a)		(2b)		(3)		(4)		(5)		(6)	
	Direct Loss	Labor Migration Outside the Kittery LMA		Population Loss		Workforce Attrition		Workforce Retention		12 Months Later: Estimate of Employed (FT or PT)		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)
<b>MAY 1992 LAYOFFS</b>													
Kittery	51	8	15	19	38	5	8	28	36	21	33	7	8
Ellot	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
<b>TOTAL KEYS</b>	<b>135</b>	<b>20</b>	<b>41</b>	<b>51</b>	<b>101</b>	<b>14</b>	<b>20</b>	<b>74</b>	<b>101</b>	<b>56</b>	<b>86</b>	<b>19</b>	<b>15</b>
<b>MAINE</b>	<b>179</b>	<b>27</b>	<b>54</b>	<b>70</b>	<b>140</b>	<b>18</b>	<b>27</b>	<b>98</b>	<b>134</b>	<b>74</b>	<b>114</b>	<b>25</b>	<b>20</b>
<b>DOWNSIZING</b>													
Kittery	120	18	36	45	90	12	18	66	90	50	77	17	14
Ellot	88	10	20	25	50	7	10	36	50	27	42	9	7
York	59	9	18	22	44	6	9	32	44	24	36	8	7
S. Berwick	70	11	21	26	53	7	11	39	53	29	45	10	8
<b>TOTAL KEYS</b>	<b>315</b>	<b>47</b>	<b>95</b>	<b>118</b>	<b>236</b>	<b>32</b>	<b>47</b>	<b>173</b>	<b>236</b>	<b>130</b>	<b>201</b>	<b>43</b>	<b>35</b>
<b>MAINE</b>	<b>734</b>	<b>110</b>	<b>220</b>	<b>286</b>	<b>573</b>	<b>73</b>	<b>110</b>	<b>404</b>	<b>551</b>	<b>303</b>	<b>468</b>	<b>101</b>	<b>83</b>
<b>FULL CLOSURE</b>													
Kittery	547	82	164	205	410	55	82	301	410	226	349	75	62
Ellot	300	45	90	113	225	30	45	165	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
<b>TOTAL KEYS</b>	<b>1,440</b>	<b>216</b>	<b>432</b>	<b>540</b>	<b>1,080</b>	<b>144</b>	<b>216</b>	<b>792</b>	<b>1,080</b>	<b>594</b>	<b>918</b>	<b>198</b>	<b>162</b>
<b>MAINE</b>	<b>3,354</b>	<b>503</b>	<b>1,006</b>	<b>1,308</b>	<b>2,616</b>	<b>335</b>	<b>503</b>	<b>1,845</b>	<b>2,516</b>	<b>1,384</b>	<b>2,138</b>	<b>461</b>	<b>377</b>

SOURCES: Estimates on migration, attrition, and unemployment taken from the Displaced Worker Survey (1984, -8, -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
<b>MAY 1992 LAYOFFS</b>							
Kittery	\$78,744	\$111,914	\$96,798	1.1%	\$11,518,808	0.8%	\$11,422,010
Eliot	\$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
<b>KEYS TOTAL</b>	<b>\$208,440</b>	<b>\$297,250</b>	<b>\$220,564</b>	<b>0.7%</b>	<b>\$36,874,757</b>	<b>0.6%</b>	<b>\$36,654,193</b>
<b>Grand Total (Maine receipts)</b>	<b>\$926,400</b>	<b>\$1,320,160</b>					
<b>DOWNSIZING</b>							
Kittery	\$185,280	\$263,925	\$227,760	2.7%	\$11,518,808	2.0%	\$11,291,046
Eliot	\$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
<b>KEYS TOTAL</b>	<b>\$486,360</b>	<b>\$693,405</b>	<b>\$518,672</b>	<b>1.7%</b>	<b>\$36,874,757</b>	<b>1.4%</b>	<b>\$36,356,085</b>
<b>Grand Total (Maine receipts)</b>	<b>\$2,161,600</b>	<b>\$3,080,730</b>					
<b>FULL CLOSURE</b>							
Kittery	\$844,568	\$1,203,553	\$1,038,206	12.1%	\$11,518,808	9.0%	\$10,480,602
Eliot	\$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
<b>KEYS TOTAL</b>	<b>\$2,223,360</b>	<b>\$3,168,705</b>	<b>\$2,368,566</b>	<b>8.0%</b>	<b>\$36,874,757</b>	<b>6.4%</b>	<b>\$34,506,191</b>
<b>Grand Total (Maine receipts)</b>	<b>\$9,881,600</b>	<b>\$14,083,490</b>					

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, Eliot/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	Estimate of Future G.A. Caseload 12 Months After Layoffs		% Increase in Number of Cases		Average \$ Cost Per Case/Month CY1991	Projected Total Annual GA Expenditures w/increase		Current FY91 Welfare Expenditures	\$ Increase in Expenditures w/ New GA Caseload		% Increase in Expenditures w/ New GA Caseload	
		(Scenario 1)	(Scenario 2)	(Scenario 1)	(Scenario 2)		(Scenario 1)	(Scenario 2)		(Scenario 1)	(Scenario 2)	(Scenario 1)	(Scenario 2)
<b>MAY 1992 LAYOFFS</b>													
Roseary	42	48	49	14.3%	16.7%	\$202	\$116,352	\$118,776	\$63,626	\$52,726	\$55,150	82.0%	86.7%
Ellis	18	21	22	16.7%	22.2%	\$291	\$73,332	\$79,624	\$62,372	\$10,660	\$14,452	17.6%	23.2%
York	24	27	27	12.5%	12.5%	\$265	\$63,600	\$65,680	\$74,382	\$11,476	\$11,476	15.4%	15.4%
8 Berwick	28	31	32	10.7%	14.3%	\$303	\$112,716	\$118,352	\$96,642	\$16,674	\$18,710	18.8%	20.4%
<b>KEYS TOTAL</b>	<b>112</b>	<b>127</b>	<b>131</b>	<b>13.4%</b>	<b>17.0%</b>	<b>\$265</b>	<b>\$404,241</b>	<b>\$416,673</b>	<b>\$297,022</b>	<b>\$107,219</b>	<b>\$116,951</b>	<b>36.1%</b>	<b>40.4%</b>
<b>DOWNSIZING</b>													
Roseary	42	56	56	33.3%	41.9%	\$202	\$135,744	\$143,016	\$63,626	\$72,116	\$79,380	113.3%	124.6%
Ellis	18	25	27	38.9%	50.0%	\$291	\$52,300	\$64,284	\$62,372	\$24,826	\$31,612	40.0%	51.2%
York	24	31	32	29.2%	33.3%	\$265	\$63,560	\$101,780	\$74,382	\$24,196	\$27,376	32.5%	36.8%
8 Berwick	28	36	36	28.6%	35.7%	\$303	\$130,866	\$136,166	\$96,642	\$34,254	\$41,526	35.4%	43.0%
<b>KEYS TOTAL</b>	<b>112</b>	<b>147</b>	<b>135</b>	<b>31.3%</b>	<b>36.4%</b>	<b>\$265</b>	<b>\$467,901</b>	<b>\$485,366</b>	<b>\$297,022</b>	<b>\$170,678</b>	<b>\$188,343</b>	<b>57.9%</b>	<b>64.1%</b>
<b>FULL CLOSURE</b>													
Roseary	42	104	117	147.6%	178.6%	\$202	\$252,066	\$283,606	\$63,626	\$166,470	\$219,962	260.2%	345.7%
Ellis	18	52	56	188.9%	227.8%	\$291	\$181,564	\$208,064	\$62,372	\$119,212	\$143,656	191.1%	230.3%
York	24	54	61	125.0%	154.2%	\$265	\$171,720	\$183,680	\$74,382	\$87,336	\$116,566	130.8%	160.6%
8 Berwick	28	64	72	128.6%	157.1%	\$303	\$232,704	\$261,762	\$96,642	\$136,062	\$168,150	140.8%	170.6%
<b>KEYS TOTAL</b>	<b>112</b>	<b>274</b>	<b>310</b>	<b>144.6%</b>	<b>178.6%</b>	<b>\$265</b>	<b>\$672,142</b>	<b>\$698,730</b>	<b>\$297,022</b>	<b>\$575,120</b>	<b>\$688,708</b>	<b>193.6%</b>	<b>232.2%</b>

SOURCE: Maine Department of Human Services and KEYS towns.

NOTE: Scenario 1 assumes that 15% (and Scenario 2, 22%) 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

APPENDIX E

APPENDIX F

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

DEMOGRAPHICS	Mbley		York		South Berwick		TOTAL KEYS		% Change 80-90
	1980	80-90	1980	80-90	1980	80-90	1980	80-90	
<b>TOTAL LAND AREA</b> (sq. miles)	16	n/a	55	n/a	32	n/a	125	125	0
<b>POPULATION</b>									
Total Population	9,314	0.6%	4,948	5,329	4,040	5,877	26,775	30,346	13.8%
Numbers of Households	3,256	10.6%	1,880	1,830	1,380	2,104	9,478	11,432	20.6%
Average Household Size	2.61	-5.2%	2.63	2.78	2.86	2.78	2.72	2.61	-3.9%
% 65 Years and Over	12.2%	7.4%	9.3%	10.9%	11.7%	8.8%	12.2%	12.4%	0.2%
Median Age	30.5	8.9%	30.7	34.8	30.6	31.8	n/a	n/a	n/a
<b>HOUSING</b>									
Total Units	3,559	9.6%	1,827	2,038	1,487	2,282	12,887	14,712	15.0%
Year Round Vacant Units	231	30.3%	65	108	87	158	824	3,280	248.1%
Seasonal Units	72	30.6%	82	36	20	30	2,385	2,410	1%
Vacancy Rate (Year Round Reg)	6.6%	7.9%	4.6%	5.3%	5.9%	7.1%	6.0%	20.7%	18.7%
Owner Occupied Units	2,228	2.34%	1,413	1,611	965	1,000	7,068	8,578	21.3%
Median Value (Current)	\$43,500	\$132,300	\$50,000	\$138,000	\$41,700	\$121,200	n/a	n/a	n/a
Median Value (1991 \$)	\$64,322	\$135,553	\$94,329	\$141,393	\$77,279	\$124,180	n/a	n/a	n/a
Renter Occupied Units	1,208	16.0%	329	322	415	504	n/a	n/a	n/a
Median Value (Current)	\$208	n/a	\$221	\$541	\$201	\$474	n/a	n/a	n/a
Median Value (1991 \$)	\$308	33.7%	\$410	\$554	\$372	\$488	n/a	n/a	n/a
<b>INCOME</b>									
Median Held Income (Current \$)	(1979)	(1989)	(1979)	(1989)	(1979)	(1989)	(1979)	(1989)	(1991)
Median Held Income (Current \$)	\$17,175	\$33,793	\$18,130	\$38,280	\$18,637	\$37,770	n/a	n/a	n/a
Median Held Income (1991 \$)	\$31,069	\$37,123	\$33,420	\$42,052	\$30,877	\$41,491	n/a	n/a	n/a
Per Capita Income (Current \$)	\$7,548	\$13,712	\$7,170	\$14,018	\$6,136	\$15,091	n/a	n/a	n/a
Per Capita Income (1991 \$)	\$13,918	\$17,280	\$13,221	\$18,368	\$11,318	\$18,578	\$13,511	\$17,859	32.0%
% Pop. Below Poverty Level	6.1%	3.5%	8.3%	4.5%	10.7%	3.4%	7.2%	3.5%	-3.6%
Number People Below Poverty Level	523	313	308	239	420	199	1,918	1,077	-43.6%
<b>EDUCATIONAL ATTAINMENT</b> (Persons 25 years +)									
% Completing High School	75.4%	85.5%	77.3%	87.7%	66.6%	87.2%	66.6%	87.2%	20.0%
% Completing 4 Years of College +	15.9%	22.7%	16.0%	20.5%	14.6%	28.7%	14.6%	28.7%	12.1%

SOURCE: SMFPC, 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.

POPULATION		HOUSING		% 65 Years and Over		Median Age		Year Round Vacant Units		Seasonal Units		Owner Occupied Units		Median Value (Current)		Median Value (1991)		Renter Occupied Units		Median Contract Rent (Current)		Median Contract Rent (1991)		INCOME		Median (Head Income (Current \$)		Median (Head Income (1991 \$)		Per Capita Income (Current \$)		Per Capita Income (1991 \$)		% Pop. Below Poverty Level		EDUCATIONAL ATTAINMENT		(Persons 25 years +)		% Completing High School		% Completing 4 Years of College or More	
U.S.	224,548	U.S.	66,750	U.S.	11.3%	U.S.	30.0	U.S.	32,183	U.S.	n/a	U.S.	280,377	U.S.	\$40,300	U.S.	\$74,885	U.S.	114,807	U.S.	\$172	U.S.	\$281	U.S.	\$18,841	U.S.	\$31,053	U.S.	\$10,300	U.S.	\$19,140	U.S.	8.6%	U.S.	64.5%	U.S.	22.1%						
Maine	1,125,000	Maine	501,000	Maine	12.5%	Maine	30.4	Maine	32,183	Maine	13,350	Maine	35,847	Maine	\$42,800	Maine	\$79,318	Maine	27,260	Maine	\$172	Maine	\$328	Maine	\$13,818	Maine	\$25,475	Maine	\$8,788	Maine	\$11,038	Maine	8.8%	Maine	14.4%	Maine	14.4%						
YORK CO.	130,000	YORK CO.	66,900	YORK CO.	12.7%	YORK CO.	30.9	YORK CO.	824	YORK CO.	2,395	YORK CO.	7,068	YORK CO.	\$42,800	YORK CO.	\$79,318	YORK CO.	27,260	YORK CO.	\$172	YORK CO.	\$328	YORK CO.	\$28,908	YORK CO.	\$31,754	YORK CO.	\$8,252	YORK CO.	\$13,511	YORK CO.	7.2%	YORK CO.	14.4%	YORK CO.	14.4%						
KEYS.	26,773	KEYS.	12,097	KEYS.	12.2%	KEYS.	n/a	KEYS.	824	KEYS.	2,395	KEYS.	227,888	KEYS.	\$79,100	KEYS.	\$81,045	KEYS.	4,805	KEYS.	\$356	KEYS.	\$307	KEYS.	\$28,908	KEYS.	\$31,754	KEYS.	\$12,057	KEYS.	\$15,441	KEYS.	10.8%	KEYS.	23.4%	KEYS.	23.4%						
U.S.	1,227,828	U.S.	587,045	U.S.	13.3%	U.S.	33.9	U.S.	121,733	U.S.	80,030	U.S.	327,888	U.S.	\$87,400	U.S.	\$89,549	U.S.	137,424	U.S.	\$356	U.S.	\$440	U.S.	\$28,908	U.S.	\$31,754	U.S.	\$12,057	U.S.	\$15,441	U.S.	10.8%	U.S.	23.4%	U.S.	23.4%						
Maine	104,587	Maine	79,941	Maine	12.6%	Maine	33.7	Maine	18,000	Maine	12,930	Maine	44,313	Maine	\$115,200	Maine	\$110,033	Maine	17,535	Maine	\$440	Maine	\$440	Maine	\$28,908	Maine	\$31,754	Maine	\$12,057	Maine	\$15,441	Maine	10.8%	Maine	23.4%	Maine	23.4%						
YORK CO.	30,308	YORK CO.	14,712	YORK CO.	12.4%	YORK CO.	n/a	YORK CO.	3,200	YORK CO.	2,410	YORK CO.	8,578	YORK CO.	\$115,200	YORK CO.	\$110,033	YORK CO.	2,858	YORK CO.	\$440	YORK CO.	\$440	YORK CO.	\$28,908	YORK CO.	\$31,754	YORK CO.	\$12,057	YORK CO.	\$15,441	YORK CO.	10.8%	YORK CO.	23.4%	YORK CO.	23.4%						
U.S.	30,308	U.S.	14,712	U.S.	1.2%	U.S.	8.7%	U.S.	3,200	U.S.	2,410	U.S.	8,578	U.S.	\$115,200	U.S.	\$110,033	U.S.	2,858	U.S.	\$440	U.S.	\$440	U.S.	\$28,908	U.S.	\$31,754	U.S.	\$12,057	U.S.	\$15,441	U.S.	10.8%	U.S.	23.4%	U.S.	23.4%						
Maine	11,432	Maine	61,848	Maine	1.2%	Maine	11.5%	Maine	3,200	Maine	2,410	Maine	8,578	Maine	\$115,200	Maine	\$110,033	Maine	2,858	Maine	\$440	Maine	\$440	Maine	\$28,908	Maine	\$31,754	Maine	\$12,057	Maine	\$15,441	Maine	10.8%	Maine	23.4%	Maine	23.4%						
YORK CO.	17.7%	YORK CO.	17.2%	YORK CO.	0.8%	YORK CO.	11.5%	YORK CO.	278.1%	YORK CO.	-3.1%	YORK CO.	16.9%	YORK CO.	27.5%	YORK CO.	48.8%	YORK CO.	19.7%	YORK CO.	15.1%	YORK CO.	34.8%	YORK CO.	n/a	YORK CO.	n/a	YORK CO.	25.7%	YORK CO.	35.5%	YORK CO.	1.0%	YORK CO.	11.0%	YORK CO.	4.4%	YORK CO.	4.4%				
KEYS.	17.6%	KEYS.	18.5%	KEYS.	-0.1%	KEYS.	9.1%	KEYS.	378.5%	KEYS.	-0.9%	KEYS.	21.3%	KEYS.	27.5%	KEYS.	48.8%	KEYS.	-35.7%	KEYS.	34.8%	KEYS.	n/a	KEYS.	n/a	KEYS.	n/a	KEYS.	25.7%	KEYS.	35.5%	KEYS.	-3.0%	KEYS.	11.0%	KEYS.	4.4%	KEYS.	4.4%				
Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90		Change 1980-90			

SOURCE: SAMPFC, 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 G

APPENDIX H

SEACOAST MANUFACTURER'S SURVEY  
1992 (N=42)

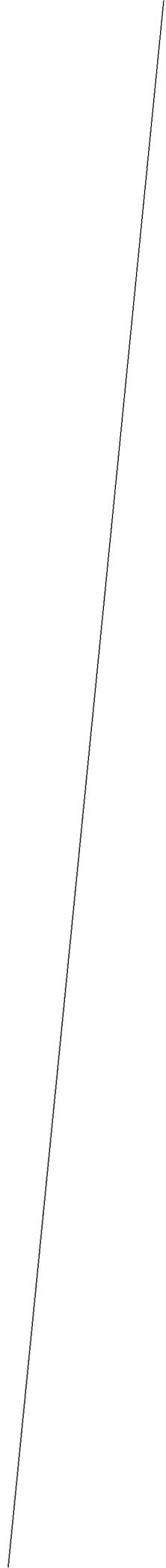
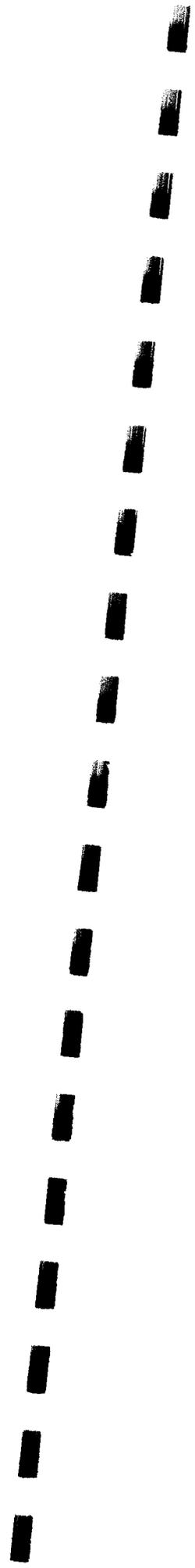
Business Perceptions of Economic Environment in Southern Maine

	Positive	Neutral	Negative
Quality of Life	81.6%	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 Resource	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.

BUSSURV.WK1









## **DRAFT--Do Not Release**

Some notes about the day:

- It will be hot. There will be an opportunity to shed jackets immediately after the press availability, and I suggest that we do so, after removing wallets. Senator Cohen is expected to do the same, and the Navy contingent will be in khakis.
- 
- We will be wearing earphones with radios so that the entire group can hear the speakers. If you get too far in the back of the group, which will be large, reception gets poor. When we go in buildings, you may need to adjust the volume.
- 
- Shortly after the tour commences, we will enter two elevators, each of which holds ten people. The shipyard commander prefers that all Commissioners and Navy Brass be on the first trip to the roof. The roof of the Headend Building overlooks Drydock #2, in which USS MEMPHIS is docked. Tiles on the roof “float” so watch your step.
- 
- After the tour of Drydock #2, there is some “schmooze time” built into the schedule during the ten-minute bus ride to the museum.
- 
- In addition to the attendees noted in the base summary, Admiral Natter (Congressional Relations) will be with us. Also, for you CEC-types, the Public Works Officer, CAPT Chuck Navin, will also be with us.
- 
- Please adjust your hardhats on the van ride up to the shipyard.

The shipyard employees are aware that excess capacity is probably the most significant factor affecting their continued existence. While acknowledging the difficulties of measuring shipyard capacity, they feel that Maximum Potential Capacity as presented in the certified data is not sustainable. They point to the mid-80s, when the shipyards were quite busy, and note the difficulties that the shipyards had in maintaining cost and schedule. The shipyard scheduler stated that, in addition to drydock availability, a number of other factors--particularly personnel--can be on the critical path to timely project completion. Due to the layered nature of systems aboard submarines, many jobs are precisely sequenced, such that, if a particular type of welder is unavailable, several follow-on jobs might be held up.

We have asked the Navy to comment officially on the sustainability of maximum potential capacity. We have not yet received a certified response; however, the indications are that it can be sustained, but only by adding more people and more shifts.

# Document Separator

**Clinton Talks to Several New Hampshire Radio Stations**

MANCHESTER, N.H. (AP) Although President Clinton has not seen the defense department's list of proposed military base closings, he does not believe Portsmouth Naval Shipyard will be on it.

In a radio interview with WZID in Manchester Tuesday, Clinton said he has no reason to believe Portsmouth Naval Shipyard will be closed as part of defense department cuts.

"My best judgment is that that will not happen," he said. "This process has received lot of scrutiny and speculation as it always does, but i have done my best to make sure it is as non-political as possible on the one hand, but that on the other hand the aggregate economic impact on various states and regions is carefully considered."

Clinton told several radio talk show hosts in New Hampshire Tuesday that he plans to be a frequent visitor.

"I think you can look forward to seeing me several times," he said, without committing to firm dates.

On WGIR in Manchester, Clinton responded to criticism that he has trouble committing to one side of certain issues.

"I am the only president ever, ever to oppose the National Rifle Association in the Congress. It's probably not popular in New Hampshire," he said.

"I think the Brady bill is the right thing to do. It's saving lives. I don't think we need a million assault-style weapons on the streets of our cities in order to protect the rights of the people. ... And that's something I went to the wall on."

Clinton credited former U.S. Rep. Dick Swett, who lost his bid for a third term in November, with co-writing the original bill on congressional accountability. A similar bill recently was passed by Congress and signed into law by Clinton.

Clinton also pitched a tax cut plan that he promised 3&1/2 years ago on the campaign trail, saying it would "directly impact the people of New Hampshire in, I would say, potentially several ways."

Under the plan, middle class taxpayers would be able to take deductions for pre-teen dependents and higher education and job training, he said. Also, tax-free IRAs would be allowed for college, a new home, or care of an elderly parent.

# War between the states

*Shipyards in Connecticut and Mississippi both need Navy contracts. Only one might survive*

In 1946, when the Navy stopped buying submarines, the Electric Boat Co. turned its red-brick shops on the banks of Connecticut's Thames River to new business. Using the "same ingenuity [it] had applied to building submarines," the shipyard introduced the electric Pin-Boy, an automatic bowling-pin-setting machine. Although the Pin-Boy met the strict standards of the National Duckpin Bowling Congress, it was the cold war, the nuclear-powered submarine Nautilus and its descendants that kept Electric Boat afloat for the next 40 years.

Duckpins won't save Electric Boat or the U.S. shipbuilding industry this time, either. The Navy wants to spend \$1.5 billion this year to finish paying for the third \$2.4 billion stealthy Seawolf-class submarine from Electric Boat. Last week, Electric Boat unveiled the first Seawolf at its Groton, Conn., shipyard. But there isn't enough money or shipyard work to go around. And down below Interstate 10 in Pascagoula, Miss., Ingalls Shipbuilding needs work, too.

Ingalls, a division of Litton Industries, is ready to build a seventh LHD-class Marine amphibious ship for \$1.4 billion, but the Marines don't plan to buy another LHD until 2001. Unless, of course, they can find more money. So bad news this year for Connecticut's Electric Boat, a division of General Dynamics, would be good news for Mississippi's Ingalls. "The money that is most vulnerable is for the Seawolf submarine at Electric Boat," says Ronald O'Rourke, a naval expert at the nonpartisan Congressional Research Service. "And Ingalls's LHD-7 is the ship people would most like to add."

Both vessels have their champions. The Marines say they need 12 big-deck helicopter carriers to respond to crises from Somalia to Haiti; the LHD-7 would be the 12th. The Navy says it needs the Seawolf and a new attack submarine being designed by Electric Boat to outperform new Russian subs: In a briefing nicknamed "The Bear Swims," the Navy claims a half-dozen Russian submarines are now harder to detect than any U.S. boat. Still, the Navy does not need to buy a third Seawolf this year in order to reach its goal of 10 to 12 stealthy subs by 2012.

But military requirements will take a back seat to shipyard politics in this debate. "Logic doesn't play a hand in some of the decisions we make," said Virginia Democratic Rep. Norm Sisisky at a recent hearing on the third Seawolf.

**Hidden agenda.** Arizona Sen. John McCain, a naval aviator whose father was

a submarine commander in World War II, calls the Seawolf a cold war relic. Virginia Republican Sen. John Warner and his House colleagues from Norfolk aim to pry more than \$48 billion in future submarine business away from Electric Boat to Virginia's Newport News Shipbuilding, the nation's only builder of nuclear-powered aircraft carriers. If they do so, they will sink the third Seawolf.

While Electric Boat and Newport News haggle over nuclear submarines, Ingalls is keeping a low profile. But Mississippi Sen. Trent Lott, whose father was a pipe fitter at Ingalls, concedes that if the Seawolf is sunk, "that would be a pot of money" he would tap to pay for the LHD-7. Pascagoula's congressman, Democrat Gene Taylor, isn't bashful, either. "If they were going to kill that \$1.5 billion baby," he says, "I'd just as soon adopt it." And while the politicians maneuver, workers in Pascagoula and Groton keep pulling cable, welding ship hulls and bending pipe—and waiting to learn whether they will have jobs next year.

Ingalls's 800-acre yard on the Pascagoula River employs 13,700 people. Even if the yard gets to build the LHD-7 next year, that force is scheduled to shrink—and without the ship, Ingalls will lay off 1,600 workers more in each of four years. R. G. "Snapper" Box could be one of them. A pipe fitter's apprentice who earns roughly \$22,000 a year, he has been assigned to hydraulics work, where the military's tolerance for mistakes is especially low. When he has completed his four-year apprenticeship, he'll be on the bottom rung of the seniority ladder.

L. C. Bender, a shipfitting supervisor who helps build the structures of the big ships, has worked 23 years at Ingalls. This spring day he is working in what will be the hangar bay of LHD-5. Now it is just a shell, one of five 8,000-ton, 100-foot-tall modules that will be fitted together to make the 850-foot-long vessel. Bender has worked on all five LHDs, but if Ingalls doesn't get a contract for the seventh this year, he expects to be demoted:

There won't be anyone left to supervise.

What Bender has learned would be lost—one reason Ingalls says it would cost the Marines \$2.1 billion to buy the LHD-7 in 2001 but just \$1.4 billion now. "A lot of things that happened on a previous hull you can correct on the hull that you're working," Bender says. Ingalls's president, Jerry St. Pé, hopes Congress will be tempted by the lower price: "If you do need the ship, the smart thing to do is to build it sooner rather than later."

Electric Boat uses similar arguments for building the third Seawolf this year. A newer submarine is being designed to swim as quietly as the Seawolf, maneuver more ably in shallow water and deploy SEALs, the Navy's special forces. But the first won't be ordered before 1998, and Electric Boat won't be able to retain its work force without building the Seawolf in the interim. "What is the best way to be sure that you can build these very, very complex [submarines]?" asks James E. Turner Jr., Electric Boat's president. "The only way we can be assured of having this capability in the future is to continue and design and build." In short, the nation must buy submarines today in order to be able to build them tomorrow.

Without work, Electric Boat could lose the people who do the unique welding and wiring at its Groton and Quonset Point, R.I., yards. Sunlight streams into Quonset Point's electrical shop, where Joe Gilheeny wires the weapons-launch console of the second Seawolf. The light is a blessing: It takes four months of 10-hour days to weave 7 miles of wire into the 16,500 connections in the system that controls the torpedo tubes and cruise-missile launchers.

If Electric Boat fails to land the third Seawolf, it will close Quonset Point and mothball its machines. "I'll be laid off," says Gilheeny. And, if he leaves, he won't come back; he already has a job offer in Colorado. "I've been an outside electrician," he says. "Not just anybody could walk in and do this. It's almost like artwork; there's a finesse to it."

**A feel for steel.** Some 200 people used to work at Quonset Point's steel-processing facility, where steel is bent into hulls. Now just 25 are finishing the last sub the Navy has ordered. "Bending steel is not something you take out of a textbook," says Roger Ball, the foreman, who has almost 19 years on the job. "There aren't too many people who have a feel for the steel."

Without the third Seawolf,

Electric Boat will lose Ball. "I'm not a box of rocks," he says. "I can leave here today and get a job." But once out the door, he won't be back, either. "It's gonna cost 'em. I'll be honest with you," he says. "For me to come back here with the chance of being laid off again, I don't want to go through it all over again."

Skilled workers like Ball and Gilheeny and the nuclear-qualified pipe fitters at Electric Boat won't be easy to replace. "I'm 54," says machine shop area superintendent Hank Moretti. "Say this place closes and 10 years from now it starts up again, I'm not going to want to come back to work. Go look at the guys in here. There are no kids doing this today." The cost of replacing Electric Boat's workers may

save their jobs. It would cost \$1.5 billion to build the third Seawolf this year but at least \$1 billion to cancel it, since Electric Boat would shift overhead costs to other work such as the new sub it is designing. Shipbuilding is a dying industry in America, kept alive largely by the mili-

OIL...  
from  
Pg. 6

to a U.N. Persian Gulf War reparations fund and \$200 million to U.N. agencies providing relief to Kurds and others in northern Iraq.

This would leave Baghdad with about \$1 billion over six months for relief purchases, as opposed to \$900 million of \$1.6 billion under an original oil sales plan formulated in 1991.

YARDS...Pg. 8

# Top brass fear White House is 'manufacturing' Iran crisis

By Rowan Scarborough  
THE WASHINGTON TIMES

Senior U.S. military officers say Iran is building up forces around the Strait of Hormuz for defensive purposes, and some worry that the Clinton administration is "manufacturing a crisis" over the deployments.

One officer involved in maintaining American forces around the Persian Gulf said Defense Secretary William Perry is giving "inflated" numbers for an Iranian troop buildup around the strait, a vital shipping channel for oil.

"I think they've [Iran] taken action purely as a defensive countermeasure to what we've been trying to do," said a senior Army officer. "They're afraid of what we might do."

Navy and Army officers said in recent interviews that it appears the hard-line Muslim regime began positioning troops and missiles around the strait in October as a reaction to two U.S. moves: the bolstering of American forces in the Gulf region after Iraqi divisions menaced Kuwait and the Navy's diversion of two Iranian-flagged oil tankers.

"Shipping intercepts had increased last fall in the Gulf," one military officer said. "They're violently opposed to the U.S. being in the Gulf anyway."

Led by the carrier USS Constellation, a Navy battle group is intercepting and inspecting ships to enforce a U.N. embargo on Iraq. U.S. intelligence has detected Iranian tankers attempting to smuggle Iraqi oil out of the Gulf in exchange for a per-barrel fee.

A Defense Department official said the number of inspections has slackened and no Iranian tanker has been stopped in recent weeks.

Concerning the Iranian buildup, the Clinton administration itself has given conflicting public assessments of why the revolutionary government moved to station troops, anti-ship missiles and anti-aircraft missiles around the strait.

At first, Gen. John Shalikashvili, chairman of the Joint Chiefs of Staff, expressed alarm over the deployment.

"What this is all about bothers us very much," he said on March 1.

The next day, however, President Clinton played down the development, as did Defense Department spokesman Ken Bacon.

"We don't see it as something that's designed to threaten international or U.S. shipping in the area," Mr. Bacon told reporters.

But Mr. Perry, while on a trip to the Middle East to encourage moderate Arab states to increase their defenses last week, sounded the

alarm again over the Iranian deployment.

"We consider it a very threatening action on their part. . . . It can only be regarded as a potential threat to shipping in the area," Mr. Perry said during a news conference aboard the frigate USS McClusky in Abu Dhabi, United Arab Emirates.

The defense secretary wants Saudi Arabia, Kuwait and other allied Gulf nations to hold more joint exercises with the United States. He also asked the United Arab Emirates to play host to enough pre-positioned weaponry to equip 4,000 American troops.

Mr. Perry told reporters Iran had stationed 6,000 troops on islands near the strait.

But an Army and a Navy officer with access to the intelligence reports said in interviews that the correct figure is about 3,700.

"It sounds to me like we're trying to manufacture a crisis," said a senior Army officer. "If you ask me, the best thing we could do is to ignore those troops. What offensive action could they launch from an island?"

As for Mr. Perry's assertion that the buildup is a "potential threat to shipping," the Army officer said: "Why would they [Iran] want to close the Strait of Hormuz? The only money they make is from oil, and every drop of it comes through the Strait of Hormuz."

The military officers, who agreed to be interviewed on the condition that they not be identified, also said intelligence analysts at the Pentagon and at U.S. Central Command in Florida have concluded that Iraq, in fact, did intend to invade Kuwait a second time last October out of frustration over the crippling effects of the international embargo.

It is difficult to determine the intent of Iraqi units because President Saddam Hussein moves them around frequently "so they don't get too comfortable or too friendly with the locals," the Army officer said. "By moving them around, he masks what they are up to."

But in this case, Central Command noticed formations that indicated Iraqi tanks were positioning to attack — as in August 1990, when they invaded and occupied Kuwait for eight months.

"We think they were going into Kuwait," the Army officer said.

Army Gen. Binford Peay III, Central Command's top officer, notified the Pentagon and argued for a massive counterdeployment to thwart Iraq.

Mr. Clinton agreed and ordered thousands of troops to the region. Iraq backed down.

# Gulf's Arab leaders express qualms with U.S. policies

By Arnaud de Borchgrave  
THE WASHINGTON TIMES

Five of the six Arab Gulf states — all anxious to maintain good relations with the United States — have serious reservations about U.S. policies in the region, according to top officials in their governments.

But none of those concerns was expressed to Defense Secretary William Perry during his six-day visit to the Gulf.

The Gulf state of Qatar had already agreed to pre-position equipment for a second U.S. armored brigade in the region before Mr. Perry left Washington.

Equipment for the first brigade of a planned 17,000-strong U.S. armored division is already in place in Kuwait.

The United Arab Emirates gave Mr. Perry a polite but equivocal "maybe" for a request to pre-position equipment for a third brigade.

Iraqi Foreign Minister Mohammed Saeed Sahhaf visited Qatar shortly before Mr. Perry did at the Gulf state's invitation. He then went on to Oman, also by official invitation.

Oman, Qatar and other Gulf states say privately that U.S. policy toward Iraq is misguided. Gulf heads of state and government, foreign and defense ministers told The Washington Times:

• America is our best friend and principal guarantor of the world's most vital interest, so why should we antagonize your secretaries of state and defense with things they don't wish to hear?

• Sanctions against Iraq have outlived their usefulness. You are not hurting Saddam Hussein, but strengthening him. He needs the beleaguered-state syndrome to justify his despotic grip on the Iraqi people. Sanctions are hurting everyone except the regime.

You are also hurting and antagonizing Turkey, which has already lost \$10 billion to \$20 billion in pipeline and trade revenue from Iraq.

• The United States failed in its objective to dislodge Saddam. You miscalculated both before the

Iraqi invasion of Kuwait and after Iraq's defeat. First, the U.S. inadvertently — some even say deliberately — gave Saddam the wrong signals. Saddam then interpreted the waffling as a yellow light to move into Kuwait at a time when he already had 100,000 troops on its borders.

• We don't feel threatened by Iraq. Some of us even hunt falcons there (even though it's a long overland trip from Amman, Jordan). There is nothing the poor, exhausted Iraqi people can do about their dictator. The regime's ruling class lives just as well as before, with special stores that supply all the luxuries the elite have long regarded as the perks of slavish obedience. There is even a perception growing among the little people of Baghdad that Iraq has fallen victim to a plot by the world's last superpower.

• Iraq has told us it will sign a peace treaty with Israel as soon as peace is signed between Syria and Israel. Deputy Prime Minister Tariq Aziz has notified an Israeli intermediary that it no longer considers itself a belligerent in the Arab-Israeli conflict.

• Iraq has been clandestinely exporting some 350,000 barrels of oil per day. About 75,000 of those barrels go to Jordan, the rest in low-in-the-water barges to Iran for re-export as Iranian oil, and in tanker trucks into Turkey (at \$5 to \$8 a barrel and with tolls paid to Kurdish middlemen).

• As long as Israel remains a nuclear power, Iran, Iraq, Pakistan and others will pursue a countervailing nuclear strategy. The only way to rein in Iran's ambitions is by engaging the regime diplomatically. Overtures will be rejected as long as Iran believes there are pre-conditions.

Iran has stated publicly that it is not opposed to developing its nuclear energy under the control of the International Atomic Energy Agency. Why not exploit the opening? The United States negotiated with North Korea rather than face military confrontation and the destruction of Seoul. Maybe all you did was gain a little time until communism collapses there too. Isn't

QUALMS . . .  
Pg. 17

YARDS . . .

from

Pg. 7

tary. And this year, as Congress battles over Seawolfs and LHDs, it will be deciding whether the next person to leave will be Mississippi's "Snapper" Box or Rhode Island's Roger Ball. There no longer will be work for both of them. ■

By BRUCE B. AUSTER

To: Larry Jackson  
 FM: Bill Beel

F-11

1

1 AP 04-08-95 12:25 PET

72 LINES

AM-CT--Submarine Wars, Conn Bjt,690  
 Shipyards' Battle Over Submarines Heats Up On Capitol Hill  
 By MELISSA B. ROBINSON=  
 Associated Press Writer=

WASHINGTON (AP) The war over where to build the first New Attack Submarine is heating up on Capitol Hill. At least one Virginia Republican has vowed to help his home-state shipyard vie with Electric Boat for the contract.

``There should be a competition for the New Attack Submarine,'' said U.S. Rep. Herbert Bateman, R-Va., a high-ranking member of the House National Security Committee, in an interview Friday. ``To me, it borders almost on the obscene for the U.S. government to select between two competitors (without bidding).''

Bateman has promised to support legislation, to be offered later this year, forcing the U.S. Navy to go against its current plan and open the first submarine up for competitive bidding.

In doing so, he has taken up the cause of Tenneco's Newport News Shipyard and Dry Dock Co., which is aggressively lobbying on Capitol Hill for the chance to build the New Attack Submarine a year and a half after the Clinton administration adopted a plan to keep it out of the submarine business.

PRESS RETURN TO CONTINUE OR ENTER ANOTHER REQUEST.

The plan, which is strongly backed by the Navy, calls for all nuclear submarines to be built by General Dynamics Corp.'s Electric Boat Division, which has plants in Groton, Conn., and Quonset Point, R.I. At the same time, all nuclear-powered aircraft carriers would be built by Newport News.

The strategy was aimed at keeping open two nuclear-capable shipyards, something Newport News and backers like Bateman now say may be costly and counterproductive.

``The two doesn't give you anything that one couldn't give you in terms of being able to produce anything that anyone contemplates ever being produced,'' Bateman said. ``Why have two if having two means being more expensive?''

If the plan is scuttled, it could have implications not only for the New Attack Submarine, now being designed by EB, but for the third Seawolf submarine, a \$2.5 billion vessel the Navy believes is essential to keep EB afloat until the new submarine goes into production in 1998.

The loss of any submarine business could potentially cripple EB, which makes only submarines and already plans to reduce its work

force by the end of the decade to about 6,000 from 22,000 in 1992. By contrast, Newport News has a varied base of commercial and government business.

PRESS RETURN TO CONTINUE OR ENTER ANOTHER REQUEST.

In EB's corner is the Navy, and Rhode Island and Connecticut lawmakers, some of whom are angry that colleagues such as Bateman are apparently ready to force the Navy to abandon its own policy.

Adding to their frustration is the fact that Newport News was awarded the contract for the CVN-76 nuclear-powered aircraft carrier, which Congress funded this year.

"It was very clear last year that there was an understanding that if the Connecticut delegation didn't go after the aircraft carriers, that the Virginians wouldn't bother us on submarines," said a congressional aide who requested anonymity. "Clearly, the Virginians aren't living up to their end of the bargain."

Others insist Congress should respect the Navy's view that introducing competition at this stage would drive up costs, delay the program and, ironically, could thwart competition in the long-run by driving EB out of business, leaving the nation with just one nuclear-capable shipyard.

They also cast doubt on Newport News' claim that it could save the U.S. government some \$2 billion over the first five New Attack Submarines, and up to \$10 billion in the long-term.

Bateman, for his part, denies there was any tacit agreement. Moreover, he rejects the argument that his traditional support for the Navy, which has huge facilities in Virginia, means he should

PRESS RETURN TO CONTINUE OR ENTER ANOTHER REQUEST.

accept its submarine policy without question.

"The Navy understands that they have few people in the Congress more supportive than I have been or expect to be," he said. "But they have to understand I am not going to approve of doing what I see as dumb things, dumb in terms of fiscal policy, and dumb in terms of national security."

2 AP 04-09-95 01:09 PET

73 LINES

AM-CT--Submarine Wars,690

Shipyards' Battle Over Submarines Heats Up On Capitol Hill

Eds: Also moved in advance for Sunday AMs

By MELISSA B. ROBINSON=

Associated Press Writer=

WASHINGTON (AP) The war over where to build the first New Attack Submarine is heating up on Capitol Hill. At least one



May 23, 1995

John Earnhardt  
Base Closure Commission  
1700 North Moore St.  
Suite 1425  
Arlington, VA 22209

John,

Please find enclosed a copy of President Clinton's comments regarding the Portsmouth Naval Shipyard during the interview that aired on WERZ FM, as well as WMYF AM, WSRI FM and WZNN AM, all owned by Precision Media in New Hampshire.

Sincerely,

A handwritten signature in cursive script that reads "Dan Alexander".

Dan Alexander  
Assistant Program Director  
WERZ/WMYF

Precision Media

Box 1540, 11 Downing Court • Exeter, NH 03833 • 603/772-4757 • 603/431-7745 • Fax 603/ 772-8464

# Document Separator

**KUTAK ROCK**  
A PARTNERSHIP  
INCLUDING PROFESSIONAL CORPORATIONS  
SUITE 1000  
1101 CONNECTICUT AVENUE, N.W  
WASHINGTON, D.C. 20036-4374  
202-828-2400  
FACSIMILE 202-828-2488

ATLANTA  
DENVER  
KANSAS CITY  
LITTLE ROCK  
NEW YORK  
OKLAHOMA CITY  
OMAHA  
PHOENIX  
PITTSBURGH

May 30, 1995

**MEMORANDUM FOR MS. MADELYN R. CREEDON, GENERAL COUNSEL  
DEFENSE BASE CLOSURE AND REALIGNMENT COMMISSION**

**FROM:** GEORGE R. SCHLOSSBERG AND JENNIFER L. PEPPER   
**SUBJECT:** LEGAL AUTHORITY OF DEFENSE BASE AND CLOSURE REALIGNMENT  
COMMISSION TO RECOMMEND PRIVATIZATION OF A DEFENSE  
FACILITY

---

On March 1, 1995 the Department of Defense ("DoD") recommended to the Defense Base Closure and Realignment Commission ("Commission") the closure of the Naval Surface Warfare Center, Crane Division Detachment, Louisville, Kentucky ("NSWC Louisville"), and the relocation of appropriate functions, personnel, equipment, and support to other naval activities at remaining bases. In response to this recommendation, the Louisville community has proposed that the Commission consider the privatization of NSWC Louisville by transferring the facility to the local community which will in turn lease or transfer the facility to defense contractors to perform the work currently completed at the facility. This proposed privatization by the Louisville community is outside the authority of the Commission to recommend, would serve to transfer Core logistics functions away from government owned and operated facilities, and is otherwise imprudent.

1. The Commission may not consider "advance conversion planning" in closure recommendations and thus the Commission may not recommend privatization of NSWC Louisville.

The Defense Base Closure and Realignment Act of 1990, as amended (the "Act"), states at § 2903(c)(3)(B) that, when considering military installations for closure or realignment, the Secretary of Defense ("Secretary") may not take into account, for any purpose, any "advance conversion planning" undertaken by an affected community with respect to the anticipated closure or realignment of an installation. Section 2903(d)(2)(E) of the Act makes this prohibition binding upon recommendations of the Commission as well. Section 2903(c)(3)(C)(ii) specifies that advance conversion planning includes:

MEMORANDUM FOR MS. MADELYN R. CREEDON, GENERAL COUNSEL

May 30, 1995

Page 2

development of contingency redevelopment plans, plans for economic development and diversification, and plans for the *joint use (including civilian and military use, public and private use, civilian dual use, and civilian shared use)* of the property or facilities of the installation after the anticipated closure or realignment. [Emphasis added.]

Clearly, the community plan to privatize NSWC Louisville falls squarely within this prohibited definition of "advance conversion planning."

In keeping with this statutory prohibition, Assistant Secretary of the Navy for Installations and Environment Robert B. Pirie, Jr. stated in his March 6, 1995 testimony to the Commission that the Navy did not consider privatization in place or some sort of private-public partnership in its recommendation for Louisville, as it is outside the authority of the Navy to take community-inspired reuse options into account. In not considering such reuse options, the Navy acted in full compliance with the Act.

Although it is understandable that the Commission should wish to ameliorate the economic impact that a base closure may have on a community, it is neither the Commission's duty nor permissible under the Act for the Commission to take advance conversion planning by a community into consideration when deciding whether to recommend a closure or realignment under the Act. Should such reuse planning be considered in the base closure selection process, the Commission would find itself evaluating the viability of private sector business plans in lieu of evaluating the military value of a military installation in accordance with the final selection criteria and the force-structure plan.

**2. Implementation of the community plan for NSWC Louisville will result in DoD losing part of its Core Logistics capability.**

As part of its presentation to the Commission, the Louisville community identified five Core Logistics functions performed at NSWC Louisville as follows (see attached Louisville slide):

- \* Naval Gun Weapon Systems
- \* Surface Missile Systems Launchers
- \* Shipboard Physical Security
- \* Specialized Mechanical Technology and Manufacturing Repair Facility
- \* Management and Distribution of Naval Drawings

MEMORANDUM FOR MS. MADELYN R. CREEDON, GENERAL COUNSEL

May 30, 1995

Page 3

The Navy protected Core Logistics functions in its recommendation to the Commission by recommending that the activities at NSWC Louisville be relocated "...to other Naval activities."

Section 2464(a)(1) of title 10, United States Code, states that:

"Section 2464(a) **Necessity for core logistics capability.** - (1) It is essential for the national defense that Department of Defense activities maintain a logistics capability (including personnel, equipment, and facilities) to ensure a ready and controlled source of technical competence and resources necessary to ensure effective and timely response to a mobilization, national defense contingency situations, and other emergency requirements.

Moreover, in pertinent part, section 2464(b) states:

"Section 2464(b) **Limitation on Contracting.** - (1) Except as provided in paragraph (2), performance of a logistics activity...may not be contracted for performance by non-Government personnel....(2) The Secretary of Defense may waive paragraph (1) in the case of any such logistics activities....Any such waiver shall be made under regulations prescribed by the Secretary and shall be based on a determination by the Secretary that Government performance of the activity or function is no longer required for national defense reasons."

While there has been some question as to whether the Congress will continue the requirement to maintain a certain percentage of depot level work within DoD organic activities, there is no effort to remove core activities from DoD owned and operated facilities. By its very terms, the community plan is at odds with the statutory requirements of section 2464 and must be rejected as a statutorily impermissible alternative at odds with the selection criteria.

3. **Privatization of NSWC Louisville denies the savings and efficiencies of cross-servicing that the Joint Cross-Service Group on Depot Maintenance is seeking to accomplish.**

The Deputy Secretary of Defense in a January 7, 1995 memorandum sets forth policy guidance on the base closure process. In this memorandum the Secretary addresses cross-servicing opportunities and provides that where operational and cost-effective, the Services should strive to retain in only one Service military-unique capabilities used by two or more Services; consolidate workload across the Services to reduce capacity; and assign operational units from more than one Service to a single base.

**MEMORANDUM FOR MS. MADELYN R. CREEDON, GENERAL COUNSEL**

May 30, 1995

Page 4

The DoD's proposed consolidation of the Navy's gun barrel plating workload to the Army's Watervliet Arsenal in New York allows for a cross-servicing effort between the Department of the Navy and the Department of the Army. The community's plan sabotages this attempt at cross-servicing.

Moreover, anticipated savings from the closure of NSWC Louisville, based on the consolidation of activities to facilities where excess capacity currently exists, will be lost. Although the community plan maintains that savings will result from the privatization because infrastructure and worker costs to the DoD will be eliminated, the proposed privatization does not take into consideration the savings that will be achieved at other installations from reducing excess capacity at those bases.

**4. Previous Department of Defense experiences with Privatization-in Place have not proven successful.**

As part of its review of the DOD recommendation and selection process, the General Accounting Office reviewed the 1993 recommendation to privatize Newark AFB; that recommendation, independently fashioned by the Air Force without regard to any advance conversion planning by the community, is clearly permissible under the Act as it did not sanction such impermissible "advance conversion planning." Nevertheless, in implementation the plan to privatize Newark AFB is remarkably similar to the community plan for NSWC Louisville. Unfortunately, the Newark effort has not gone smoothly, in those very areas that the instant community plan fails to address, i.e. conveyance of land problems, government production guarantees, etc. In fact, in its April 14, 1995 report to the Commission (B-261024), the General Accounting Office states the following about the Newark AFB privatization effort:

Among other things, one-time closure costs had doubled and may still be underestimated. As a result, the payback period has increased to at least 17 years and as much as 100 years - depending on the assumptions used. Moreover, projected costs of conducting post-privatization operations could exceed the cost of current Air Force operations and reduce or eliminate projected savings.

**5. Even if it were within the Commission's jurisdiction to recommend privatization, the potential "private developers" have not made any commitment to participate in this project.**

The community plan is based upon a hypothetical business plan with little economic analysis and no firm commitment from any private entity that it is willing to participate in the venture. In fact, the only assurance that private industry will participate in this scheme is in the

MEMORANDUM FOR MS. MADELYN R. CREEDON, GENERAL COUNSEL

May 30, 1995

Page 5

form of two letters of "interest", one from United Defense and one from Hughes Missile Systems, both of which assume the successful completion of sole-source contract negotiations with the Navy.

At the April 12, 1995 BRAC regional hearing in Chicago, the Louisville community testified that these two letters, dated April 3rd and April 5th, 1995, respectively, "are the culmination of *months and months* of ongoing meetings with these contractors." (Emphasis added.) Yet even after all these months, neither United Defense nor Hughes Missile System has entered into any agreement or commitment with the City to participate in this project. In fact, both entities have expressed reluctance to commit to such a venture. In particular, United Defense, in the very letter offered as an endorsement of the plan, states:

We do, however, have some concerns about your proposed concept--particularly the plan to consolidate new build gun activity at the center. We cannot now support this portion of the plan because we do not have a business analysis that financially justifies to the Navy such a move.

Even Hughes Missile Systems, which the City suggests would lease another part of the facility to perform phalanx weapons system work, states with regard to its own participation in the project that Hughes is only now assimilating data to prepare a "business plan" for *possible* Hughes participation in the proposed gun center of excellence. Moreover, Hughes goes on to say that the development of the business plan will only provide the basis for discussions regarding the viability of Hughes' involvement in the project.

Notably, neither the community plan or letters of interest addresses those very sticking points that have proven so troublesome at Newark AFB, i.e., pass-through transfer of the property to the community and then to a private contractor absent special statutory authority, environmental indemnification to the community and the contractor, government guarantees of production levels sufficient for the contractor to maintain the facility, and so forth. Thus, the community proposal not only does not provide the Commission with any reasonable assurance of viability, it fails to address the very issues that make the Privatization process so difficult. If the Commission were to approve such a plan in this BRAC round, the likely result is that the Navy continue to own and operate the facility at Louisville long after the Commission has made its final recommendation and disbanded, thereby circumventing entirely the intended BRAC purpose of closing public facilities that are in excess of the military's requirements.

KUTAK ROCK

MEMORANDUM FOR MS. MADELYN R. CREEDON, GENERAL COUNSEL

May 30, 1995

Page 6

**5. Conclusion.**

The Commission should reject out of hand the Louisville community's proposal to privatize the NSWC Louisville. Neither DoD nor the Commission should consider advance conversion planning in their recommendations for closure and thus the Commission should not now consider the sole-source Privatization proposals from Hughes Missile Systems and United Defense. Moreover, the Commission should not entertain any proposal that will serve to undermine the Core logistics capability of the Department of Defense under section 2464 of title 10, United States Code. To meet their statutory obligations under the Act, the Commission must look to the DoD's recommendation to close the Naval Surface Warfare Center and ask if the DoD deviated substantially from the final selection criteria. Inasmuch as there has been no showing of such substantial deviation, the Commission should not now overturn the DoD recommendation.

cc.: Mr. Arthur L. Collins, Exec. Dir., Hampton Roads Planning District Commission

# *Technical Capability*

## Core Capabilities

Naval Gun Weapon Systems

Surface Missile Systems Launchers

Shipboard Physical Security

Specialized Mechanical Technology and Manufacturing/  
Repair Facility

Management and Distribution of Naval Drawings

## MAXIMUM CAPACITY COMPUTATION FOR NAVAL SHIPYARDS (Mathematical Calculation vs. Reality of Work Execution)

Potential shipyard workload (when compared to predicted shipyard workload) provides a measure of additional capacity. This variance may be useful to approximate available margins to accept workload surges during short periods of workload (up/down) transients. When shipyards calculated their potential workload for data calls, there was no place to explain the typical workload scenarios experienced by shipyards over time such as:

- (1) Steady State Workload with limited mix of surface ship/submarine classes and availability types (work packages) with minor workforce adjustments over time.
- (2) Steady State Workload with wide mix of surface ship/submarine classes and availability type with minor workforce adjustments over time.
- (3) Short Term Workload (Up/Down) Transients where workforce adjustment is not feasible.
- (4) Prolonged Workload Overload/Underload conditions where workforce adjustments are necessary but not readily achievable due to conditions beyond the control of the shipyard i.e. RIFs.

Shipyards were instructed to use OPNAV Note 4710 data base to develop predicted and potential future workloads. There was no difficulty in determining predicted workload since it was a "snap shot" of assigned shipwork at a point in time. **Potential workload determination is a judgment call by each shipyard of maximum margin beyond the predicted workload.** Each shipyard typically desires to heavily load their facility with a broad range of surface ships and submarines such that their maximum capability is demonstrated. A shipyard maximum physical capability historically has been much more than its successful execution capability. This was continually demonstrated in the 1980s by virtue of the fact that a large increase in Fiscal Year workload was not translated into schedule or Fiscal success. Schedules slipped year to year, cost increased drastically and so did overtime. While this judgment is a positive indicator of a shipyard's volume of work, in actual execution, it often translates to failure. Short term workload surges (2 months) are easily accommodated; Prolonged work overloads have been extremely difficult for shipyards to accommodate without schedule delays. Shipyards have incurred late delivery of many major availabilities with resultant increased costs when attempting to execute work overloads in past years. Borrowing/loaning personnel between shipyards, which is used to assist specific overloaded shipyards at various times, is no longer an option when you consider all shipyards remaining would also be in a maximum capacity condition. **Clearly stated, the potential (maximum) workload that a shipyard could execute does not reflect the ability of that shipyard to sustain that level of execution for long / duration.** When the total naval shipyard potential (maximum) workload is defined by simply summing the maximum achievable workloads from all shipyards, without consideration of past cost and schedule performance during peak periods, it places excess capacity in question. Consideration must be given to:

- (1) lack of ability to borrow shipyard workers
- (2) lack of an in depth evaluation of shipyard facilities and special equipment maintenance
- (3) lack of other practical considerations associated with continuously operating a navy depots at maximum capacity.

Navy needed to go well beyond simple calculations in assessing the need to retain 4 of their 8 naval shipyards after the BRAC process is complete in FY95 (with the closure of 2 nuclear submarine and 2 non-nuclear surface ship shipyards to be completed by 1996). Military judgment, having been applied to apparent conclusions one could draw from the numbers, has served to qualify the pure statistical data and apply a sense of reality to data call capacity reported by naval shipyards.



DEPARTMENT OF THE NAVY  
OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
3000 NAVY PENTAGON  
WASHINGTON, D.C. 20381-2000

IN REPLY REFER TO  
4000  
SER N44/40587335  
31 Aug 94

FOR OFFICIAL USE ONLY

P R E D E C I S I O N A L W O R K I N G P A P E R

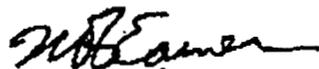
From: Chief of Naval Operations  
To: Commander, Naval Sea Systems Command

Subj: BRAC-95 DATA CALL NUMBER NINE

Ref: (a) COMNAVSSEASYSKOM ltr 1100 Ser 0712/274 of 3 Aug 94

Encl: (1) BRAC-95 Data Call Number Nine

1. We have reviewed the methodology contained in reference (a), used in responding to the "maximum potential workload" (MPW) computations and find it to be a misinterpretation of the data call guidance.
2. Your interpretation of criteria noted in paragraphs 1 and 2 to enclosure (2) of reference (a) is appropriate for existing predicted workload. However, programmed or budgeted workload should be used as a starting point and should not be considered a constraint in estimating MPW. Additionally, the requirement to "meet your cost/schedule commitment to your customer" only applies to existing/predicted workload. The cost/schedule commitment does not apply to maximum potential workload determinations.
3. Data Call Nine is therefore returned to incorporate MPW requirements outlined above. The need for a short turnaround is urgent. Your assistance and cooperation are greatly appreciated.

  
W. A. EARNER  
Deputy Chief of Naval  
Operations (Logistics)

P R E D E C I S I O N A L W O R K I N G P A P E R  
FOR OFFICIAL USE ONLY

All submarines, now and future and 75% of the current and future fleet can be docked here at PNSY.

Modernized facility to carry out today's missions.

Modernized DD #2 FACILITIES can't be replicated elsewhere without considerable milcon. Piecemealing the removable dd covers and other aspects of the dock would result in a loss of efficiencies. Comparison btw MINSY refueling and PNSY refueling seems to be attributable to efficiencies gained from the DD#2 complex.

Submarine work is significantly more difficult than surface work--total experience at PNSY exceeds by about 1/3 that of the other remaining yards.

Special Hull Treatment must be performed in climate-controlled area. Lock-step, Clean metal, adhering tile, vacuum test. Learning curve reflects efficiencies that can be gained through specialization. (BD)

Two-fold value in specialization. Fewer mandays saves money, but also, the sooner we can get ships out of yards, the less ships we have to have. From 100 attack boats to somewhere between 40 and 55. I'd like to tell you some of the things these boats are doing when we get back to Washington. (CNO)

Why wouldn't the Navy invest in the kind of system that you have here to get that kind of performance? (BM)

Part of the problem is up-front money. You need to pay in the year things are authorized. I don't know how many 688's I'm gonna have. We've settled a minimum number, but I don't know how large the maximum is going to be; it depends on how all this shipbuilding argument goes on for the next few years and how much money is going to be available. But I can tell you that this class of ships will be with us until 2026 at the minimum. Do I need a lot of yards facilitized to do this? No. Do I need a capability here? I think the answer is yes. We've got what we need here; so, I can send ships here. I don't need to duplicate it everywhere. I don't have that kind of money, and I can keep Portsmouth fully loaded. (CNO)

This is a nice facility, but it requires a coming together of things. (BD)

Yes, but your answer will ring hollow to whoever doesn't have one. (BM)

Admiral, if you were to hazard a guess at facilitizing a private facility? (JB)

40-60Mil and 3-4 years (BD)

I'd like to have two shipyards, one building carriers and one building submarines, but I don't want to throw into that political and business morass the maintenance. Just look at what we're going through trying to get one. I'd like to be able to turn to a guy in the same color uniform and say, "Fix it!" We have real short negotiations. (CNO)

Both EB and NNS have said that they will shut down if they don't get SEAWOLF or the New SSN. (WC)

Doesn't that imply that you need to send more money into those yards to keep them viable? (WLS)

Navy's plan: EB for submarines, NNS for carriers. Congress has mandated that 60% of the maintenance must be done in the public sector, and NORVA might be able to do it all, but do you want to put all of your nuclear eggs in one basket. DON trying to maximize capability with current budget. (WC)

After this BRAC, we will have closed half our shipyards. We want to retain nuclear-capable yards because I don't want to get in a position where I don't have enough internal capability to

accomplish the work should the industrial capability go away or get significantly smaller. This is not a service that shies away from cutting. (CNO)

DON spent over 50M over last few years storing nuclear materials on shipyards and doing environmental impact statements. (BD)

Currently doing maintenance planning and maintenance facility planning for SEAWOLF.

Either this yard or Charleston would close. That was the tough decision, and Charleston was picked in 93. From my point of view that's why we find ourselves in this position today. We decided to spend our money here to facilitate PNSY. (CNO)

What would it mean to put all of the East Coast work into Norfolk? (WC)

Metric we've sent to Staff is as good as any other, though it's an immense over simplification of a complex thing. 1% total capacity if PNSY closes, and as a good manager, you don't engineer yourself down to no excess capacity. There is a lot of work if you put it all in one place. Realize that it's not just industrial facilities, but also the command and control among the managers and how much work the technicians and managers can efficiently perform. QOL for sailors if you put everyone into Norfolk. Eggs in one basket. (BD)

From an operational standpoint, I don't ever want to get down to a point where there are no choices. We can't assume that no one is going to shoot at us, or that no one is going to run aground. (CNO)

How many refuelings can we do totally with the yards configured as they are now? (SLK)

3. Norfolk, Pearl, Puget. Other reasons that subs and ships go into drydock other than refuelings. (BD)

Off-site work: PNSY averages 42 emergent repairs per year.

Personnel skills can't be developed overnight.

[Some confusion about numbers of RAEs.] It'll be 6 by the Fall of 96. There are 4 now, there will be 5 by this fall. These include the ones that are being used for cruiser work. (BD)

Dilemma of a Commissioner. Admiral DeMars' Idaho argument might be persuasive to some, but short-term nuclear storage is a problem for the private sector, as well. Other dilemma keys on the word nuclear, but there seems to be an inconsistency depending on what coast you're on. Putting all your eggs in one basket in San Diego--I'm getting letters reminding me about Pearl Harbor. (BM)

I don't want to close Long Beach any more than anyone else. They're a great yard doing great work, but they're doing a different kind of work. On West Coast, ships will be some in Japan, a lot in Pearl Harbor, a lot in the Pacific Northwest and more in San Diego. There aren't any ships homeported in Long Beach because we closed the homeport down. [Describes East and Gulf Coast homeports.] We're spread out about as much as we can afford to be. There is some benefit to concentrating in one place. (CNO)

Given budget constraints, if you spend more money to refuel 688s, won't you have less money to buy a new SSN? (WLS)

By closing PNSY, over twenty years, you might save enough to pay for part of a new SSN, but that assumes you don't have an accidental grounding, or that you don't refuel an additional 688 and have to facilitate another yard. (Pirie)

Why would you want to spend money to facilitate someone else, and do away with a quality workforce. Then spend more money to requalify another workforce? (CNO)

You do have to pay some upfront money to close a shipyard. Radiological cleanup requires about \$220M at MINSY and CNSY. (BD)

We can't consider that cost, and you can't either, because someday we'll have to clean it up. But if that someday is today, and we're cash poor, then you're talking about money that could pay for something. (CNO)

That comes out of your TOA? (BM)

Yes. We pay for the BRAC cleanup. (Pirie)

Assuming you don't get the NSSN, or that they're significantly delayed, what is the potential for refuelings? (RC)

Well, you'd spend money here, and this place would get real busy. (CNO) We'd stop defueling, and I think they're 12 of which its too late for two or three. So about ten, and one or two of those would do away with the excess capacity if PNSY closes, because we wouldn't have enough time to facilitate other docks in the necessary timeframe. (BD)

Also, you're talking about 688s--not the more recent 688Is--so there would be major combat systems work to bring them up to speed. (CNO)

If the new SSN doesn't materialize, then the need for this place increases. (GOV King) (CNO agrees)

A few years from now, DON counting on \$15-16B for SCN account, but there is no guarantee that Congress will provide that money. (WC)

[Tremendous confusion on excess capacity numbers.]

[Need to do the numbers if most of LBNSY work goes to private sector.]

If we keep PNSY, we have 19% excess total capacity. If we don't keep PNSY, we have only 1% excess capacity, which doesn't allow room for error. (Pirie)

Excess capacity--limiting factor tends to be drydock capacity. Jobs in critical path will be worked around the clock. There's really no extra room in the calculations. [Admiral DeMars makes oblique reference to "losing the bid" on the 37% excess capacity number.] No metrics are perfect, and there are no factors in there for unexpected work or low productivity; so, if you get down to 1% and that number is inexact, then that's bad. 40% of the combatant fleet is nuclear; so, why would you screw around with the ability to do that properly? 25% of submarine work is

reactor servicing. Also don't forget about off-site work. (BD) [DeMars refers to a 19% number we sent to your staff.]

If we close this yard, then we'd have to recreate some of the capacity elsewhere. Also, it costs money to shut down the base--it takes a while to get your money back from BRAC. In some cases your reward is in heaven. (BD)

Turns out none of our accounts were fully funded for BRAC. The money comes out of other programs. COBRA doesn't include environmental costs; so, I get a big upfront bill when we turn the key. I've got one working; Im not paying the upfront costs; I need the work and the capacity. I hear my mainteance guy (garage mechanic) say that if I don't do it here, I've got to pay to have it done somewhere else. (CNO)

We really do wanna keep this yard. I really don't know how to tell you any other way. We truly did not want to keep anything we didn't need. Our idea was to get the smallest infrastructure we could have and still maintain a good navy for the Nation. This yard is in that smallest infrastruture. Thanks and I hope you make the decision to go along with us.

When a submarine comes in for an overhaul, we don't know what we're going to find. From the time she gets in until the time she leaves, we're constantly responding to problems we didn't anticipate. Captain Strawbridge

ROTHSCHILD NY

WINTER WAVE

Rogers thinks the market is better

Drydock issues @ 1.5% - not only open your profit in, but can you do the work

~3.5% profit for putting me in

Essentially this is manufacturing drop into the red numbers

\* Excess Capacity

Reduction of Plant Capacity

Market conditions for June - better

move from positive market in capacity to June to

your load weighing with the year in October

3 mths, but really only October people on 1st half

need to take it out from the way the 1952

change and conditions?

in 45 of 50% of people work in different work

REPRODUCTION MARKET W/ DED (1952 in part - not just 1952)

Shipping in case

cut more in. Shipping more costly.

Re-gaining license to be made work in production

Regional Market concept as a market for many other

industrial activities can be considered. International

through plus work in 1952. "You can have a

King or AF report in very complex.

1 MAY 53

Addition for purposes of comparison

metrics aren't comparable

Make job performs complex, organic work really not a good comparison to LBRBY

EB hasn't refueled since 70's  
NWS " " " 80's & their costs lead to public-priv competition

→ they aren't prioritized to take on sub work immediately as is port sector on West Coast

• BUR: just as BUR states that success capabilities must be maintained in port sector, so must maintain capabilities in pub sector - they're

• shouldn't ignore qualitative judgement substantial revision

### COTORA

- examine old COTORAs for 20 yr 1990
- Navy put data in in significantly 2 methods
- the time around, make the direct labor is referred and no overhead expenses

### Workload

- dip in 97 and 98
- recent ship work has attempted to level-load
- w. recent increase in OPEX, workload for DMP's out to 2018

Tom: Admiral Emory pushing for 65 ships. Arguments they're presenting support refueling more 655's.

Del: Workload values come in 90's. Workload beyond 1999 increases significantly.

Roger: Make certified welder takes ~3 yrs to train

3 Sept 76-20-5

Norfolk is wild & fer

- they're close to overload
- They could absorb the work, but it would be very difficult
- ? - did GAO question PMSY ability to absorb all of PMSY work w/o transferring people from PMSY?

Make M's

- Norfolk hasn't requested a GSB
- Fogot: little exp. & will be using Trident
- Kent: specialized to work on GSBs as a result of special appropriation
- de - Off. of PH to form PMSY supervisor would indicate PMSY more off.
- also: - How do you measure? Refer to Navy. MDR
- Who'll provide staffing for PD in S.D. by hook? PMSY has done work there and frequently is asked to do work
- PMSY is supporting DSRV for MDR.

Tom: it appears that we'll be retaining more GSB's

consensus is 67-65

David: how many requestings. Cal consensus: 14. PMSY has 11/yr for 20 yr

Tom Alan Vinton and a group of Chandra. We fought in 83, but CDSY & MDR were comparable. Also CDSY is not.

de: ME is 3rd most important in the stable nation  
Russ in 91.

David: 3656

Alex: what about DBBE/WR results.

Roger: you obviously carry more risk w. sub work, but as usual  
I, & fixed costs remain the same WRR ↑  
: set MDR fixed w/ you in advance

Is there anything in DBBE results that you or WRR  
looks @ for comparison thru years? WRR, but you  
have to look @ mitigating circumstances, such as work  
that you do - or don't do - and how frequently you do it.  
Budget for WRR + surplus to WRR to WRR

## CONGRESSIONAL TOPICS

### Major overhaul/refueling experience

Total Major Overhaul Experience

Nuclear Submarine Refueling Experience

### Public/Private Maintenance

Experience

60/40

### Fleet Support Flexibility

Drydock capability

>80% of Fleet ships

Ability to move CVNs to other shipyards (FSC)

Remote Site Support

Unique Ships

### Portsmouth Expertise

Shipyard Firsts

SSN 688 Expertise

Submarine Technology

Learning Curve Payoffs

People - Skills/Education/Experience

### Economic Impact/ Redevelopment Issues

#### Future Workload 2001-2018

Submarines >50% of total nuclear maintenance

Complex Work

Uncertainty Factors relative to submarine fleet needs

#### Nuclear Shipyard Capacity

1 to 2 additional refuelings vice defuelings will cause drydock logjam

Conversion of defueling to refueling is a 7 fold increase in manday workload

#### Facilities

"Endangered species" Once gone, gone forever

Environmental

Quality of Life at Portsmouth

#### COBRA

\$1.2B vice \$2.3B Net Present Value

#### Northeast Submarine Support

Location of related activities

## PNS EXPLANATION OF EXCESS NSY CAPACITY

- Portsmouth understands the methodology of Navy's Excess Industrial Capacity Statistical Analysis.
- This analysis is a theoretical statistical tool which provides a data point in the overall assessment of industrial capacity; Navy clearly stated that this data point was considered in capacity related decisions and associated risk assessments.
- If this tool is to be used as a primary indicator for retention/closure of Naval Industrial Facilities, a number of real work constraints must be considered:
  - Management structure, workforce levels, personnel skills/qualifications.
  - Past cost and schedule performance under maximum workload condition (vice typical workload).
  - Facility limitations and availability of additional ship/submarine overhaul support equipment.
  - Number of on yard and off yard projects/worksites that can be worked simultaneously.
  - All ship/submarine availabilities should be as currently scheduled in 4710.
- If and only when these factors are considered, the theoretical statistical tool evolves into a realistic assessment of maximum capacity.
- Portsmouth has analyzed Shipyard performance over the last decade and found that ship/submarine availability cost and schedule performance was seriously affected when shipyards operated at or near maximum capacity.
- Portsmouth's conclusion is that when Naval Shipyards have operated at reasonable workloads, optimum performance has been achieved; closure of Portsmouth would cause nuclear capacity to drop so dramatically that the remaining Naval Shipyards would frequently operate at near maximum workloaded conditions. The result would be long term performance deterioration on major overhauls of ships/submarines. (i.e., fewer ships available to support Navy missions)

**WHAT REAL LIFE (INFRASTRUCTURE) CONCERNS  
WOULD SHIPYARDS HAVE WHEN ATTEMPTING  
TO OPERATE NEAR MAXIMUM CAPACITY**

- **Plant**

- Dry Dock and Pier Maintenance
- Crane Maintenance
- Shop Capacity (Machines, Lay Down . . .)
- Shop Maintenance
- Brows, Camels, Blocking
- Transportation Support
- Environmental Submarine Covers
- Special Support Systems

- **People**

- Special Qualifications (STE, SRE, QA, RADCON, OSH . . .)
- Engineering (Multi Discipline)
- Basic Trade Experience (Multi Trade)
- Planning and Estimating
- Support Personnel

- **Portable Equipment**

- Refueling Equipment
- Test Equipment
- Tool Crib Stock Levels
- Special Component Repair Tooling

- **Management**

- Project Team Experience
- Project Prioritization
- Reactive Vice Projective
- Ability to Rapidly Adjust Workforce

- **Support**

- Computer Capability
- Material Logistics (Stock Levels, Leadtime, . . .)
- Laboratory Services
- Training Services

NUCLEAR SUBMARINE DEPOT OVERHAUL COMPARISON  
(SHIPYARDS ACTIVELY PERFORMING OVERHAUL WORK)

AC/1221/021395

SUB CLASS/SHIPYARD/ AVAILABILITY TYPE		PORTSMOUTH	NORFOLK	PUGET	PEARL
SSBN 598/608 CLASS	RFOHs	1 Complete (FY67)	None	3 Complete (FY71-73)	None
	ROHs	None	None	2 Complete (FY83)	None
SSBN 616/627/640 CLASS	RFOHs	10 Complete (FY68-87)	None	6 Complete (FY69-73)	None
	ROHs	10 Complete (FY76-81)	None	1 Complete (FY87)	None
SSBN 726 CLASS	EOHs	None	None	1 Complete +1 Underway (FY93 -)	None
PRE SSN 637 CLASS	RFOHs	None	3 Complete (FY65-72)	4 Complete (FY67-76)	11 Complete (FY62-81)
	ROHs	5 Complete (FY62-86)	4 Complete (FY68-80)	2 Complete (FY67-80)	3 Complete (FY68-71)
SSN 637 CLASS	RFOHs	4 Complete (FY76-90)	None	10 Complete (FY74-89)	None
	ROHs	11 Complete (FY72-88)	16 Complete (FY73-88)	18 Complete (FY73-89)	4 Complete (FY75-82)
SSN 688 CLASS	EROs	1 Complete +1 Underway (FY93 -)	None	None	None
	ROHs	2 Complete (FY84-86)	4 Complete (FY85-89)	None	6 Complete (FY84-88)
	DMPs	8 Complete (FY89-93)	4 Complete (FY89-92)	None	5 Complete (FY89-92)
UNIQUE SUB PROJECTS	RFOHs	8 Complete [(2) SSN 571, (1) SSN 575, (3) SSN 597, (1) SSN 605, (1) NR-1] (FY59-91)	None	None	None
	ROHs	4 Complete [SSN 571, (2) SSN 605, NR-1] (FY64-83)	1 Complete [SSN 685] (FY81)	None	1 Complete [SSN 587] (FY65)
TOTAL OVERHAULS		64 Complete +1 Underway	32 Complete	47 Complete +1 Underway	30 Complete

(FY\_\_\_) Fiscal Year Overhaul Was Funded

NUCLEAR SUBMARINE DEPOT OVERHAUL COMPARISON  
(SHIPYARDS NO LONGER PERFORMING THIS WORK)

AC/1221/021395

SUB CLASS/SHIPYARD/ AVAILABILITY TYPE		MARE (C)	CHASN (C)	EB	NNSD	OTHERS (*)
SSBN 598/608 CLASS	RFOHs	8 Complete (FY65-77)	4 Complete (FY67-73)	4 Complete (FY64-66)	3 Complete (FY66-67)	None
	ROHs	None	None	None	None	None
SSBN 616/627/640 CLASS	RFOHs	1 Complete (FY70)	7 Complete (FY68-87)	13 Complete (FY67-76)	18 Complete (FY68-85)	None
	ROHs	None	1 Complete (FY83)	None	8 Complete (FY77-84)	None
SSBN 726 CLASS	EOHs	None	None	None	None	None
PRE SSN 637 CLASS	RFOHs	9 Complete (FY62-77)	3 Complete (FY65-77)	3 Complete (FY61-75)	None	4 Complete (FY73-77)
	ROHs	15 Complete (FY65-85)	3 Complete (FY63-70)	1 Complete (FY69)	None	3 Complete (FY70-72)
SSN 637 CLASS	RFOHs	5 Complete (FY78-89)	6 Complete (FY76-82)	3 Complete (FY76-78)	3 Complete (FY76-78)	1 Complete (FY78)
	ROHs	5 Complete (FY82-90)	5 Complete (FY74-89)	4 Complete (FY71-74)	None	1 Complete (FY73)
SSN 688 CLASS	EROS	1 Underway (FY93)	None	None	None	None
	ROHs	None	None	None	None	None
	DMPs	3 Complete (FY89-92)	1 Complete (FY92)	None	None	None
UNIQUE SUB PROJECTS	RFOHs	3 Complete [SSN 575, SSN 587, SSN 683] (FY69-87)	4 Complete [(2) SSN 671, (2) MTS CONVS] (FY80-90)	1 Complete [SSN 586] (FY69)	None	None
	ROHs	3 Complete [SSN 575, SSN 683, SSN 687] (FY71-87)	None	2 Complete [SSN 571, SSN 671] (FY72-74)	None	None
TOTAL OVERHAULS		52 Complete +1 Underway	34 Complete	31 Complete	32 Complete	9 Complete

(C) These Naval Shipyards are under closure per BRAC 93.

(\*) These Private Shipyards are either closed or no longer overhauling nuclear submarines.

(FY\_\_\_) Fiscal Year Overhaul Was Funded

## NUCLEAR SUBMARINE NEW CONSTRUCTION COMPARISON (ALL SHIPYARDS)

SUB CLASS/ SHIPYARD	PTSMH	NORVA	PUGET	PEARL	MARE (C)	CHASN (C)	EB	NNSD	OTHERS (*)
SSBN 598/608 CLASS	1 Compl. (FY59)	None	None	None	1 Compl. (FY58)	None	4 Compl. (FY58-59)	4 Compl. (FY59-61)	None
SSBN 616/627/640 CLASS	2 Compl. (FY61-62)	None	None	None	6 Compl (FY61-64)	None	13 Compl. (FY61-64)	10 Compl. (FY61-64)	None
SSBN 726 CLASS	None	None	None	None	None	None	15 Compl. +3 Underway (FY74 →)	None	None
PRE SSN 637 CLASS	4 Compl. (FY58-59)	None	None	None	4 Compl. (FY56-58)	None	6 Compl. (FY55-60)	1 Compl. (FY57)	8 Compl. (FY57- 61)
SSN 637 CLASS	2 Compl. (FY63-64)	None	None	None	5 Compl. (FY64-66)	None	14 Compl. (FY62-68)	9 Compl. (FY63-69)	7 Compl. (FY62- 68)
SSN 688 CLASS	None	None	None	None	None	None	31 Compl. +1 Underway (FY70 →)	25 Compl. +4 Underway (FY70 →)	None
UNIQUE SUBS (Included if built as unique vice modified later)	1 Compl. [SSN 605] (FY60)	None	None	None	1 Compl. [SSGN 587] (FY56)	None	7 Compl. [NR-1, SSN 571, SSN 575, SSRN 586, SSN 597, SSN 671, SSN 685] (FY52-68)	None	None
TOTAL NUCLEAR SUBMARINES	10 Compl.	None	None	None	17 Compl.	None	91 Compl. +4 Underway	49 Compl. +4 Underway	15 Compl.

(C) These Naval Shipyards are under closure per BRAC 93.

(\*) These Private Shipyards are either closed or no longer building nuclear submarines.

(FY\_\_\_) Fiscal Year Construction Authorized).

# From atoms to sails

Submitted by LCDR Fred Bahrke, Shipyard Diving Officer

The Portsmouth Naval Shipyard divers recently returned to the days of sails for ship propulsion. Under the direction of the Naval Historical Center (NHC), Detachment Boston, they were contracted to perform diving operations on USF CONSTELLATION, moored in Baltimore's inner harbor. The NHC contracted the PNS divers to measure the hog, or arch, in CONSTELLATION's keel and complete the underwater hull inspection of her keel, skeg, stem and hull planking.



CONSTELLATION was the last sail-powered vessel commissioned in the Navy. She is 176 feet in length, has a beam of 41 feet, and a displacement of approximately 1500 tons. She is presently in a state of disrepair. Her sails, masts and topside rigging have all been removed for safety reasons. The ship has hogged, meaning her midsection has risen while her ends have dropped, causing the keel to be arched upward.

The underwater inspection revealed that her 142 year old wooden keel was in relatively good condition. However, the keel, which is designed to be straight, has a 34 inch upward bow or hog. Her hull planking inspection found some of her caulking missing, causing her to take on roughly 1200 gallons of sea water per day. This leakage was easily recovered by her bilge pumps, but the wetting and drying of the internal frames has caused them to deteriorate over the years.

The NHC is performing a survey to evaluate the cost and feasibility of CONSTELLATION's restoration. In addition, the group is taking preventive actions to retard her deterioration. They are placing additional shoring throughout the ship to help support

**UNDERWATER EXPERTS** — PNS divers go to Baltimore, Maryland, to complete an underwater hull inspection on USF CONSTELLATION.

The ship was the last sail-powered vessel commissioned in the Navy. Shown (l to r, front to back) are Mark Matthews, Bill Creighton, Ralph Spear, Ron Wallner, Frank Coleman, Rodger Ward and Bruce Preston.

the decks. They are also placing wire ropes across the beam of the ship to keep the sides from spreading. Six 6" nylon straps were run by the divers around CONSTELLATION's girth to help strengthen the sides. A wire rope was also run from the ship's stem to stem and fulcrumed in the center, much like a suspension bridge, in an effort to prevent her hog from increasing.

The diving crew consisted of eight divers from Portsmouth. They arrived on Sunday evening, set up diving operations Monday morning and worked 12 hour days to complete the underwater inspection. The diving crew displayed a positive image for the Navy and the Portsmouth Naval Shipyard with their highly competent diving team consisting of supervisor Ron Wallner, diving officer Lieutenant Commander

Fred Bahrke and divers Frank Coleman, Bill Creighton, Roger Ward, Bruce Preston, Mark Mathews and Ralph Spear.

## Stay healthy!

Naval Medical Clinic, Portsmouth, is sponsoring its annual health fair on Wednesday, June 7, from 10 a.m. - 2 p.m. in the Shipyard gym. The theme of this year's fair is "Celebrate Your Health." The event will feature displays from the Clinic's Health Promotions Department and several Seacoast area civilian medical facilities.

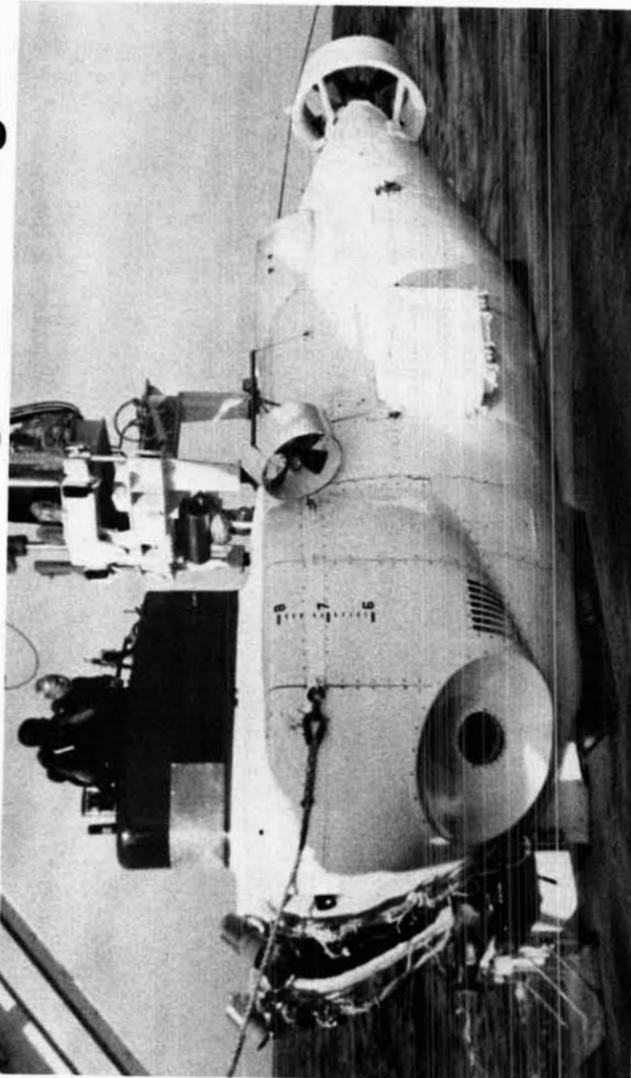
For additional information, call Lieutenant Susan Dionne, (207) 438-1781/2385.

# The Periscope

Volume 53, No. 10  
May 12, 1995

1942 Official newspaper of Portsmouth Naval Shipyard 1995

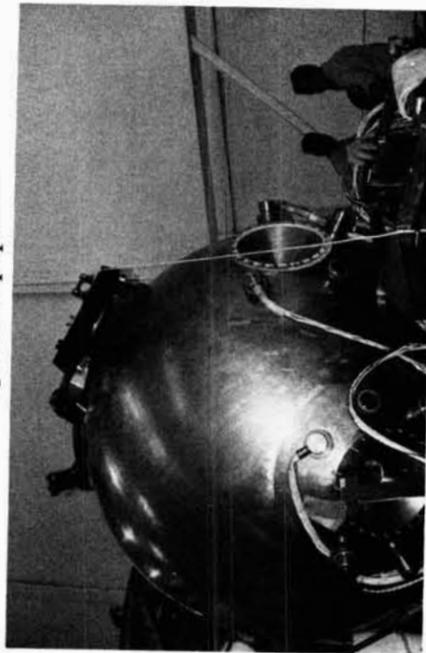
## Portsmouth team dives into Navy's Deep Submergence Program



**LOOK OUT BELOW**—SEA CLIFF (DSV-4) is the Navy's deepest diving manned vehicle, diving to 20,000 feet. SEA CLIFF's mission is deep sea search, location and recovery.

Maneuvering 20,000 feet under the sea, SEA CLIFF (DSV-4), the Navy's deepest diving manned vehicle, studies plant and animal life on the ocean's bottom. SEA CLIFF's primary mission is deep sea search, location and recovery. It is also an oceanographic platform.

Codes 205 and 206 were recently established at PNS to support vehicles such as SEA CLIFF through the Navy's Deep Submergence Program. Located in San Diego, California, the deep submergence vehicles are special deep diving systems supporting the Navy's oceanographic, research, rescue, recovery and special warfare missions. Deep submer-



**CRAMMED FOR SPACE**—This personnel sphere located inside SEA CLIFF is 6 1/2 feet in diameter and holds up to three people who control the vessel.

DSV — Continued on Pages 4 & 5

## Inside

A day of remembrance  
Page 2

Captain's Corner  
Page 3

Library update  
Page 6

Community message  
Page 7

## Thrift Savings open season starts May 15!

Open season for Thrift Savings is from May 15 - July 31. The Personnel Support Center in Building 86, 1st floor, is available to assist in signing up or changing present thrift savings contributions. PSC will also provide information booklets to aid in meeting financial needs. Visit the "One Stop Shop" today and start saving for a better tomorrow.

### Travel tip

When completing a travel claim on DD Form 12351-2, make sure to list duty commence and duty complete time, using military time only.

# A day of remembrance



**HONORING FALLEN SERVICEMEN**—Military and civilian dignitaries met Sunday, May 7, at the Portsmouth Naval Shipyard cemetery to honor servicemen killed during World War II. The cemetery was chosen by the British Consul-General in Boston as the site for a "Service of Remembrance, Peace, and Reconciliation" commemorating the end of World War II in Europe. Shown (l to r) are Grahame Ledson and Jeremy Wailes of the British Officers' Club of New England; retired U.S. Navy Captain George Street III; Charles Butts of the English Speaking Union; Coast Guard Captain Kent Kirkpatrick; Shipyard Commander Captain Lance C. Horne; and British Consul-General John Owen.

## Your PNS telephone is monitored

All Department of Defense nonsecure communications systems are potential sources of intelligence information which can be readily monitored. Classified or unclassified sensitive information should never be discussed when using these systems.

All communication systems under the operational control of DoD are subject to COMSEC (Communications Security) monitoring. Use of these, including telephones, constitutes consent to monitoring for COMSEC purposes. (This means you use your Shipyard phone with the understanding that your call may be monitored.)

Information obtained as a result of COMSEC telephone monitoring may be used in connection with disciplinary or administrative action against DoD military or civilian personnel for knowing, willful, or negligent actions that result in the unauthorized disclosure of classified information.

## Community message

### Monument dedication— May 29

The SQUALUS Memorial Chapter, U.S. Sub Vets WWII, and THRESHER Base, U.S. Sub Vets, will purchase two monuments in memory of the lost crew members of USS 0-9 (SS-70) and USS SQUALUS (SS-192). The monuments will be placed at Albacore Park, Portsmouth, NH, in May, with a dedication ceremony scheduled for May 29 at 10 a.m. Anyone wishing to make a donation or who knows of a family member of the 0-9 or SQUALUS, please contact: 0-9/SQUALUS monuments, PO Box 315, Chocourua, NH 03817-0315, (603) 323-8782.

## NMCRS kicks off annual fund drive

The Portsmouth Naval Shipyard Navy-Marine Corps Relief Society fund drive will run until June 6. During this campaign there will be several opportunities for everyone to participate in fund raising events including several kinds of raffles, 50/50 drawings, a bowlathon, and other fun activities. The funds raised from these events will go toward NMCRS, which provides services such as budget counseling, layettes for military members with new babies, scholarships, and emergency loans for military members and retirees.

Calendars are now being sold for \$5. Everyone will receive five raffle tickets with their purchase of a calendar, plus other prize winning opportunities. Contact Lois Miller, Code 800.01, extension 3800, for more information.

Register now for a bowlathon scheduled May 23-25. Everyone is invited to participate. Interested personnel must get a sponsor sheet from Lauri Troutman, Code 820.11, extension 2351.

Other upcoming events include a musical benefit at the Chief's Club on May 26; a car wash at the PNS fire station on May 26; and a June 6 drawing for various prizes including a grand prize of a 13" color television. Everyone who has purchased a ticket for any of the raffles or calendars will be eligible.

Allotment forms will be available at every event to sign up to contribute to Navy Relief through payroll deduction.

## Rides/Riders

**Berwick/So. Berwick:** two carpool riders wanted, downtown, via Route 236, 7:20 shift, Jeff, ext. 5351.

**Biddeford:** vanpool riders wanted, 7:20 shift, Don, ext. 1957/(207) 282-6829.

**Biddeford:** looking for carpool, 6:30 a.m. - 4 p.m., West Street, Lou, ext. 4753/(207) 284-6550.

**Biddeford:** passengers wanted, vanpool, 7:20 shift, Larry, ext. 2313, (207) 284-1762.

**Dover:** looking to get in a vanpool or carpool, Redden Gardens Apartments, Steven Parks, ext. 2694.

**Dover:** ride needed, p.m. shift, Jim, ext. 1206/(603) 749-4675.

**Lebanon:** want to join a carpool on Hubbard Road, 7:20 shift, (207) 339-2115.

**Limerick:** ride needed, non-smoking, 7:20 shift or flextime, ext. 1794/(207) 793-2387.

**Milton/Rochester/Dover:** riders wanted, day shift, non-smoking, plenty of room, John, (603) 652-4670, ext. 5507

**North Waterboro:** ride needed, 7:20 shift, Lake Arrowhead area, (207) 247-5821.

**Portland:** vanpool riders wanted from exit 7, a.m. shift, Woody, ext. 1114.

**Rochester:** driver/rider needed, 7 a.m. shift, Route 125, Salmon Falls Road, Denise, (603) 332-8300, ext. 5785.

**Sanford:** rider wanted for carpool, 7:20 shift, Sherm Alexander, ext. 2785/2789.

**Sanford:** passengers wanted for flex-shift, 7 a.m. - 3:30 p.m., Route 4, Quarry Road, Rey, extension 2615 or Guy, ext. 1159.

**Sanford/Springvale:** pass wanted, 7:20 shift, non-smoking, Joe, ext. 4207/(207) 324-5378.

**Sanford/Springvale:** passenger wanted, 7:50 shift, non-smoking, dependable, Routes 4 & 236, Bob, ext. 3223/(207) 324-3422.

## Trading Post

**'86 Ford Escort parts car:** 48k miles, new timing belt, new tires, \$500, (603) 431-6136.

**Items:** Supreme 770 steel belted radials, P 205/70/R-14, four tires, \$60; 3M copy machine, \$50/b.o.; 9 x 12 gold rug, \$25, (603) 431-4255.

**'90 Buick Regal LTD:** loaded, ex cond, less than 50k miles, \$8,500, Nick, (603) 436-2335.

**'92 Nissan Sentra XE:** 24k miles, one owner, 4-door, auto, loaded, book \$9,400, asking \$8,900, Kurt, (207) 439-1606.

**Items:** Little Tikes swing and motorcycle, \$8 each; Cozy coupe, \$20; Graco Premier LTD stroller, ex cond, used for one child, \$75, (207) 646-6828.

**'85 Nissan 300 ZX:** loaded, ac, cruise, climate cont, tee top, 118K miles, \$1,750, (207) 748-1063.

**'82 Cadillac Eldorado:** good condition, \$1,500/b.o., Paul, (603) 436-1335.

**Waterbed:** king size, 92" x 72", bookcase headboard/mirror, liner, new heater, \$100, (207) 384-2413.

**'84 Dodge van:** 15 pass, window van, high miles, driven daily, \$1000, (603) 664-9631.

## Community message

### Ride for charity

The third annual motorcycle ride to benefit the homeless will be on May 31. Riders will start at U.S. Made Leather, Route 1 in York, Maine, at 10 a.m. A registration fee of \$10 per person or \$15 per couple will be donated to the Crossroads House in Portsmouth, NH. In addition to trophies for the ride, there will be a bike show, door prizes, live music and food at the final stop until 5 p.m. Come enjoy and support a worthy cause rain or shine. The day is sponsored by Northeast Riders and Donnelley's Custom Cycles. For tickets/info, call Donnelley's, (603) 964-8127. If you don't ride a motorcycle and still want to support the charity you can drive in your automobile instead.

## Notice

The appearance of advertisements placed in *The Periscope* does not constitute any endorsement by the Department of the Navy, the Portsmouth Naval Shipyard, or *The Periscope* of the products or services advertised.

## Merit Staffing Opportunities

Announcements with closing dates. Applicants should send a copy of their application and keep the original for future use.

Title	Dept	Ann No.	Closing date
Radioactive Material Specialist-GS-2001-11	500	95-15-36	17 May 95
Rigger Supervisor II, WS-5210-15	900	95-104-37	17 May 95

These Merit Staffing opportunities are open to career or career-conditional and other appointable employees. Announcements for these positions may be seen on official bulletin boards or in your personnel office. Please file a separate application for each position you apply for. Information on overseas positions is available to career employees on extension 2660. This Shipyard is an Equal Opportunity Employer with a commitment to affirmative action.

# Plan for spring at the Shipyard Library

by Dee Bissell, Shipyard Librarian

Let the Shipyard Library help you with your spring planning! Are you eager to begin a fitness plan or sport, get into the garden, take a trip, nap in the sun listening to a recorded book? The Library has new books to fit your moods and interests this spring.

## For fitness and sports, try:

Covert Bailey, **Smart Exercise**; Ken Sprague, **The Gold's Gym Book of Weight Training**; Joe Ellis, **Running Injury Free**; Timothy White, **The Wellness Guide to Lifelong Fitness**; David Neft, **The Football Encyclopedia**; Arthur Ashe, **On Tennis**; Herman Seidl, **Mountain Bikes**; Hugo Wilson, **The Ultimate Motorcycle Book**. We have videotapes on fitness, yoga, self-defense, massage, and dancing.

## Is boating in your plans? Try:

Dennis Conner, **Learn to Sail**; David Getchell, **The Outboard Boater's Handbook**; Eric Evans, **The Kayaking Book**; Tamsin Venn, **Sea Kayaking Along the New England Coast**. We also have a video provided by the U.S. Coast Guard Auxiliary called, "Let's Go Boating."

## Do you have home and garden plans? We have:

Monte Burch, **Complete Guide to Building Log Homes**; Terrence Conran, **Kitchen Book**; Ronni Eisenberg, **Organize Your Home**; Gordon Burgett, **Treasure and Scavenger Hunts**; John Waganer, **Building a Multi-Use Barn**; Janice West, **Marketing Your Arts and Crafts**; Susan Frey, **Outdoor Living Spaces**; Jacqueline Heriteau, **Water Gardens**; Lynda Brown, **Vegetables for Small Gardens**; Jim Wilson, **Landscaping with Herbs**; Rodale Press, **Growing Fruits & Vegetables**

Organically; Mark Cullen, **Urban/suburban Composter**. The Library also has new cook books with recipes from many ethnic groups around the world.

## Are you planning a trip in the States or abroad? Try:

Hugh McManners, **The Complete Wilderness Training Book**; Blue Guide, **Boston and Cambridge**; Steve Sherman, **Country Roads of New Hampshire**; George Cantor, **North American Indian Landmarks, a Traveler's Guide**; John Norris, **Amusement Parks**; Allen Nyhuis, **The Zoo Book**; Gladson Nwanna, **Americans Traveling Abroad, What You Should Know Before You Go**.

## Do you or your family like animals? Try:

Thomas Knott, **The Complete Book of Dog Training**; Ellen Whiteley, **Understanding and Training Your Cat or Kitten**; Eric Allen, **Everycat, the Complete Guide to Cat Care, Behavior and Health**; Sharon Smith, **The Affordable Horse**.

Do you plan to learn more about computers or to contemplate the universe? We have books on the Internet and on specific programs such as Microsoft Office, or try:

John Bear, **Computer Wimp no More**; Gene Williams, **All Thumbs Guide to Home Computers**; Nancy Hathaway, **The Friendly Guide to the Universe**; Kip Thorne, **Black Holes & Time Warps**, **Einstein's Outrageous Legacy**; George Smoot, **Wrinkles in Time**; Rita Beebe, **Jupiter: The Giant Planet**; Bob Berman, **Secrets of the Night Sky: The Most Amazing Things in the Universe You Can See with the Naked Eye**.

The Shipyard Library receives new titles every month. If this small sampling doesn't include your favorite hobby or interest, visit the library on the second floor of Building 22, weekdays 9 a.m. - 5 p.m. (Tuesday and Wednesday evenings, open until 9 p.m.).

Whatever your spring plans are, the library has information you can use and enjoy. And check out a new recorded book—great to listen to while commuting or for long car trips.

Come check out a book! For more information, call Dee or Pam, extension 2769.

## BCBS rep at PNS—May 23

A Blue Cross and Blue Shield representative will be at the Shipyard on Tuesday, May 23, from 8:30 - 11:30 a.m. For an appointment, call extension 2635 or 2691.

## Earn your master's degree

Antioch New England Graduate School will be holding an information session for Innovative Master's Programs in Management on Tuesday, May 23, at 5:30 p.m., at 76 Congress Street in Portsmouth, New Hampshire. For more information contact Sue Sellers, extension 2672.

## Meet with a Mail Handlers rep

A Mail Handlers representative will be at the Shipyard on Wednesday, May 31, from 8:30 a.m. - 12:30 p.m. For an appointment, call extension 2635 or 2691.



# Captain's Corner

## Farewell to a successful team

For me it has been a great tour of duty. The successes have been the result of a team effort and there can be no greater pleasure for a Commanding Officer than to see the team work together to meet its objectives. All areas of our Shipyard strategic plan made significant improvement and many of the areas surpassed anything we had anticipated. You've done a great job!

Beth and I will be heading for Hawaii the end of this month. My next job in the Pacific Fleet will involve Portsmouth, so I look

forward to seeing many more Portsmouth firsts. We have enjoyed the friendship that everyone has extended to us these past two years and look forward to renewing them in the future. Our sincerest thank you to everyone. Take care and keep up the excellent work.



L.C. Horne  
Captain, USN  
Shipyard Commander

## Employee spotlight

## They don't make sails anymore

by Diane Batchelder, Code 100PAO

Don't expect to go into the Shop 72 Sail Loft and find **Charlene Shaw** sewing up a sail for a local tall ship. Since joining the apprentice program in 1982, Charlene has been working as a containment specialist on more practical items.

The shop's main work is custom-made herculite containments for any job which requires covering to protect the surrounding environment.

Typically, the shop works from drawings done from measurements taken at the job site and by talking to the customer.

The containments are sometimes huge—taking five or six people to handle. These may be containments for stairways or entire rooms that need to be painted, for example. The weight of the herculite, more than the



size, is what makes it difficult to handle, according to Charlene. The pieces for the containments are assembled either by sewing or heat sealing. The shop also makes smaller items such as painters' hoods and tool bags; it also does some upholstery work for the boats.

"We also do a lot of off-yard work," says Charlene. "We take measurements, make drawings, and fax them back to the Shipyard where the shop completes the work and ships the containment back for us to install."



## The Periscope

The Periscope, official publication of the Portsmouth Naval Shipyard, is published biweekly with appropriated funds in accordance with NAVSO-P35, revised May 1979. Views and opinions expressed are not necessarily those of the Department of Defense.

Correspondence is welcome and should be sent to *The Periscope*, Code 100PAO, Building 18, Portsmouth Naval Shipyard, Portsmouth, NH 03804-5000; telephone (207) 438-1353.

Captain Lance C. Horne  
Shipyard Commander

Public Affairs  
Deborah Holton  
Mary Anne Masciana  
Periscope  
Debra Hames

Graphics  
Diane Batchelder

Next issue: May 26  
Next deadline: May 16

## Sailing lessons

MWR is offering sailing lessons using their seventeen foot O-Day sailboats. Call extension 2351 for class dates and registration information.



PNS TV

Watch "Navy News" on PNS TV Thursdays and Fridays at 7 and 11:30 a.m., 2:30, 3:30 and 7:45 p.m.

DSV—Continued from Page 1

# Navy's Deep Submergence Program . . .



**TEAMWORK**—Code 205 is the Deep Submergence Systems Program Division. Shown (l to r) are John Higgins, Ed Price, Mike Waterhouse, John Gilbert, Larry Bates, and Mary David.

Code 205 is the Deep Submergence Systems Program (DSSP) Division, which is the planning and program representative for the following deep submergence vehicles including the SEA CLIFF:

- DSV-3 TURTLE; A deep submergence vehicle, it dives to 10,000 feet.
- Naval Research Submarine (NR-1); One of the Navy's deep diving submarines, PNS provides planning software development, overhaul, maintenance, modifications and testing for the submarine. Portsmouth has performed more major maintenance on the NR-1 than any other facility, private or public.
- Submarine Rescue Chambers; Their primary mission is to rescue crews from submarines trapped on the sea floor. The SRCs can be transported by aircraft or

specially configured surface ships to the rescue site. Because these SRCs are capable of quick reaction response worldwide, agreements are in effect with several allies to provide rescue services. PNS is the planning yard, developing all modifications, material support and on-site engineering support.

- AGSS-555 USS DOLPHIN; The Navy's deepest diving submarine to 3,000 foot depth, DOLPHIN is the Navy's only diesel-electric drive submarine. Its primary mission is deep diving research and as a development platform, supporting Navy and civilian activities. PNS designed and

built the DOLPHIN. As the planning yard, it has the responsibilities to develop modification software for upcoming availabilities, perform studies for new technology implementation on-board, coordinate resolution of fleet concerns, and interface with the fleet, naval labs, and private contractor personnel.

"The deep submergence community is small and specialized," says John Higgins, Deep Submergence Systems Program Director. "Everyone from San Diego, Washington and Portsmouth work together as an outstanding team."

# . . . surfaces at Portsmouth Naval Shipyard

Code 206 is the program representative for the Advanced SEAL Delivery System (ASDS). The ASDS is a combatant/special operations vessel being designed, built and tested by the Navy for the United States Special Operations Command (USSOCOM).

"This work is very challenging and rewarding. I am fortunate to have this opportunity to work with such a capable and professional team," says Gary Woods, Advanced SEAL Delivery System Program Director.



**STATE-OF-THE-ART**—Code 206 takes on the challenge of supporting the Advanced SEAL Delivery System. Shown (front to back, l to r) are Gary Woods, Mary David, Cecile Jacobsmeyer, Rick Bates, Steve Webber, and Lieutenant Dan Butler. Not shown is Alan Doucette.

A new acquisition program has many new and exciting aspects such as wind tunnel tests, which has a full scale model that is destructively tested to validate all the calculated strength characteristics, as well as the initial system certification and the responsibility to ensure the vehicle is safe and robust.

"The primary focus of our responsibility is to bring to this new program the lessons learned throughout the Shipyard, from submarine designers, to the engineers/technicians/mechanics from the waterfront, the men and women who

have been fixing submarines for years, to our environmental office and SUBSAFE office to ensure the ASDS meets all technical and performance specifications. We ensure it is user friendly, and cost efficient to build, operate and maintain," explains Gary.

Many people at the Shipyard have been involved in helping to establish Codes 205 and 206. Limited space does not allow them to thank everyone individually, but their appreciation is sincere. Special thanks to Donna Cantara, Code 202 personnel, Central Files, Tech Library and Microfilm/Drawing Section, Defense Printing Service, the SUBSAFE Office, HRO, PSC Travel, Public Works, and everyone who shows a real interest in the Deep Submergence Systems Program.



**READY FOR ACTION**—Codes 205 and 206 team up to support the Navy's oceanographic, research, rescue, recovery and special warfare missions. Shown (l to r, front to back) are Gary Woods, Cecile Jacobsmeyer, Dan Will, Mary David, John Higgins, Ed Price, John Landry, Steve Webber, Rick Bates, John Gilbert, Mike Waterhouse, Jeannette Kubera, and Larry Bates.

**Gear rental offers half off!**

Canoes and camping gear are available at Northeast Outfitters, MWR's gear rental facility. Until May 19, Canoes and camping gear may be rented at half price. Call extension 1514 today!

**White water rafting**

Looking for a little excitement? Try one of Maine's white water rafting experiences. A weekday trip costs \$70; weekend days are \$80. Call extension 2351 for more information.



MASSACHUSETTS - 127 Civilian Employees were paid \$5,038,691

CITY/TOWN	EMPLOYEES	ANNUAL PAYROLL
Amesbury	25	\$1,075,520
Newburyport	12	467,880
Haverhill	11	535,607
Salisbury	11	391,766
Methuen	10	443,699
Newbury/West Newbury	7	210,113
Merrimac	6	226,782
Georgetown	4	166,078
Andover	3	153,300
Byfield	3	107,731
Lynn	3	71,117
Dracut	2	98,227
Rowley	2	102,818
Tewksbury	2	103,594
Boston/So. Boston	2	39,663
All Others	24	844,796

ALL OTHER STATES - 65 Employees were paid \$1,683,716



JANUARY 1995

PORTSMOUTH NAVAL SHIPYARD - ECONOMIC IMPACT - CY 1994

CIVILIAN PAYROLL

STATE	PAYROLL	*ACTUAL NUMBER OF EMPLOYEES	NUMBER OF EMPLOYEES PAID
Maine	\$118,670,456	2,583	2,956
New Hampshire	95,555,018	2,100	2,403
Massachusetts	5,038,691	111	127
Other States	<u>1,683,716</u>	<u>57</u>	<u>65</u>
Totals	\$220,947,881	**4,851	5,551

\* The average employment level during 1994 was 4,851. The number of employees paid (5,551) is greater since in many cases more than one person occupied the same job during 1994.

\*\* 4,851 includes: Shipyard-4,599, SUBMEPP-237, and NMQAO-15

MILITARY PAYROLL

\$12,811,200

PURCHASED GOODS & SERVICES - SUPPLY DEPT.

\$85,200,000

Of this, \$13,963,000 went to New England States:

Massachusetts	\$7,152,000	Maine	\$1,117,000
New Hampshire	4,203,000	Rhode Island	157,000
Connecticut	1,302,000	Vermont	32,000

CONTRACTED FACILITY SERVICES - PUBLIC WORKS DEPT.

\$14,300,000

Includes: Maintenance/Alterations/Support: \$8,844,000  
 Utilities (Water, sewer, electricity): \$5,456,000

SIX YEAR COMPARISON

	Employment Level	Civilian Payroll	Military Payroll	Purchases (Supply)	Contracts (Public Works)
CY 1994	4,851	\$220,947,881	\$12,811,200	\$85,200,000	\$14,300,000
CY 1993	5,942	240,853,227	14,000,000	47,256,000	--
CY 1992	6,873	272,099,577	19,000,000	50,535,000	--
CY 1991	7,505	264,691,367	18,008,000	69,810,000	--
CY 1990	8,340	267,201,609	28,480,000	57,500,000	--
CY 1989	8,700	268,409,364	28,600,000	60,000,000	--

# BRAC itinerary-draft dated Thursday, June 1, 1995 at 1130 hrs.

## for Site Visit June 2, 1995

Time	Subject	Presenter/Attendees	Background working notes	Topical notes
0800	VIP vans and sedan depart for Pease for CNO et al pickup	CMC, Mary Anne Mascianica, duty driver	Mary Anne will call CAPT Strawbridge when plane lands	
0840	CNO party arrives and is driven to PNS (Gate 2)	ASN(I&E) Pirie ADM Boorda ADM DeMars RADM Natter LCOL Johnson Major Tierney CDR Carman	CNO's Communications Person will be taken to Trans Oceanic conference room (reserved for his use) by CMC personnel  CNO presents awards to 5 sailors in CAPT Strawbridge's office upon arrival in 100's office	Mary Anne has necessary badges in hand to give to CNO's party  Photographer on hand for awards presentation  Sailors in place prior to CNO's arrival
0900	Media assemble outside Gate 1 and board PNS vans	Media bus with Deb Holton and appropriate number of escorts (to be determined by # of press attending) arrive outside Gate 1 for media pickup	Media advisory/invitation to be issued through PAO on May 30 with RSVP date of June 1. NAVSEA Public Affairs and NAVSEA Congressional Affairs notified; RSVP list maintained by PAO and forwarded to Code 1700 by June 1; verify final list with Code 1720 June 2; give security brief to media on bus prior to coming onboard.	
0915	Vans with media onboard enter Shipyard from Gate 1 and drive to O'Club (Superintendents' Room)	Deb Holton and escorts deliver media to Superintendents' Room and oversee press set-up	Superintendents' Room will be cleaned for availability; Deb Holton will arrange audio taping; glasses with water pitcher will be on side table; Deb Holton will brief media on availability timetable	Deb Holton arranged audio recording equipment and videotaping of press availability

0900	VIPs at Gate 1 and proceed to 100's office	Governor King Governor Merrill Senator Cohen Senator Snowe + staff Senator Smith Senator Gregg Congressman Longley Congressman Zeff Congressman Balducci Congressman Bass  CAPT Strawbridge, John Murtagh, John Deforge, Roger Gendron, Nancy Peschel, Al Pemberton, Bert White, Arnie Paul, Terry Eletherion, Clint Schoff, CAPT Navin, CAPT Jorgensen, CAPT Flohr, LCDR Bloom, CMC	Diana Wheeler and Pat Szewczak are at Gate 1 Guard Shack to badge visitors (provide a map if necessary) and direct them to park behind Bldg 86, then enter 100's Office (most know the drill)—Diana is tasked to ensure no media ride in with VIPs; DoD police cruiser on-call to escort any VIPs unfamiliar with location of Bldg. 86; Mary Anne Mascianica stationed at 100's outside door to greet and direct VIPs inside; coffee (including cups, spoons, sugar, cream, napkins . . .) and danish arranged in advance by Gloria Entemann in 100's conference room  Hard hats and glasses will be distributed to non-Shipyard VIPs and copies of the day's itinerary will be available; Walkie-talkies will link Lois, Mary Anne, Deb Holton, Diana Wheeler, Gloria Entemann, Mike Curry, Pat Crowley, Bob Landry (VIP bus driver)  Parking behind 86 will be cordoned off Thursday evening by Manny DeCourt	VIP list for CIA tour will be sent to NAVSEA Congressional Affairs, OLA, Code 1700, and a courtesy call to CHINFO (NavInfo N.E.); followup telcon with NAVSEA OOD to confirm arrangements one last time  Arrange for umbrellas to be staged at 100's office in case of heavy rain  pick up VIP badges Thursday from Security: • VIP badges to Diana with list of names • BRAC badges to Code 1700  copies of all lists to be kept with Gloria, Deb Holton, Diana Wheeler  military uniform--summer khaki (uniform info given to CNO's EA)
0930	Commissioner Robles picked up at Pease and driven to 100's office	CMC and duty driver	CMC will call Gloria when Commissioner Robles arrives at Pease	
0930	BRAC visitors arrive PNS in 3 vans: Commissioners Dixon, Cornella, Montoya, Cox, Kling, Davis, Steele, Robles plus 7 staffers (including Col. Purser)	Met at Dairy Queen rotary by Mike Curry in DoD police vehicle; escorted directly to Auditorium for press availability	Mike Curry (Code 1700) will have appropriate badges and will ensure proper distribution to BRAC and staff prior to entry onto yard.  Larry Meske will go over plans with Mike; Mike will brief 100 on process	
0945-1000	BRAC press availability	BRAC visitors only escorted by Mary Anne	Deb Holton ends availability promptly	DoD security guard stationed by corridor door; when BRAC departs officer moves outside to fence; media escorts will be placed to ensure quick get-away

0950	Navy and civilian VIPs staged at CIA gate with CAPT Strawbridge, Roger Gendron, Bert White, John Murtagh, CAPT Navin	VIPs plus Shipyard tour escorts leave 100's office (with BRAC hard hats and glasses)	Mary Anne escorts BRAC from Superintendents' Room to CIA gate to rendezvous with rest of tour group	
1000	BRAC departs Auditorium	BRAC joins VIPs at CIA gate  Tour group: CAPT Strawbridge, BRAC, elected official VIPs, Navy VIPs, John Murtagh, Roger Gendron, Bert White, Mary Anne Mascianica, CAPT Navin, Al Pemberton	BRAC given hard hats and glasses distributed to BRAC	
1010	Media depart Shipyard via media vans	Media, Deb Holton, escorts		
1000	Non-tour group VIPs board VIP vans in back of Bldg. 86 and are escorted to Visitor Center by Jim Dolph and PNS BRAC Committee members	Specific names to be determined; those anticipated:  • Congressional staffers/drivers • Governors' staff	VIP vans will be driven by military drivers; PNS BRAC team members not on tour should meet at Visitor Center	
1010-1020	Tour group walks to Head End Building	Tour group meets Bob Drew and Bob Vozzella at back corner of HEB	As soon as tour group passes through CIA gate, DoD security guard shuts and locks gate; Bob Drew and Bob Vozzella meet group outside Head End Bldg and join tour of this area; CAPT (S) Herbein and Bruce Jenkins are waiting on the sixth floor for the arrival of tour	elevators manned by someone with key

1020-1040 (20 min)	Group views complex from Head End Building	Tour Group with temporary addition of CAPT (S) Herbein, Bruce Jenkins, Bob Vozzella; met on rooftop by Bob Drew, Arnie Paul, Terry Eletherion, Clint Schoff	Group moves from elevator to roof to view DD#2 complex, then elevator back down to drydock floor; when leave roof, union presidents move directly to museum	When complete, exit and turn over to Refueling Complex tour; at this point CAPT Navin, Bob Drew, Bob Vozzella, CAPT (S) Herbein and Bruce Jenkins drop out of tour and proceed to museum.
1040-1110 (30 min)	Group tours DD#2	Tour group with temporary addition of CAPT (S) Herbein and Bruce Jenkins; Bob Vozzella brings up the rear	RSC tour route to be mapped out by Bruce Jenkins; inform/invite MEMPHIS C.O.; courtesy info/invite SUBLANT Rep.	
1110-1120	Group boards bus outside RSCs; proceeds to museum	Tour group	Bus route: Out DD#2 CIA gate, turn right at Bldg. 79, turn left at Supply (past Commissary), turn right at Chief's Club, turn right at gym (past Chapel), pause at foot of hill to point out Child Care and Barracks up the hill; disembark at museum	
1120-1130	Break in museum	BRAC, VIPs, PNS BRAC team, staffers, union presidents, community members, selected senior PNS managers	luncheon tables with labelled seating set up for BRAC and VIPs only; gallery seating for others	see separate lists for names of community members and PNS representatives who will be at museum
1130-1200 (30 min)	CAPT Strawbridge presentation	same as above	Roger Gendron will be CAPT Strawbridge's technical assistant with view-graphs . . .	
1200-1230	Q & A session	facilitated by CAPT Strawbridge		
1230	CNO party departs PNS	CMC and duty drivers; CNO's party	CMC has VIP transportation staged in front of museum; Navy VIPs board and are transported to Pease	
1230-1245	Break	museum clears	after tour group departs, museum set up for community meeting at 1435 hrs. (Jim Dolph)	

1245	Tour group boards bus to Refueling Complex	Tour group	Bus route: Right on Meade, right on Sloat through Winslow, right at Bldg 79, enter CIA to Refueling Complex	
1245	Non-tour staffers and PNS team member lunch at O'Club		Nancy Peschel and Bob Eaton make arrangements for transportation and with O'Club	
1245-1255	Group arrives at Refueling Complex	Tour Group	Bob Bryan is on site at Refueling Complex to present info and answer questions (10 minutes)	
1305	Group arrives at Bldg. 300	Tour Group	John DeForge and Mike Desjardins greet tour at Shop 31 entrance (door in front on far left)	
1305-1355 (50 min)	Tour Shop 31 and Engineering displays	Tour Group, John DeForge, Mike Desjardins	Presenters to be arranged; John DeForge and Mike Desjardins remain behind when tour group departs from middle roll-up door	25 minutes for displays 10 minutes for fastener cell area 15 minutes for total walk/talk time in and out (including Haz. Sub. Manage. Sys. talk)
1400-1420	Depart Bldg 300 for windshield tour of waterfront	Tour Group	Trolley and bus ready to board outside middle roll-up door of Bldg 300; Principals and BRAC staffers in trolley with CAPT Strawbridge, Mr. Wilson, Bert White, CDR George; Congressional staffers in van with Roger and Mary Anne; windshield tour around DD#2, up past Shop 72, and around to the right side of DD#1 for a brief stop; tour proceeds towards plate yard with pause to point out Berth 11; proceeds to DD#3; continues straight out CIA Gate #1; return to museum (up past cemetery, past fire station, straight to museum)	Appropriate bus seating At DD#1 pass photos around bus
1420-1435	Break at museum		coffee, soda and cookies available	
1435-1515	Community meeting with BRAC	BRAC, ME and NH reps, community members, CAPT Strawbridge, staffers		both ends of museum set up with chairs

1515	Group departs Visitor Center	Group breaks down into separate groups and departs	BRAC's vehicle staged outside museum ready for immediate departure; DoD cruiser will escort BRAC out Gate 2 to Rte. 95 south exit (off Rte 236).  VIP parking available for Congressional cars	
1515	Elected officials proceed to O'Club (Superintendents' Room)	Bus staged at museum to drive VIPs to O'Club	Mary Anne escorts VIPs	
1530-1545	Civilian VIP press availability in Superintendents' Room	VIPs escorted to Auditorium; Deb Holton has media reps staged		
1550	Civilian VIPs depart PNS			