

Background

Portsmouth Naval Shipyard and the Base Realignment And Closure Round Of 2005

The Portsmouth Naval Shipyard is in the history books as the place where the Treaty of Portsmouth, ending the Russo-Japanese War, was signed in 1905. Events are taking place this year celebrating the 100th anniversary of that treaty. But in addition the Shipyard is currently drawing attention because of its potential for closure under the 2005 round of the Base Realignment and Closure (BRAC) Act. Such a closure would lead to the direct loss of more than 4,800 civilian jobs and more than 800 military positions. The Shipyard avoided closure in each of the four previous rounds of BRAC. On the contrary, nearby Pease Air Force Base, the other military facility that remained in the Portsmouth area at the end of the cold war, was one of the first bases to close under BRAC in 1990. The loss to the regional economy resulting from this 1990 closure was significant. The roughly 3,500 military personnel stationed at the Pease Air Force Base were transferred to other bases around the nation and the world, but the purchasing power of the military families and their availability to the local labor force was lost. Pease also employed about 400 civilian employees. Of the base's original 4,100 acres; 1,100 acres on Great Bay have been set aside as a wildlife refuge. Much of the remaining 3,000 acres, which include the 1,500 acre airport district, have been successfully redeveloped, over the past 14 years, into a business and aviation industrial park known as the Pease International Tradeport. An estimated 5,000 civilian jobs had been created by October 2004.



Shipyards, however, unlike other types of defense installations, typically employ thousands of skilled civilians and relatively few military personnel. And the track record of civilian jobs regained from closures of naval shipyards and shipyard complexes under BRAC is not as positive. The Philadelphia Naval Shipyard was selected for closure in 1991's BRAC II, and officially closed in 1996. It has only recovered 34 percent of the more than 8,000 civilian jobs lost. The Long Beach Naval Shipyard in California, chosen for closure in 1995's BRAC IV, lost 4,487 civilian jobs by September 1997, the official date of closure. That area has only regained 200 jobs since then. At the Charleston Naval Complex in South Carolina, which was selected in 1993's BRAC III, more than 3,000 civilian jobs have been created since its official closing in 1996, but these jobs only represent about half the civilian jobs that were lost.¹

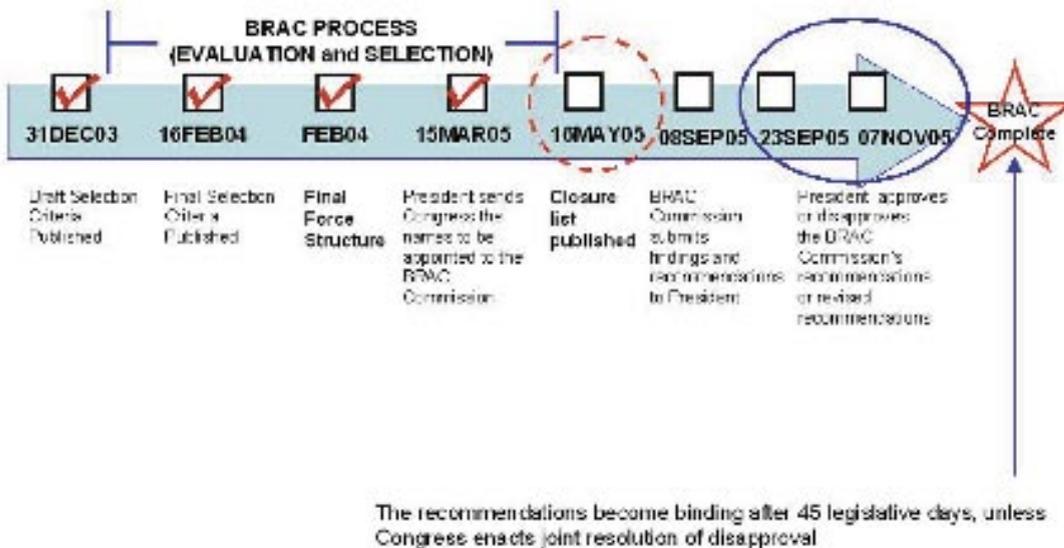
¹ Military Base Closures: Updated Status of Prior Base Realignments and Closures (GAO-05-138, January 13, 2005). United States Government Accountability Office. Accessed February 15, 2005 <http://www.gao.gov/new.items/d05138.pdf>

The BRAC 2005 Process

The decision making behind BRAC is a rather procedural two-year recommendation and approval process designed to downplay the role of local political interests. Each branch of the Department of Defense conducts an internal deliberative process of information gathering and analysis, and no base closure information is to be released before May 16, 2005.

Unlike each of the previous rounds of BRAC, the 2005 round has a statutory requirement incorporated, making military value the primary consideration. (In the earlier rounds of BRAC military value was considered a primary concern, but not a statutory requirement.) No set target has been made for the number of base closures, but the Department of Defense has estimated that the DOD's overall excess capacity is 24 percent.² In perspective, the four previous BRAC rounds eliminated nearly 20 percent of the Department of Defense 1988 capacity. In other words an amount almost equal to what has already been eliminated in four rounds will be eliminated in this 2005 round.

Milestones in the BRAC Process



The primary criteria for closure is that national security is not compromised. After that, all military installations are to be considered equally, no matter how hard an area was hit by any of the previous rounds of closures. In the post 9/11 era, national security connotes Homeland Security. In that respect Portsmouth Naval Shipyard has a role. Three U.S. Coast Guard cutters are located at the Yard.

² Report Required by Section 2912 of the Defense Base Closure and Realignment Act of 1990, as amended through the National Defense Authorization Act for Fiscal Year 2003, March 2004, Department of Defense.

Included under the criteria of Military value is the efficiency of the operations. The Portsmouth Naval Shipyard claims a reputation as “America’s submarine maintenance expert” – the best performing shipyard in the country, public or private. However, the demand for submarine maintenance can be predicted to go down as the Pentagon intends to decrease the size of the Navy’s submarine fleet from 55 to 37.³ The Administration’s proposed FY 2006 defense budget also reduces the number of new naval vessels from six to four, including only one new submarine.⁴

As a state or region, we have limited influence on defining national security. But, among *Other considerations* the Department of Defense evaluates when selecting military installations for closure, is “the economic impact on existing communities in the vicinity of military installations”. By using the New Hampshire Econometric Model to perform a regional economic simulation, we are able to show the impact that a closure of the Portsmouth Naval Shipyard would have on the economies of Rockingham and Strafford



Counties as well as on the entire state of New Hampshire. **This model estimates the impact on New Hampshire alone. Beyond the initial direct loss of military and civilian employment, this study does not consider effects on Maine, the other state that would be greatly affected by a closure.**

Location

Despite its name, Portsmouth Naval Shipyard, the Yard is in Kittery, Maine. It is located on Seavey Island in the Piscataqua River and connected to the mainland by two bridges to Kittery. Although located in Kittery, the main gate of the Shipyard is just 1.5 miles from downtown Portsmouth, New Hampshire. The Shipyard is also only about 13 miles from Dover, New Hampshire, and about 28 miles from Rochester, New Hampshire, the two largest cities in the vicinity of the Shipyard. Kittery, Portsmouth, Dover, and Rochester are all part of the Portsmouth-Rochester, NH-ME Primary Metropolitan Statistical Area (PMSA), an interstate urban area with a population of 247,258 in 2003. This urban area was defined by the Office of Management and Budget (OMB) based on data about commuting patterns collected in the 1990 Decennial Census. OMB has defined new metropolitan areas, based on the 2000 Decennial Census, creating a Portsmouth, NH-ME Metropolitan NECTA (New England City and Town Area) and a Rochester-Dover, NH-ME Metropolitan NECTA. We chose to use the

³ Lenz, Ryan: Associated Press; Bases in Northeast prone to BRAC.

⁴ Kenny, Elizabeth: <http://www.seacoastonline.com>; Navy: Too soon to tell future of the shipyard.

1990 PMSA to describe the area because it corresponds well to the 2004 patterns of commuting to the Shipyard (see map). Fifty-eight percent of the Yard's workers lived in the PMSA. The Portsmouth-Rochester PMSA definition is also more familiar to data users since data has only just started to be released, in 2005, using the new area definitions.

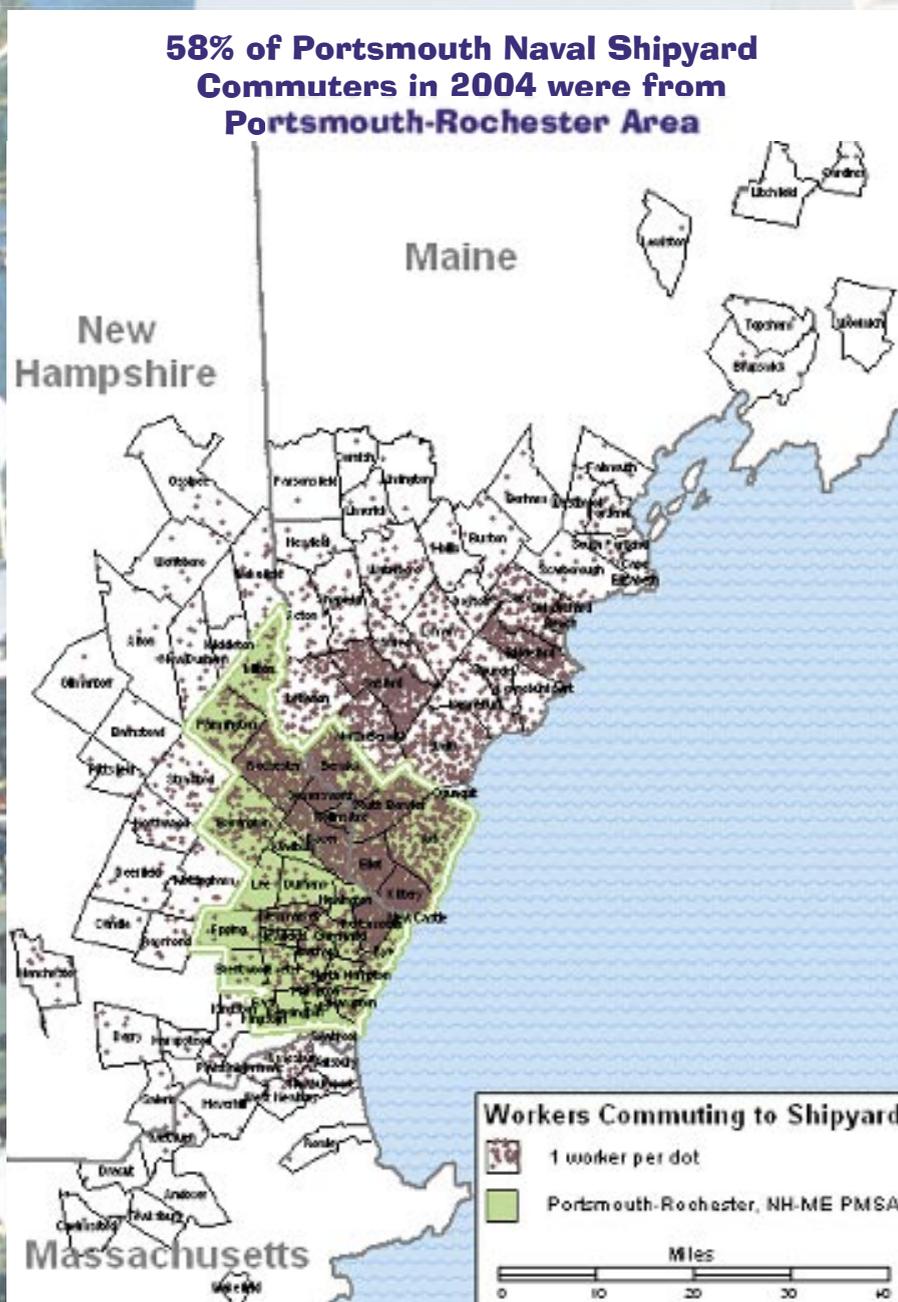
The Shipyard and Pease Airforce Base Following World War II

The Portsmouth Naval Shipyard has been a key employer in the

Portsmouth area since the Civil War. With the construction of its first submarine, the L8, in 1917, the Shipyard changed its focus from construction of steamboats and sloops to submarines. World War II caused employment at PNS to reach an historic high of 20,466 civilian workers in 1943. From 1940 to 1945, 88 submarines were commissioned from the Portsmouth Naval Shipyard. In comparison, the pre-war level was only about one submarine commissioned per year.

The Portsmouth Naval Shipyard has consistently been at the forefront in applying technology. In 1957 the Shipyard launched the

Skate class USS Swordfish, the first nuclear-powered submarine built by a government-owned shipyard. The Yard became the first facility

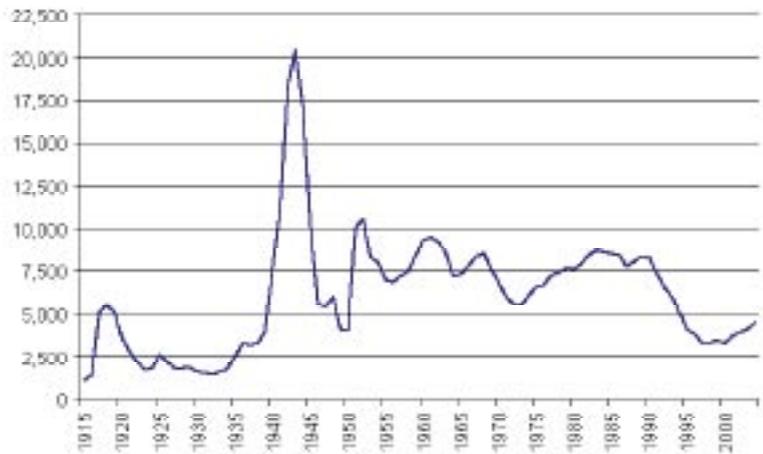


in history to overhaul a nuclear-powered ship when the first nuclear-powered submarine, the Nautilus, was serviced in Kittery in 1959. Since the base started building and overhauling nuclear-powered submarines its civilian employment level has varied between a high of 9,200 in 1962 to a low of 3,300 in 1998. In November 1969 the USS Sand Lance, the last submarine built in a public shipyard, was launched, ending a fifty-plus year PNS submarine construction era. Since then the Yard has specialized in the refueling and maintenance of nuclear-powered submarines.

During World War II the U.S. Navy leased the Portsmouth Municipal Airport, which led to opening of Portsmouth Air Force Base in 1957. The base was renamed Pease Air Force Base a year later. Geographically, Pease Air Force Base was located in Portsmouth and Newington. The military personnel and their dependents who lived on or nearby the base, mostly in Portsmouth and Newington, were therefore counted in the population of area communities. The increase in the population of these communities from 1950 to 1960 can partly be attributed to the opening of the air force base. Likewise the closure of the Pease Air Force Base in the early 1990's led to a decrease in both Portsmouth's and Newington's populations as 3,400 active duty military personnel⁵ and their dependents left the area.

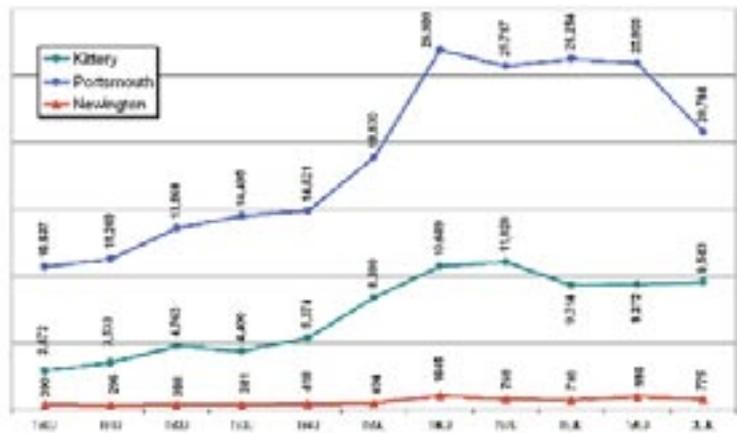
The unemployment rate in the Portsmouth-Rochester, NH-ME PMSA has in general been lower than the unemployment rates of the Granite State during the 1990s. Although only 400 civilians were laid off at Pease, in combination with the decline in PNS employment (1,700) and the effect of the national recession of 1990-1991, total employment in the

Naval Shipyard Civilians (excludes tenant activities)



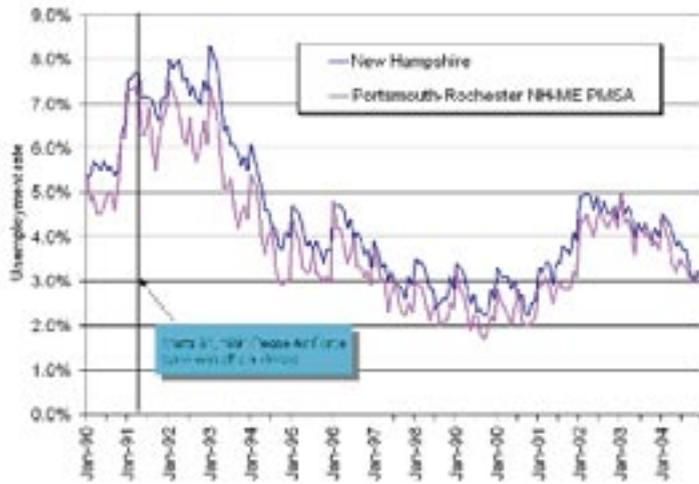
Source: Data from 1915 to 1999 is from "Do your Job!" – An Illustrated Bicentennial History of the Portsmouth Naval Shipyard, 1800-2000 by Richard E. Winslow III. The data until 1978 originally appeared in *Cradle of American Shipbuilding*. Data from 2000 to 2003 was provided by the Portsmouth Naval Shipyard.

Decennial Census Population



⁵ Pease ANGB 43°04'N 70°49'W, Global Security, <http://www.globalsecurity.org/military/facility/pease.htm>.

The Unemployment Rate in New Hampshire and in the Portsmouth-Rochester PMSA



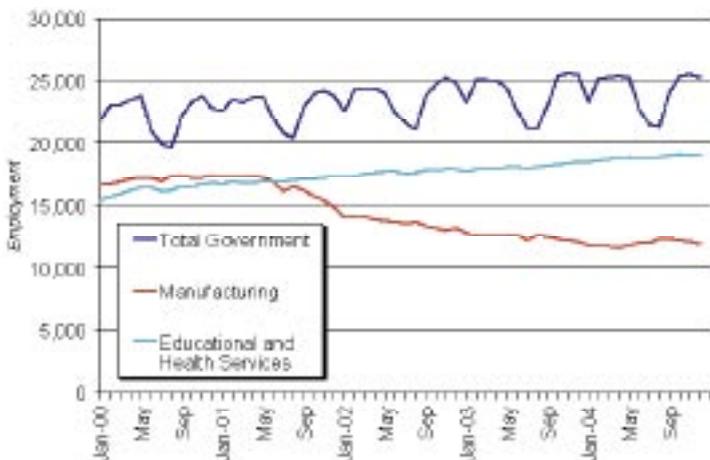
New Hampshire portion of the Portsmouth-Rochester PMSA dropped by 6,300 from 1990 to 1992. At the same time the labor force in the New Hampshire portion of the Portsmouth-Rochester, NH-ME PMSA was reduced by about 5,100. This reduction in labor force can be partly attributed to those military family members who had worked, or been seeking to work, in civilian jobs, but who left the area when the base closed. (Active military personnel would not be counted as part of the civilian labor force.)

During the first half of the 1990s the employment at PNS declined from more than 8,000 to just above 4,000. As the economy started recovering from the 1991 recession and the high tech boom took off in the seacoast area, jobs lost at the PNS were offset by growth in other sectors of the economy. By the late 1990s the PNS started to increase its employment, which has been growing steadily since 2001.

The Portsmouth-Rochester, NH-ME PMSA weathered the 2001 recession fairly well. Although Manufacturing lost a couple of thousand jobs, Government and Educational and health services each amended a couple of thousand jobs.

The Federal government employment share in the Portsmouth-

Nonfarm employment(CES) in the Portsmouth-Dover-Rochester PMSA 2000-2004



Rochester, NH-ME PMSA is higher than the New Hampshire statewide share of federal government employment. In most regional economies, the majority of federal government employment is US Postal workers. Federal government employment for the Portsmouth-Rochester area makes up about a quarter of total government employment. In comparison, federal government employment for the whole state makes up less than ten percent of total government employment. This higher share of federal employment in the PMSA

is due in large part to the civilian employment at the Portsmouth Naval Shipyard. (The federal share of government employment in

New Hampshire is not affected by employment at the Shipyard since that is counted as employment in Maine.) According to the Portsmouth Naval Shipyard, the shipyard and its tenant activities employ about 4,800 civilians, thereby accounting for about three quarters of the federal government employment in the Portsmouth-Rochester, NH-ME PMSA. Making up about 39 percent of the Yard's civilian workforce, 2,008 New Hampshire residents commuted to the Yard in 2004, to 1,878 jobs (the balance representing turnover).

Government employment data is generally available by ownership rather than by work activity. If the Portsmouth Naval Shipyard were to be coded according to work activity, it would be included in the Ship building and repairing industry (NAICS 336611). The 2003 covered employment data for New Hampshire shows that on average 51 persons were employed in Boat building (NAICS 336612) under private ownership but none in the Ship building and repairing industry (NAICS 336611).

Bath Iron Works, a privately owned shipyard, is located in Maine, about 85 miles north of Kittery. This shipyard has approximately 6,400⁶ persons employed. Although privately owned, this shipyard primarily builds Guided Missile Destroyers under contract with the US Navy. This means that Bath Iron Works is under the same threat of slowed contracts activity due to the Navy's budget constraints.

Finally, covered employment data in Shipbuilding for Massachusetts shows average employment for 2003 to be 183. So, if the Portsmouth Naval Shipyard were to be closed, the opportunity for reemployment as skilled shipbuilding workers in nearby Maine, Massachusetts, and New Hampshire would be very limited.

Capacity and Occupational Employment

Today, 95 percent of the activity at the PNS has to do with the overhauling of nuclear-powered submarines. Currently three submarines of the Los Angeles class are stationed at the Shipyard,



⁶ "General Dynamics Awarded \$489 Million in Funding for Navy Destroyer", News, November 16, 2004, Bath Iron Works, A General Dynamics Company Quarterly Census of Employment and Wages Data from BLS is not available, even statewide for Maine, because of disclosure.

undergoing repair and refueling. Each submarine overhaul takes about two years.⁷ While a submarine is being overhauled at the Shipyard, its approximately 135 submarine crewmembers live at the Yard. Although the Los Angeles class submarine isn't the newest generation of submarines (Virginia class), the U.S. Navy fleet consists mainly of this type of submarine and will continue to do so for at least the next decade. According to PNS, its three dry docks are capable of docking all active classes of submarines including the Virginia and the Ohio classes. History has shown the Shipyard's ability to change its focus in order to be in alignment with the needs of the Navy.



In addition, the base is host for several tenant activities such as a Naval medical clinic; the Coast Guard; and Submarine Maintenance Engineering, Planning, and Procurement (SUBMEPP). Another unit, related to the planning process and project cycle for maintenance and overhauling submarines called the Naval Material Quality Assessment Office (NMQAO), is located in downtown Portsmouth.

- The Naval Clinic employs 57 employees and serves as a primary care facility first for the military and civilian personnel at the Yard, but is also available to retired military personnel in the New England region.
- The Coast Guard has three cutters stationed at the Yard and employs approximately 295 military personnel as crew and in support roles.
- SUBMEPP employs 226 civilians, primarily engineers and technicians, who support submarine repair activities worldwide.
- NMQAO employs 27 civilians and is part of the Naval Sea Systems Command (NAVSEA), a headquarters component of the Department of the Navy. This unit was originally located at the Yard and performed work only for PNS. As the unit evolved, it became responsible for the development and administration of centralized quality assurance and assessment systems for NAVSEA.

Occupational Specialties of Civilian Employees at PNS

The economic impact, at the personal level, of a potential base closure would be quite devastating, as individuals may have difficulties maintaining current income levels and finding jobs matching their skills. Maintenance and refueling of nuclear-powered submarines is highly specialized and requires a large number of engineers and technicians, as well as a large number of skilled tradespeople. Most of the work is very

⁷ http://www.globalsecurity.org/military/facility/portsmouth_nsy.htm

specifically related to submarines, one reason why the Yard’s training and apprenticeship program is crucial to making sure that the ‘PNS’s expertise’ or ‘Quality workmanship’ is kept intact as the workforce reaches retirement. The average annual pay at the PNS is about \$65,000, a wage level substantially higher than the average 2003 annual pay for all private covered employment in New Hampshire (\$37,700) or in Rockingham County (\$38,000). But the average pay for PNS is in line with wages in Rockingham County for Machinery manufacturing (\$60,200) and Computer and electronic product manufacturing (\$67,300) — industries that, like PNS, require highly skilled labor.

If the Portsmouth Naval Shipyard were to close under BRAC, it would become the task of state and regional development authorities to try to replace those jobs. With data provided by the Shipyard on occupational

Major Occupational Groups

| SOC Code | Major Occupational Groups | Portsmouth Naval Shipyard |
|---|--|----------------------------------|
| 11-0000 | Management Occupations | 189 |
| 13-0000 | Business and Financial Operations Occupations | 47 |
| 15-0000 | Computer and Mathematical Occupations | 31 |
| 17-0000 | Architecture and Engineering Occupations | 1018 |
| 19-0000 | Life, Physical, and Social Science Occupations | 89 |
| 23-0000 | Legal Occupations | 3 |
| 25-0000 | Education, Training, and Library Occupations | 66 |
| 27-0000 | Arts, Design, Entertainment, Sports, and Media Occupations | 8 |
| 29-0000 | Healthcare Practitioners and Technical Occupations | 17 |
| 33-0000 | Protective Service Occupations | 7 |
| 43-0000 | Office and Administrative Support Occupations | 174 |
| 47-0000 | Construction and Extraction Occupations | 691 |
| 49-0000 | Installation, Maintenance, and Repair Occupations | 741 |
| 51-0000 | Production Occupations | 924 |
| 53-0000 | Transportation and Material Moving Occupations | 31 |
| All Occupations at Portsmouth Naval Shipyard | | 4036 |

groups and families for 4,036 of the Shipyard’s civilian employees, it is possible to gain insight into the occupations and the skills represented at the Yard.

Using a conversion table provided by the National Crosswalk Service Center between General Schedule and Federal Wage Schedule codes and O*NET98 occupations, we were able to translate the PNS occupational data to Standard Occupational Classification data. In some cases we also used the O-Net database to get a more precise classification in the case of a very broad translation of code, such as Government Service Executives. The Shipyard has a high concentration of engineers and technicians. The major occupational group level shows that one

out of four are employed in Architecture and engineering occupations. Within this group a little more than half are engineers and the rest are engineering technicians. At the detailed occupational level, *Mechanical engineering technicians* are the largest single occupational group with 266 employed, followed by *Mechanical engineers* and *Nuclear engineers* with 184 and 180 employees, respectively.

The second largest major occupational group at the Shipyard is Production occupations, with a little below 1,000 employed in that field. At the detailed level, *Helpers – production workers* made up a quarter of

Top Ten Occupations by Area

| Occupation | SOC Code | Portsmouth Naval Shipyard Employment | Portsmouth, Dover, Rochester Area Estimated Employment | New Hampshire Statewide Estimated Employment |
|---|----------|--------------------------------------|--|--|
| Mechanical Engineering Technicians | 17-3027 | 266 | 3 | 420 |
| Industrial Machinery Mechanics | 49-9041 | 250 | 170 | 130 |
| Helpers--Production Workers | 51-9198 | 243 | 240 | 530 |
| First-Line Supervisors/Managers of Construction Trades and Extraction Workers | 47-1011 | 201 | 290 | 2,470 |
| Mechanical Engineers | 17-2141 | 184 | 280 | 1,480 |
| Nuclear Engineers | 17-2161 | 180 | n/a | n/a |
| Electricians | 47-2111 | 153 | 420 | 2,140 |
| Painters, Transportation Equipment | 51-9122 | 152 | n/a | 500 |
| Plumbers, Pipefitters, and Steamfitters | 47-2152 | 129 | NP | 2,300 |
| Machinists | 51-4041 | 117 | 340 | 180 |

* Estimated area and statewide employment are based on the November 2003 New Hampshire Occupational Employment and Wages survey by the Occupational Employment Statistics (OES) Program

n/a - not available

NP - indicates that the estimated employment is not publishable

this occupational group and *Painters, transportation equipment* was the second largest occupational group with 152 employed. *Machinist* came in as the third largest occupation within Production occupations with 117 employed.

Combined, the Installation, maintenance and repair occupations and the Construction and extraction occupations employed about a third of all the Shipyard workers. Among the Installation, maintenance and repair occupations, *Industrial machinery mechanics* is the largest occupation employing 250 workers. A fairly large proportion (30 percent) of Construction and extraction workers is *First-line supervisors/managers of construction trades and extraction workers*. Due to the code translation, these First-line supervisors/managers should be interpreted more broadly than supervising just Construction and extraction workers. *Electricians*, and *Plumbers, pipefitters, and steamfitters* are the two other big occupations within the Construction and extraction occupations group, employing 153 and 123, respectively.

By comparing the Shipyard occupational data with data from the November 2003 New Hampshire Occupational Employment Statistics (OES) survey for the “Portsmouth, Dover, Rochester wage area” (which includes only the New Hampshire portion of the Portsmouth-Rochester PMSA and thus does not include PNS), we found that the Shipyard has a high concentration of employees in certain occupations not common in the New Hampshire portion of the area otherwise. Examples of such occupations are *Riggers; Nuclear engineers; Lay-out workers; and Painters, transportation equipment.*

