A New Economic Impact Study released – What if... the Shipyard closed?

The fifth round of the Base Realignment and Closure (BRAC) Act is well underway, and everyone in the Seacoast Region of New Hampshire and in Southern Maine is concerned that the Portsmouth Naval Shipyard might be included on the list to be released by the Secretary of Defense in mid-May. The Yard survived a closure order in the mid-sixties, as well as four rounds of BRAC. The area has not gone unscathed as Pease Air Force Base fell victim to the first round of BRAC. History has shown the shipyard’s ability to change its focus in order to
be in alignment with the needs of the Navy. But it is beyond our means to predict the outcome of the BRAC 2005 process.

The Shipyard has been an important economic player in the regional economy. It contributes more than 4,800 civilian jobs and more than 800 military positions to the region. The total civilian payroll was $318,329,729; of which $122,635,908 was paid to New Hampshire residents. In addition the shipyard spent $5,817,322 on purchased goods and services in New Hampshire and Maine as well as $46,418,335 on contracted facility services (utilities and maintenance/alteration/support).

The primary criteria for closure under BRAC 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.

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. 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.

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 (see page 4) to perform a regional economic simulation, we were 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. However, this model estimated the impact on New Hampshire alone. Beyond the initial direct loss of military and civilian employment, this study does not consider effects

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on Maine, the other state that would be greatly affected by a closure. The total regional effect would be a multiple of the effects, on New Hampshire alone, that are presented here.

Despite the name, Portsmouth Naval Shipyard, this shipyard is located in Kittery, Maine. Since most of the jobs are physically located in Maine (jobs by place of establishment), the closure of the Shipyard would have an immediate direct effect on the number of jobs in Maine. However, 39 percent of its civilian employees commute to the Shipyard from cities and towns in New Hampshire. The wages from these commuters are included in the New Hampshire economy, and the secondary effects following a closure would significantly reduce jobs and income in New Hampshire.

 Compared to the baseline forecasts in the New Hampshire Econometric Model, a closure of the PNS would result in the following:

- A direct loss of 800 military positions and 27 civilian positions in New Hampshire. (The Department of Defense reports the military contingent of the yard as if it were in New Hampshire.)
- $122,635,908 in lost wages paid to PSN civilian employees residing in New Hampshire. Of these New Hampshire wages, 61 percent are from Strafford County and 33 percent are from Rockingham County. In 2004, New Hampshire residents held 1,878 civilian positions at PNS.
- 1,219 jobs lost in the secondary effects of a PNS closure. The secondary effects would be caused by a decrease in purchasing power (due to the loss of the PNS wages), the loss of expenditures on local goods and services purchased by PNS, as well as the loss of facility services contracted by PNS.

- New Hampshire civilian jobs will remain at least 900 below the projected growth for the duration of the simulation, statewide.

- Gross Regional (or State) Product (GRP) in New Hampshire would fall $133.8 million below the baseline in the first year and remain $128.7 million below the baseline by 2021.

- Wage and salary disbursements linked to secondary effect job declines in New Hampshire would initially suffer losses of $71.5 million, expanding to a loss of $106.3 million by 2021.

- Wages in Strafford County would be hit the hardest. The average annual wage rate would be lowered by $123.51 in nominal dollars by 2010, the bottom of the trough. The effects on the average annual wage rate are smaller at the statewide level, but it would take New Hampshire until 2019 to get back to the pre-closing wage level.

- New Hampshire would lose $14.8 million in state and local revenues in the first year after closure, while state and local expenditures would be reduced by $4.4 million. This would result in a net

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loss of $10.4 million in state and local
government finances.

Sales, office and administrative
occupations compose the occupational
group most affected by the secondary
effects of the closure. By 2021 only
about half of the jobs lost would be
recouped.

By 2021 the State’s population will
have shrunk by 3,780 below the
baseline.

Unemployment in New Hampshire
would rise by at least 2,700 persons,
with the unemployment rate rising by
about 0.5 percent. Since most of the
unemployment would occur in the
Portsmouth-Rochester area, that area’s
unemployment rate would increase
much more.

If the Portsmouth Naval Shipyard were
to close, the opportunity for reemploy-
ment as skilled shipbuilding workers in
New Hampshire, and nearby Maine and
Massachusetts, would be very limited.

The shipyard has a high concentration of
workers in the following major occupa-
tional groups (Standard Occupational
Code - SOC):

- 17-0000 Architecture and Engineer-
ing Occupations - 1,018 positions
- 51-0000 Production Occupations -
  924 positions
- 49-0000 Installation, Maintenance,
  and Repair Occupations - 741 positions
- 47-0000 Construction and Extrac-
tion Occupations - 691 positions

This is especially a problem as the
shipyard has a high concentration of
employees in certain occupations not
common in the region otherwise, such as
Riggers, Nuclear engineers and Lay-out
workers (metal). The impact of the PNS
closure, at the personal level, would be
quite devastating, as individuals may
have difficulties maintaining current
income levels and finding jobs matching
their skills. The average annual pay at

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Top Ten Occupations by Area

<table>
<thead>
<tr>
<th>Occupation</th>
<th>SOC Code</th>
<th>Portsmouth Naval Shipyard</th>
<th>Portsmouth, Dover, Rochester Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Engineering Technicians</td>
<td>17-3027</td>
<td>266</td>
<td>30</td>
</tr>
<tr>
<td>Industrial Machinery Mechanics</td>
<td>49-9041</td>
<td>250</td>
<td>170</td>
</tr>
<tr>
<td>Helpers—Production Workers</td>
<td>51-9198</td>
<td>243</td>
<td>240</td>
</tr>
<tr>
<td>First-Line Supervisors/Managers of Construction Trades and Extraction Workers</td>
<td>47-1011</td>
<td>201</td>
<td>290</td>
</tr>
<tr>
<td>Mechanical Engineers</td>
<td>17-2141</td>
<td>184</td>
<td>280</td>
</tr>
<tr>
<td>Nuclear Engineers</td>
<td>17-2161</td>
<td>180</td>
<td>n/a</td>
</tr>
<tr>
<td>Electricians</td>
<td>47-2111</td>
<td>153</td>
<td>420</td>
</tr>
<tr>
<td>Painters, Transportation Equipment</td>
<td>51-9122</td>
<td>152</td>
<td>n/a</td>
</tr>
<tr>
<td>Plumbers, Pipefitters, and Steamfitters</td>
<td>47-2152</td>
<td>129</td>
<td>NP</td>
</tr>
<tr>
<td>Machinists</td>
<td>51-4041</td>
<td>117</td>
<td>340</td>
</tr>
</tbody>
</table>

* 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
the PNS is about $65,000, a wage level substantially higher than average 2003 annual pay for all private covered employment in New Hampshire or in Rockingham County. A large portion of the shipyard employees are either highly skilled or have attained a high level of education. If workers with high levels of educational attainment seek employment in other parts of the nation, the state will lose valuable human capital as these workers migrate from New Hampshire. For the purpose of modeling we assumed that no other major employer would enter the region and absorb some of the excess labor force. If that were to occur, the economy would tend to move back toward equilibrium.

Depending on how much employment would be absorbed, the economy would recover, accordingly. In any case, the recovery period and jobs replacement would likely be a long and protracted one, especially in light of the slow recoveries experienced by other areas whose naval bases have already been closed.

Peter S. Bartlett
Annette Nielsen

1 Lenz, Ryan: Associated Press; Bases in Northeast prone to BRAC.
2 Kenny, Elizabeth: http://www.seacoastonline.com; Navy: Too soon to tell future of the shipyard.
N.H. and U.S. Seasonally Adjusted Unemployment Rates

Except Maine, all New England states saw a decline in their unemployment rates over-the-year.

Seasonally Adjusted Labor Force Estimates By Place of Residence

Seasonally Adjusted Nonfarm Employment By Place of Establishment

Unemployment Rates by Region

Please note that not all supersectors meet the statistical criteria for publication in this category. We seasonally adjust the total nonfarm data series and all the published supersectors independently. Therefore, the sum of the published parts will not equal the total.
Unemployment rates in the New Hampshire portion of its Labor Market Areas (LMA) and Metropolitan Areas, and New England City and Town Areas (NECTA)

Not Seasonally Adjusted

By Place of Residence

New Hampshire unemployment and labor force estimates are calculated using a regression model which depends on Current Population Survey (CPS) Estimates. Labor Market Area estimates are calculated using the Bureau of Labor Statistics "Handbook Method" and then adjusted to the State levels.
The strong growth in Leisure and hospitality of 800 jobs over-the-month was driven by an increase in Food service and drinking places.

For further analysis please read the Detailed Monthly Analysis of Industry Employment Data on our Web site at <www.nhes.state.nh.us/elmi/nonfarm.htm>
Average Earnings and Hours of Production Workers in Manufacturing

<table>
<thead>
<tr>
<th>Sector</th>
<th>Average Weekly Earnings</th>
<th>Average Weekly Hours</th>
<th>Average Hourly Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Hampshire</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Manufacturing</td>
<td>$616.62</td>
<td>39.2</td>
<td>$15.73</td>
</tr>
<tr>
<td>Durable Goods</td>
<td>$633.21</td>
<td>39.9</td>
<td>$15.87</td>
</tr>
<tr>
<td>Nondurable Goods</td>
<td>$570.32</td>
<td>37.3</td>
<td>$15.29</td>
</tr>
<tr>
<td>Manchester NH MetroNECTA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Manufacturing</td>
<td>$653.18</td>
<td>38.4</td>
<td>$17.01</td>
</tr>
<tr>
<td>Nashua NH-MA NECTA Division, NH Portion</td>
<td>$702.69</td>
<td>38.4</td>
<td>$17.01</td>
</tr>
<tr>
<td>All Manufacturing</td>
<td>$665.41</td>
<td>41.1</td>
<td>$16.19</td>
</tr>
</tbody>
</table>

Note: Production workers and information for Portsmouth and Rochester will be available with January 2006 data.

Leisure and hospitality (supersector 70) led the way with an 800-job expansion. Educational and health services (supersector 65) and government (supersector 90) each followed by adding 700 jobs. Trade, transportation, and utilities (supersector 40) expanded its staff by 500 positions. Both construction (supersector 20) and professional and business services (supersector 60) added 400 jobs to their respective rosters. Natural resources and mining (supersector 10) wrapped up expansion for the month with its 100-job increase.

Employment activity for information (supersector 50) and other services (supersector 80) remained neutral in March, as the total number of jobs in each held at the February level.

On the downside, manufacturing (supersector 30) dropped 200 jobs in the March estimates, and financial activities (supersector 55) reduced its personnel strength by 100.

B. G. McKay
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Portsmouth Naval Shipyard and the North Country Industrial Development Simulation are available on the web at http://www.nhes.state.nh.us/elmi/specpubs.htm. The impact study of the paper industry contraction is only available in hard copy. Any of these publications can be requested by contacting ELMI Publications at (603) 228-4124.

REMI studies have been conducted in regional economies all over the United States, on subjects ranging from economic development, transportation, infrastructure, environment, energy and natural resources to state and local tax changes. Some of these studies are listed at the Regional Economic Models, Inc website at <www.remi.com/support/articles.html>.

If you have any questions about the Portsmouth Naval Shipyard study or any questions related to the use of the REMI Model, please contact Peter S. Bartlett at (603) 228-4122, email pbartlett@nhes.state.nh.us or Annette Nielsen at (603) 229-4427, email anielsen@nhes.state.nh.us.

1 Product of Regional Economic Models, Inc. of Amherst, MA.
2 REMI has the capabilities to forecast to 2050.