An Evaluation of the Demographic and Employment Impacts and Growth in Southern Maryland (St. Mary’s, Calvert, and Charles County) Resulting from Base Realignment and Closure (BRAC)

By

Edith Hoschar
Resource Management Concepts, Inc.
Lexington Park, Maryland
September 2012

Capstone paper submitted in partial fulfillment of the requirements for the Certificate in NEPA
Duke Environmental Leadership Program
Nicholas School of the Environment at
Duke University

2012
An Evaluation of the Demographic and Employment Impacts and Growth in Southern Maryland (St. Mary’s, Calvert, and Charles County) Resulting from Base Realignment and Closure (BRAC)

1. Abstract

The southern Maryland region experienced considerable growth in population when the 1991, 1993, and 1995 Base Realignment and Closure (BRAC) Act relocated facilities from Warminster, Pennsylvania; Trenton, New Jersey; and Arlington, Virginia to the Patuxent River Naval Air Station (NAS), located in Lexington Park, Maryland (shown in figure 1). No longer considered a “Frontier Navy” town, the base has become the Navy’s principal research, development, test, evaluation, engineering, and fleet support activity for naval aircraft, engines, avionics, aircraft support systems and ship/shore/air operations. With the BRAC consolidation and additional multi-billion dollar programs, the station has become the largest employer in St. Mary’s County, hosting three major Navy commands: the Naval Air Systems Command (NAVAIR) headquarters, the Naval Air Warfare Center Aircraft Division (NAWCAD), and the Air Test Wing Atlantic.

2. Background

The environmental impacts from the BRAC realignments/relocations were evaluated within two Environmental Impact Statements (EIS). The 1991 BRAC EIS evaluated the environmental impacts resulting from moving operations from Warminster, PA and Trenton, NJ to Patuxent River NAS. The draft EIS was published in December 1992 and the final EIS was published in March 1993. The 1993 BRAC EIS evaluated the impacts resulting from the transfer of NAVAIR headquarters from Arlington, VA to Patuxent River. The draft EIS was published in August 1994 and the final EIS was published in November 1994.

Figure 1: Location of Patuxent River NAS
Since these EISs were published, NAWCAD has prepared an Integrated Management Plan (IMP) for assets and operations within the Patuxent River Complex, which includes airspace over the Chesapeake Bay. An EIS reviewing potential impacts resulting from the IMP was prepared in December 1998.

As of February 2012, Patuxent River NAS has selected a company to develop a business and leasing plan via an enhanced use lease (EUL) to build new office space for Patuxent River employees. As stated in the EUL Opportunity presentation on June 9, 2010, “the Navy foresees a general growth trend at the installation as new aircraft and weapon systems are brought into NAS Patuxent River for testing, evaluation, and operation.” This action is expected to require some sort of NEPA analysis; however, the Navy does not anticipate that an EIS will be required for this action.

3. Scope

Most people would not argue with the statement that NAS Patuxent River has had a significant effect on southern Maryland’s economic and demographic profile. Supporters of the Navy base point to the economic prosperity brought to the area, particularly St. Mary’s County. However, critics point out the social problems that have affected the least prosperous residents, such as affordable housing shortages.

Due to the uncertainty regarding predictions of socioeconomic impacts, the consequences of proposed actions are expected to vary from predictions within environmental impact statements. This report will review the socioeconomic analyses within the two BRAC EISs and compare projected forecasts to actual socioeconomic data.

Socioeconomic impacts are generally attributed to the contribution of payrolls (military and civilian) and local procurement to the economic base of the local region of influence. In this case, the actions proposed for Patuxent River would have a multiplier effect on the local and regional economy. Direct jobs would be created, generating new income and increasing personal spending. This spending generally creates secondary jobs, increases business volume and increases revenues for schools and other social services.
An analytical approach will review the expected effects of the base expansions resulting from BRAC evaluated within the EISs. This paper will evaluate the actual impacts to the region of influence, the tri-county area of St. Mary’s, Calvert, and Charles County, shown in figure 2.

![Location of Southern Maryland Counties in Maryland](http://en.wikipedia.org/wiki/File:Southern_Maryland_highlighted.png)

This paper will review the estimated impacts from the proposed actions and the actual changes in socioeconomics of the region of impact. Socioeconomic measures that were reviewed were population, direct employment, indirect employment, and income. The impacts of increased housing/rental costs on the poor and those with fixed incomes, impacts and overcrowding in schools, transportation impacts or the fiscal health of the county taxed with providing these services were not reviewed in this paper.

4. **BRAC 1991 impacts**

Impacts discussed within both the Draft and Final EIS encompassed environmental, physical and socioeconomic effects resulting from building facilities and from operating buildings and test facilities. The EIS attempted to identify various effects upon the tri-county area from an additional 2,700 families (approximately 6,800 people), shown in table 1. This was estimated to be an increase of approximately 3% of the existing population.

New facilities were expected to bring an additional demand for housing, public education, and social services. The majority of impacts were expected to occur in St. Mary’s County, within Lexington Park and Election District 8, based on a historic analysis (1991) of zip
code data of the civilian employees. This analysis showed that approximately 89 percent of employees received mail in St. Mary’s County, approximately 6.1 percent received mail in Calvert County and approximately 1.9 percent received mail in Charles County.

<table>
<thead>
<tr>
<th>Site</th>
<th>Number of personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAWC- Warminster</td>
<td>1,656</td>
</tr>
<tr>
<td>Military</td>
<td>143</td>
</tr>
<tr>
<td>NAWC- Trenton</td>
<td>157</td>
</tr>
<tr>
<td>Contractor support (estimated)</td>
<td>750</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,706</strong></td>
</tr>
<tr>
<td><strong>Estimated Dependents</strong></td>
<td><strong>4,178</strong></td>
</tr>
<tr>
<td><strong>Total increase from BRAC 1991</strong></td>
<td><strong>6,884</strong></td>
</tr>
</tbody>
</table>

New residents were expected to start moving into the tri-county area in late 1995, with the move completed by the third quarter of 1996. An estimated 2,030 additional new employment positions were estimated in support of the direct additional employment at Patuxent River.

5. BRAC 1993 impacts

Socioeconomic impacts from BRAC 1993 were expected to result from a personnel increase of approximately 2,800 employees (both military and civilian). An increase of approximately 6,800 people was expected, shown in table 2. All NAVAIR personnel were expected to be relocated by the end of 1997. Trenton personnel were expected to relocate by 1998. Approximately 20% of NAVAIR employees already lived in the tri-county area.

<table>
<thead>
<tr>
<th>Site</th>
<th>Number of personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAVAIR</td>
<td>2,171</td>
</tr>
<tr>
<td>NAWC AD Trenton</td>
<td>116</td>
</tr>
<tr>
<td>Contractor support (estimated)</td>
<td>915</td>
</tr>
<tr>
<td>Total</td>
<td>3,202</td>
</tr>
<tr>
<td>---------------</td>
<td>-------</td>
</tr>
<tr>
<td>Estimated Dependents</td>
<td>3,598</td>
</tr>
</tbody>
</table>

Total increase from BRAC 1993 | 6,800 |

6. **1998 FEIS Impacts**

The proposed action within the 1998 FEIS covered the use of existing personnel and facilities within the Patuxent River Complex. No increase to the post-BRAC employment level of operations was expected. According to the FEIS,

“The permanent employment base of NAS Patuxent River and Webster Field would remain the same as under the current level of operations (e.g., full post-BRAC employment, or 16,600 persons). The number of transient workers that would be associated with specific test programs would also remain the same as described for current operational levels. In addition, no new facilities are planned beyond those constructed for BRAC realignment.”

7. **Population**

As shown in figure 3, the overall population in Maryland has steadily increased over past decades; however, the rate of growth of population over ten-year increments has slowed.

In the decade prior to the BRAC realignment, the southern Maryland region saw significant population growth which impacted local infrastructure, shown in figure 4. The BRAC realignment in the mid-1990s added additional people and jobs to an area already experiencing significant growth.

![Maryland Population](data from census.maryland.gov)
The total estimated direct impact from both BRAC documents was approximately 13,600 people moving into the region of influence. An estimated 70 percent of that total, or 9,520 people, moved to St. Mary’s County. That total is consistent with an overall population increase in St. Mary’s County over the decade of 10,237 people.

The BRAC transition was expected to impact Charles and Calvert Counties to a lesser degree. Both Calvert and Charles counties are heavily dependent upon employment north of the counties in Prince Georges County and the Washington DC metropolitan area. St. Mary’s County is more dependent upon employment at the Patuxent River Complex and the contractors associated with naval operations.

A review of the population rate of increase (Table 3) shows that the growth in those counties have been greater than in St. Mary’s County and in Maryland overall. The growth in these counties can be attributed to other factors, such as the proximity to the Washington, D.C. area. Both Charles and Calvert counties are included in the Washington, D.C. Metropolitan Statistical Area; therefore, have close economic and population ties with the D.C. area.

<table>
<thead>
<tr>
<th>Decade</th>
<th>Maryland</th>
<th>St. Mary’s County</th>
<th>Calvert County</th>
<th>Charles County</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970-1980</td>
<td>40%</td>
<td>26%</td>
<td>67%</td>
<td>53%</td>
</tr>
<tr>
<td>1980-1990</td>
<td>13%</td>
<td>27%</td>
<td>48%</td>
<td>39%</td>
</tr>
<tr>
<td>1990-2000</td>
<td>10%</td>
<td>13%</td>
<td>45%</td>
<td>19%</td>
</tr>
<tr>
<td>2000-2010</td>
<td>9%</td>
<td>22%</td>
<td>19%</td>
<td>22%</td>
</tr>
</tbody>
</table>
8. **Direct Employment in the Region of Influence**

The Patuxent River Complex, which includes the NAS, NAVAIR, and numerous tenants, is one of the largest employers in St. Mary’s County, as well as in Southern Maryland. In 2001, Patuxent River directly employed 9,995 military and civilian personnel. (The France Institute, 2002) In 2010, that number increased to 10,965 (Maryland B&ED, 2012). In 2011, the total workforce, including onsite contractors, was more than 22,200. (St. Mary’s County, 2012).

The BRAC personnel relocations were expected to occur between 1995 and 1998. Based on the numbers in figure 5, the total increase between fiscal years 1994 and 1997 was 5,500 personnel. That number is approximately seven percent less than the estimated 5,908 employees expected; however, it is consistent with the likelihood of some personnel taking early retirement or finding other work rather than moving.

In the initial ten years since the BRAC decisions, the military staff at the Patuxent River Complex has been reduced by 11% from fiscal year 1992. As expected, the civilian workforce has increased by 60% over the same time period. The number of contractors working at the base has surpassed the civilian personnel number; increasing by over 65%.
The number of contractors outside of the base has also shown an increase. According to the Washington Business Journal, there were 40 contractors supporting the base in 1991. By 2000, there were 120 contractors. In 2011, St. Mary’s County identified 220 contractors. A growth in technology companies has reflected this increase, increasing 65% from the 129 companies in 2000. (Aitoro, 2011)

9. **Indirect employment**

The additional population from personnel and families moving into the region are expected to benefit the local tax base and increase additional retail demand. The additional household incomes and consumer demand associated with relocated personnel would have a positive and long-term effect on the regional economy. According to the BRAC 1993 EIS:

The additional purchasing power and consumer demand will result in increased spending in the area which, in turn would create additional employment opportunities. Employment resulting from various support functions could add an additional annual earning income of about $159 million. This would be a permanent addition to the economy of the region.
County Business Patterns, collected by the U.S. Census, is a useful tool for studying economic activity of small areas. This data set could be used to evaluate business changes and indirect employment changes in the region of influence.

The number of overall business establishments in the tri-county region is growing faster than in Maryland, shown in Table 4. St. Mary’s County business establishments have increased 15% from 1998 compared to approximately 10% increase in Maryland. All counties within the region of influence have shown an increase in businesses; however, that could be attributed to the increased population.

Table 4: Total Business Establishment (U.S. Census)

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>2008</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Mary’s County</td>
<td>1,646</td>
<td>1,897</td>
<td>15%</td>
</tr>
<tr>
<td>Calvert County</td>
<td>1,440</td>
<td>1,790</td>
<td>24%</td>
</tr>
<tr>
<td>Charles County</td>
<td>2,411</td>
<td>2,758</td>
<td>14%</td>
</tr>
<tr>
<td>Maryland</td>
<td>126,577</td>
<td>138,607</td>
<td>9.5%</td>
</tr>
</tbody>
</table>

An interesting perspective on the increasing numbers of businesses in St. Mary’s County is the numbers of hotels/motels and total number of rooms. The 1991 BRAC EIS listed seven hotels with approximately 788 rooms available. A review of Southern Maryland Online in 2012 showed 13 hotels in St. Mary’s County with approximately 985 rooms available, a 25 percent increase over twenty years.

10. **Income**

Patuxent River is a significant contributor to the economic health of St. Mary’s County. The average base salary is close to $90,000, contributing to the median annual household income in St. Mary’s County of $88,500.

Comparing the growth of annual median income in the southern Maryland region with the United States and Maryland yields some interesting trends (figure 6). St. Mary’s County median income was 28 percent higher than the United States number in 1989; however, that increased to a 43 percent increase in 2009. The most substantial difference was in the Calvert
County numbers: 65 percent higher than the United States number in 1989 and 73 percent higher in 2009.

![Figure 6: Median Family Income](image)

Retail sales tax collections are a fairly good indicator of the relative level of retail sales in St. Mary’s County over time. Retail sales were around 11.6 million dollars in 1989 and increased to 47.1 million dollars in 2010. This 300 percent increase could be tied to the infusion of Navy business. A study by the Jacob France Institute in 2002 estimated the value of Patuxent River business to be around 19 million dollars per year.

11. **Cumulative Impact**

The BRAC 1991 and 1993 relocated research and engineering functions to the Patuxent River Complex reinforcing the base as a recognized leader for RDT&E for air platforms. The proposed actions contributed to air and water impacts, development in the tri-county area, stresses on existing infrastructure, population and economic growth and traffic increase.

One potential impact that was not considered in any depth in the two EISs was the likelihood of staffing on the base continuing to grow with the expansion of national defense contracts located in the region. The location of the Navy air systems acquisition headquarters at Patuxent River would contribute to the additional contractors moving their companies nearby.
The number of research and development programs has increased at the Patuxent River complex. Programs, such as the development of presidential helicopter, the Global Hawk system, and the Joint Strike Fighter bring multi-billion dollar programs in research and development and test and evaluation. Direct federal expenditures for defense totaled 2.8 billion dollars in St. Mary’s County in 2010, a per capita expenditure of $26,477. In comparison, Calvert had direct federal defense expenditures of 56 million dollars with a per capita expenditure of 635 dollars.
Works Cited


Maryland. Employment, Unemployment and Unemployment Rate by Place of Residence. Date Accessed June 15 2012 from http://dllr.state.md.us/lmi/laus/


Profile of General Demographic Characteristics: St. Mary’s County, Maryland. Date Accessed August 1, 2011 from http://planning.maryland.gov/msdc/census/Historical_Census/SF1_80-00/stma80-00.pdf.


Smith, Tim. “Successful Teaming for the Future Brief.” Date Unknown. Personal communication with Mr. Smith on July 23, 2012.


