MARYLAND

Economic Impact Study of Military Facilities

FY12 RESULTS

MARYLAND

Department of Business & Economic Development

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Maryland Military Installation Economic Impact Study

Prepared for
Maryland Department of Business and Economic Development

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August 25, 2015

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Table of Contents

1.0 Executive Summary 5
1.1 Economic Impacts 5
1.2 Methodology 10
1.3 Limitations 11
2.0 Introduction 12
3.0 Joint Base Andrews 13
4.0 Aberdeen Proving Ground 15
5.0 Fort Detrick 18
6.0 Fort George G. Meade 21
7.0 National Maritime Intelligence Integration Office 23
8.0 Naval Support Activity Bethesda 25
9.0 Naval Air Station Patuxent River 27
10.0 Coast Guard Yard 30
11.0 Maryland National Guard 32
12.0 Naval Research Lab—Chesapeake Bay Detachment 34
13.0 Naval Support Activity Annapolis 36
14.0 Naval Surface Warfare Center—Carderock Division 38
15.0 Naval Support Facility Indian Head 40
16.0 Adelphi Laboratory Center 42
17.0 Army Corps of Engineers—Baltimore District 44
18.0 Conclusion 46
19.0 References 47
Appendix A—Methodology 52
A.1 IMPLAN Model Overview 52
A.2 Assumptions 52
Appendix B—EIS Questionnaire 55

Table of Figures

Figure 1: Maryland Military Installation Output 6
Figure 2: Maryland Military Installation Visitor Spending 6
Figure 3: Maryland Military Installation Location and Economic Impacts 7
Figure 4: Economic Impacts of Maryland Military Installations 9
Figure 5: Joint Base Andrews Facility Spending 14
Figure 6: Economic Impacts of Joint Base Andrews 15
Figure 7: Aberdeen Proving Ground Facility Spending 17
Figure 8: Economic Impacts of Aberdeen Proving Ground 18
Figure 9: Fort Detrick Facility Spending 20
Figure 10: Economic Impacts of Fort Detrick 21
Figure 11: Fort George G. Meade Facility Spending 22
Figure 12: Economic Impacts of Fort George G. Meade 23
Figure 13: National Maritime Intelligence Integration Office Facility Spending 24
Figure 14: Economic Impacts of National Maritime Intelligence Integration Office 25
Figure 15: Naval Support Activity Bethesda Facility Spending 26
Figure 16: Economic Impacts of Naval Support Activity Bethesda 27
Figure 17: Naval Air Station Patuxent River Facility Spending 29
Figure 18: Economic Impacts of Naval Air Station Patuxent River 29
Figure 19: Coast Guard Yard Facility Spending 31
Figure 20: Economic Impacts of Coast Guard Yard 31
Figure 21: Maryland National Guard Facility Spending 33
Figure 22: Economic Impacts of Maryland National Guard 34
Figure 23: Naval Research Lab—Chesapeake Bay Detachment Facility Spending 35
Figure 24: Economic Impacts of Naval Research Lab—Chesapeake Bay Detachment 36
Figure 25: Naval Support Activity Annapolis—Facility Spending 37
Figure 26: Economic Impacts of Naval Support Activity Annapolis 38
Figure 27: Naval Surface Warfare Center—Carderock Division Facility Spending 39
Figure 28: Economic Impacts of Naval Surface Warfare Center—Carderock Division 40
Figure 29: Naval Support Facility Indian Head Facility Spending 41
Figure 30: Economic Impacts of Naval Support Facility Indian Head 42
Figure 31: Adelphi Laboratory Center Facility Spending 43
Figure 32: Economic Impacts of Adelphi Laboratory Center 44
Figure 33: Army Corps of Engineers—Baltimore District Facility Spending 45
Figure 34: Economic Impacts of Army Corps of Engineers—Baltimore District 46
Figure 35: IMPLAN Industry Sectors 53
Figure 36: EIS Questionnaire—Joint Base Andrews 55
Figure 37: EIS Questionnaire—Aberdeen Proving Ground 56
Figure 38: EIS Questionnaire—Fort Detrick 57
Figure 39: EIS Questionnaire—Fort George G. Meade 58
Figure 40: EIS Questionnaire—National Maritime Intelligence Integration Office 59
Figure 41: EIS Questionnaire—Naval Support Activity Bethesda 60

Figure 42: EIS Questionnaire—Naval Air Station Patuxent River 61
Figure 43: EIS Questionnaire—Coast Guard Yard..... 62
Figure 44: EIS Questionnaire—Maryland National Guard..... 63
Figure 45: EIS Questionnaire—Naval Research Lab—Chesapeake Bay Detachment..... 64
Figure 46: EIS Questionnaire—Naval Support Activity Annapolis 65
Figure 47: EIS Questionnaire— Naval Surface Warfare Center—Carderock Division..... 66
Figure 48: EIS Questionnaire— Naval Support Facility Indian Head 67
Figure 49: EIS Questionnaire—Adelphi Laboratory Center 68
Figure 50: EIS Questionnaire—Army Corps of Engineers—Baltimore District 69

1.0 Executive Summary

The Maryland Department of Business and Economic Development (DBED) tasked the Regional Economic Studies Institute (RESI) of Towson University with estimating the economic impacts of Maryland's Military Installations on Maryland's economy based on base-specific payroll, procurement, visitor and other spending.

RESI estimated the fiscal year 2012 (FY 2012) economic impacts of 15 Military Installations in Maryland.[1] The list of installations included in the analysis is as follows:

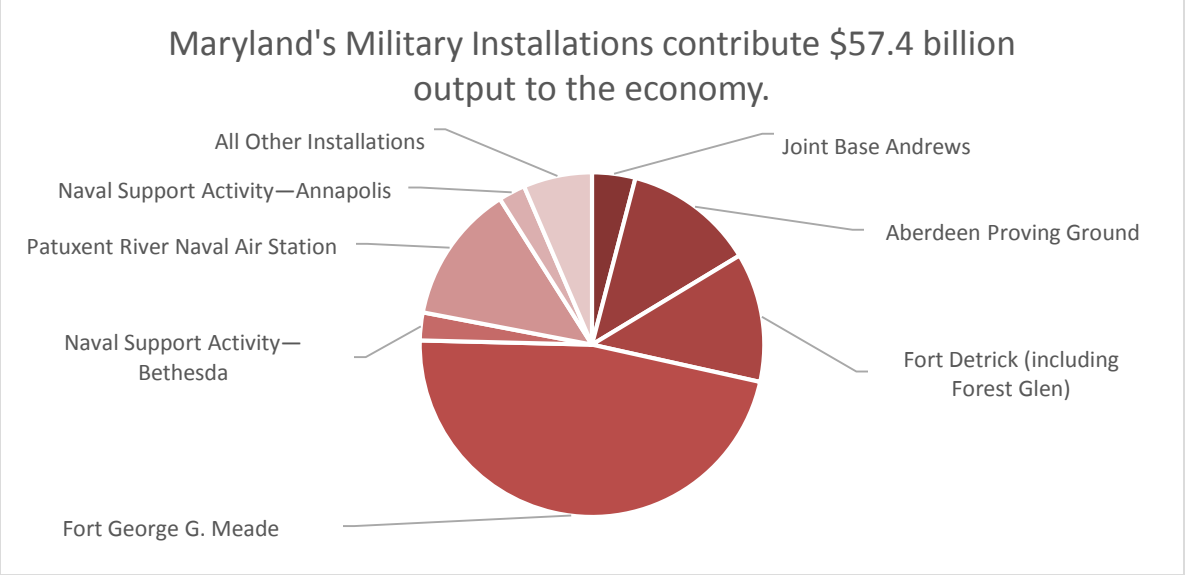
- Joint Base Andrews
- Aberdeen Proving Ground
- Fort Detrick
- Fort George G. Meade
- National Maritime Intelligence Integration Office
- Naval Support Activity Bethesda
- Naval Air Station Patuxent River
- Coast Guard Yard
- Maryland National Guard
- Naval Research Lab—Chesapeake Bay Detachment
- Naval Support Activity Annapolis
- Naval Surface Warfare Center—Carderock Division
- Naval Support Facility Indian Head
- Adelphi Laboratory Center
- Army Corps of Engineers—Baltimore District

1.1 Economic Impacts

The fifteen installations that RESI analyzed support 410,219 jobs and generate $57.4 billion in total output and $25.7 billion in total wages. According to the U.S. Bureau of Economic Analysis, Maryland's total output was nearly $336.5 billion in 2012.[2] At $57.4 billion, 17 percent of Maryland's total output can be attributed to the Military Installations.

[1] Joint Base Andrews provided FY 2013 data.
[2] "Gross domestic product (GDP) by state (millions of current dollars)," Bureau of Economic Analysis, accessed May 7, 2015, http://www.bea.gov/.

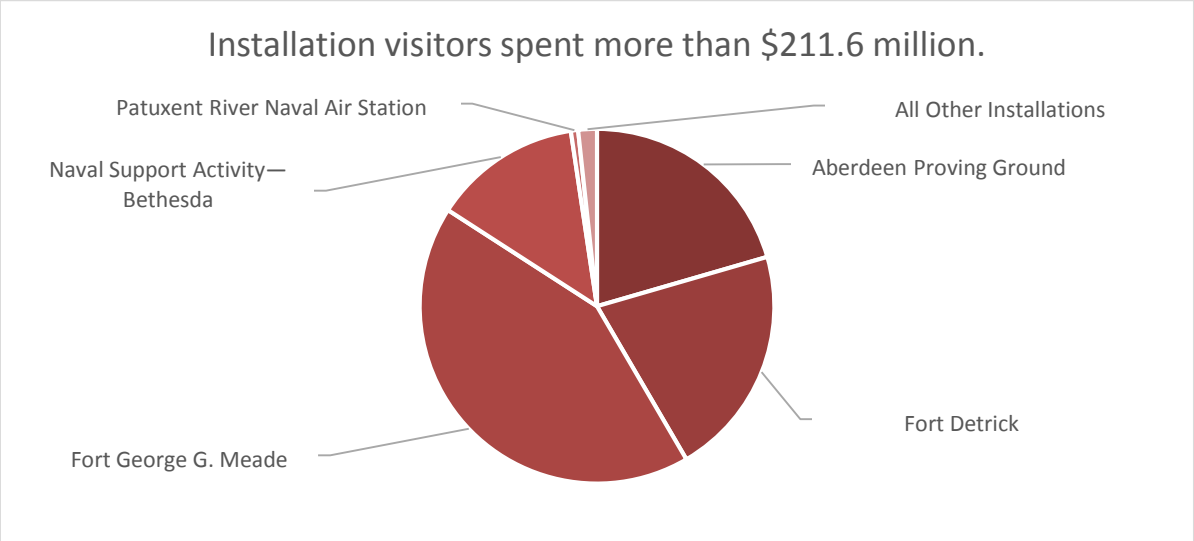
Figure 1: Maryland Military Installation Output



Source: RESI

Additionally, Maryland's military installations attract thousands of visitors each year. This spending generate tourist dollars for the state.

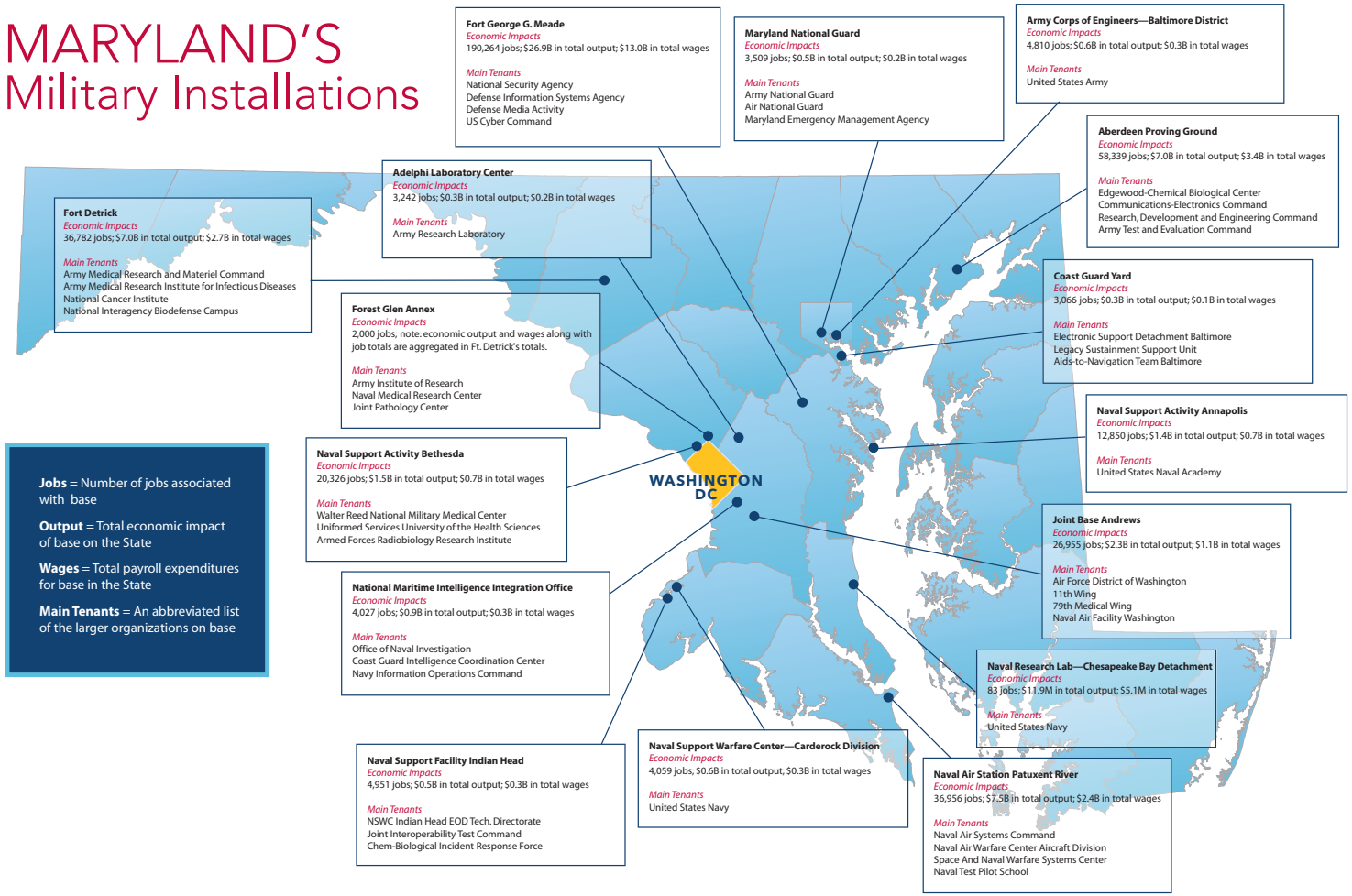
Figure 2: Maryland Military Installation Visitor Spending



Source: RESI

Maryland's Military Installations, and their impacts are spread throughout the state.

Figure 3: Maryland Military Installation Location and Economic Impacts



Sources: DBED, RESI

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The 2005 iteration of Base Realignment and Closure (BRAC) was given a six-year implementation period ending September 15, 2011.[3] BRAC's measures have brought an influx of high-paying jobs (defense contracting positions and federal jobs) to Maryland.[4] To support these new jobs, billions of dollars have been invested in infrastructure.[5] Combined, the creation of high-paying jobs and infrastructure expenditures aided in returning higher economic impacts than seen in previous studies.

FY 2012 impacts exhibited an increase over FY 2008, where the installations supported more than 264,000 jobs and generated $35.5 billion in total output and $16.8 billion in wages. Installation impacts for the two periods were found to be as follows.

[3] "DoD Base Realignment and Closure," Department of Defense, 4, March 2014, accessed August 20, 2015, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2015/budget_justification/pdfs/05_BRAC/FINAL_FY15_BRAC_Summary_Book.pdf.
[4] James Bach, "Maryland's BRAC legacy: More jobs and office leases," Washington Business Journal, September 7, 2012, accessed August 20, 2014, http://www.bizjournals.com/washington/print-edition/2012/09/07/marylands-brac-legacy-more-jobs-and.html.
[5] Jamie Smith Hopkins, "Preparing for another BRAC, before it's a done deal," Baltimore Sun, June 23, 2014, accessed August 20, 2015, http://articles.baltimoresun.com/2014-06-23/business/bs-bz-maryland-brac-military-installations-20140619_1_brac-maryland-military-installation-council-aberdeen-proving-ground.

Figure 4: Economic Impacts of Maryland Military Installations[6]

Installation	2008			2012		
	Employment	Output	Wages	Employment	Output	Wages
Joint Base Andrews[7]	12,506	$1.0	$0.6	26,955	$2.3	$1.1
Aberdeen Proving Ground	28,995	$4.3	$1.6	58,339	$7.0	$3.4
Fort Detrick	13,395	$1.8	$0.7	36,782	$7.0	$2.7
Fort George G. Meade	125,729	$17.8	$9.2	190,264	$26.9	$13.0
National Maritime Intelligence Integration Office	3,343	$0.4	$0.3	4,027	$0.9	$0.3
Naval Support Activity Bethesda	11,216	$0.8	$0.5	20,326	$1.5	$0.7
Naval Air Station Patuxent River	41,185	$6.6	$2.4	36,956	$7.5	$2.4
Coast Guard Yard	2,395	$0.2	$0.1	3,066	$0.3	$0.1
Maryland National Guard	3,850	$0.4	$0.2	3,509	$0.5	$0.2
Naval Research Lab—Chesapeake Bay Detachment	85	$0.0	$0.0	83	$0.0	$0.0
Naval Support Activity Annapolis	8,886	$0.7	$0.3	12,850	$1.4	$0.7
Naval Surface Warfare Center—Carderock Division	3,082	$0.3	$0.2	4,059	$0.6	$0.3
Naval Support Facility Indian Head	5,165	$0.5	$0.3	4,951	$0.5	$0.3
Adelphi Laboratory Center	2,831	$0.4	$0.2	3,242	$0.3	$0.2
Army Corps of Engineers—Baltimore District	1,507	$0.1	$0.1	4,810	$0.6	$0.3
Total	**264,170**	**$35.5**	**$16.8**	**410,219**	**$57.4**	**$25.7**

Sources: DBED, RESI, Jacob France Institute

The majority of installations saw an increase in economic impacts between FY 2008 and FY 2012, resulting in an overall higher impact to Maryland in FY 2012. In FY 2012, the same 15 military installations supported a total of more than 400,000 workers, an increase of approximately 146,000 workers when compared to FY 2008. Total output increased by

[6] Output and wages are reported in billions of dollars.
[7] Joint Base Andrews provided FY 2013 data.

approximately $21.9 billion, surpassing $57.4 billion in FY 2012. Total wage impacts also increased to $25.7 billion—an increase of nearly $8.9 billion since FY 2008.

1.2 Methodology

To quantify the economic and fiscal impacts of the installation, RESI used the IMPLAN input/output model. This model enumerates the employment and fiscal impact of each dollar earned and spent by the following: employees of the installation, other supporting vendors (business services, retail, etc.), each dollar spent by these vendors on other firms, and each dollar spent by the households of the installation's employees, other vendors' employees, and other businesses' employees.

Economists measure three types of economic impacts: direct, indirect, and induced impacts. The direct economic effects are generated as businesses create jobs and hire workers to fill new positions. The indirect economic impacts occur as firms purchase goods and services from other firms. In either case, the increases in employment generate an increase in household income, as new job opportunities are created and income levels rise. This drives the induced economic impacts that result from households increasing their purchases at local businesses.

To maintain consistency between FY 2008 data and FY 2012 data, RESI followed the methodology used in the DBED's 2008 *Measuring Economic Impact of Maryland's Military Installation* study.[8] In addition, RESI reviewed a case study published on the IMPLAN website titled *Economic Impact of Arizona's Principal Military Operations* to quantify the economic impacts that military installations had on the state.[9] Four military installation inputs were used to best quantify the economic impacts. These inputs included employment numbers, payroll totals, purchase/procurement totals, and visitor totals. All data were collected from the military installations and provided by DBED. Suppliers, vendors, and contactors paid to Maryland were used in the calculation of economic impacts.

To keep the analysis consistent with the 2008 Maryland Military Installation Study, RESI excluded revenues associated with commissary and exchange sales or on-installation lodging revenues in the spending and procurement figures for each facility. This exclusion avoided double counting of these revenues with visitor and employee spending. Medical spending by the installations was also excluded from the analysis of purchases to avoid double counting with the impacts associated with military and other employee incomes.

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[8] "Mission Maryland: Measuring Economic Impact of Maryland's Military Installations," The Jacob France Institute of the Merrick School of Business at the University of Baltimore, 3, 15, accessed September 6, 2013, http://www.choosemaryland.org/moveyourbusiness/Documents/B2G%20Docs/missionMd.pdf.
[9] "Economic Impact of Arizona's Principal Military Operation," The Maguire Company and ESI Corporation, A-1, accessed September 6, 2013, http://www.dm.af.mil/shared/media/document/AFD-110822-041.pdf.

Total visitor spending was calculated by using data found in the 2012 *Economic Impact of the Military Community in South Carolina* study. RESI used the total visitor data provided each installation and an estimated spending of a person when visiting the installation. According to the study, the average visitor to the military installation spends approximately $143 per day.[10]

1.3 Limitations

While efforts were made to maintain consistency between FY 2008 and FY 2012 data, certain limitations apply. Data utilized in the study came from the military installations and was provided by DBED. Each military installation received the same identically formatted reporting tool in FY 2008, but not all data were reported in the same way. For instance, some installations provided data but did not complete the provided form, others only provided part of the requested information. In most cases, these differences did not require RESI to make additional assumptions.

Additionally, several installations have undergone major changes since FY 2008. For example, FY 2008 impacts included data from Andrews Air Force Base, whereas FY 2012 impacts include data from Joint Base Andrews (covering Air Force and Navy personnel). Similarly, in the FY 2008 economic impact study, the Fort Detrick and Walter Reed—Forest Glenn Annex installations had separate submissions, whereas these installations are now under one reporting governance. It is also important to note that the FY 2012 impact report analyzed 15 installations, while the FY 2008 report analyzed 17.

[10] Lu Wang, Paul Carlsen, and David Clayton, "The Economic Impact of the Military Community in South Carolina," Research Division South Carolina Department of Commerce. 33, accessed September 6, 2013, http://sccommerce.com/sites/default/files/document_directory/the_economic_impact_of_the_military_community_in_south_carolina.pdf.

2.0 Introduction

The Maryland Department of Business and Economic Development (DBED) tasked the Regional Economic Studies Institute (RESI) of Towson University with estimating the economic impacts of Maryland's Military Installations on the state's economy based on base-specific payroll, procurement, visitor and other spending.

The list of installations included in the analysis is as follows:

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- Coast Guard Yard
- Maryland National Guard
- Naval Research Lab—Chesapeake Bay Detachment
- Naval Support Activity Annapolis
- Naval Surface Warfare Center—Carderock Division
- Naval Support Facility Indian Head
- Adelphi Laboratory Center
- Army Corps of Engineers—Baltimore District

Data primarily included FY 2012 data, however Joint Base Andrews provided FY 2013 data.

To quantify the economic and fiscal impacts of the installation, RESI used the IMPLAN input/output model. This model enumerates the employment and fiscal impact of each dollar earned and spent by the following: employees of the installation, other supporting vendors (business services, retail, etc.), each dollar spent by these vendors on other firms, and each dollar spent by the households of the installation's employees, other vendors' employees, and other businesses' employees.

To maintain consistency between FY 2008 data and FY 2012 data, RESI followed the methodology used in the DBED's 2008 *Measuring Economic Impact of Maryland's Military Installation* study.[11] In addition, RESI reviewed a case study published on the IMPLAN website titled *Economic Impact of Arizona's Principal Military Operations* to quantify the economic impacts that military installations had on the state.[12] Four military installation inputs were used

[11] "Mission Maryland: Measuring Economic Impact of Maryland's Military Installations," Jacob France Institute, 3, 15.
[12] "Economic Impact of Arizona's Principal Military Operation," The Maguire Company and ESI Corporation, A-1.

to best quantify the economic impacts. These inputs included employment numbers, payroll totals, purchase/procurement totals, and visitor totals. All of the data were collected from the military installations and provided by DBED. Suppliers, vendors, and contactors paid to Maryland were used in the calculation of economic impacts.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

3.0 Joint Base Andrews[13]

Joint Base Andrews is located 10 miles southeast of Washington, D.C.[14] Under the orders of President Franklin D. Roosevelt, construction on the facility began in 1942.[15] In 1943, 105 enlisted men and 5 officers arrived, forming the first permanent unit.[16] Originally named Camp Springs Army Air Field, the facility was designed "to train fighter pilots for overseas duty."[17] In 1945 the name changed to Andrews Field, then changed again in 1947 to Andrews Air Force Base.[18] In 2009, the facility became known as Joint Base Andrews following the merger between the Air Force and the Navy.[19] In addition to serving as the headquarters for Continental Air Command, the Military Air Transport Service, and Strategic Air Command following World War II, from 1950 to 1992 the facility served as headquarters to the Air Research and Development Command—and later the Air Force Systems Command.[20]

The facility is home to a number of units, such as the 11th Wing, Naval Air Facility Washington, the 89th Airlift Wing, the 113th Wing D.C. Air National Guard, and Air National Guard Readiness Center, to name a few.[21] The 11th Wing, the host wing for the facility, provides "security, personnel, contracting, finance and infrastructure support for six Wings, two Headquarters and more than 50 tenant organizations, as well as 60,000 Airmen and families in the national capital region and around the world."[22] The Naval Air Facility Washington, one of five Navy Reserve bases in the nation, provides Navy reservists with access to currently available weapons systems, while the 89th Airlift Wing "is responsible for worldwide special air mission airlift,

[13] Joint Base Andrews provided FY 2013 data.
[14] "Joint Base Andrews, Maryland—Hotels, Lodging, Inns," Military-Hotels.us, accessed October 9, 2013, http://military-hotels.us/maryland/andrews-afb-md.html.
[15] "Joint Base Andrews History," Joint Base Andrews, September 21, 2012, accessed October 9, 2013, http://www.andrews.af.mil/library/factsheets/factsheet.asp?id=4479.
[16] Ibid.
[17] Ibid.
[18] Ibid.
[19] "Andrews Air Force Base," Military.com, accessed October 9, 2013, http://www.military.com/base-guide/andrews-air-force-base.
[20] "Joint Base Andrews History," Joint Base Andrews.
[21] "Units," Joint Base Andrews, accessed October 9, 2013, http://www.andrews.af.mil/units/index.asp.
[22] Ibid.

logistics and communications support for the president, vice president, cabinet members, combatant commanders and other senior military and elected leaders."[23]

Best known for special air missions, the facility provides transportation for senior government and military leaders, as well as visiting royalty, religious officials, and presidents.[24] Recent events creating publicity for the facility include former President Bush's reception of Pope Benedict XVI and the annual aerial and ground demonstrations.[25] The facility is also home to the best-known aircraft in the United States, the VC-25A—known as "Air Force One" when the President is on board.[26]

Joint Base Andrews Facility Spending

The installation provided data for specific payroll, procurement, and visitor spending for FY 2013. Figure 5 represents facility spending for FY 2008 and FY 2013. In FY 2013, Joint Base Andrews supported a total of 17,546 direct workers (not including contractors), an increase of nearly 9,500 workers when compared to FY 2008. Total payroll also increased from approximately $406.1 million to nearly $874.7 million as employment grew. Total in-state purchases decreased between FY 2008 to FY 2013 by $64.3 million.

Figure 5: Joint Base Andrews Facility Spending

Facility Spending	FY 2008	FY 2013
Total		
Payroll	$406,100,000	$874,650,554
Employment (# of jobs)	8,057	17,546
Purchases	$128,400,000	$96,088,578
Visitor Spending	n/a	n/a
In-State		
Payroll	$356,500,000	$767,823,005
Employment (# of jobs)	4,858	10,579
Purchases[27]	$128,400,000	$64,065,049
Visitor Spending	$800,000	n/a

Sources: DBED, Joint Base Andrews

Joint Base Andrews's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study.[28] Figure 6 represents the

[23] "Units," Joint Base Andrews,
[24] "Joint Base Andrews History," Joint Base Andrews."
[25] Ibid.
[26] "Joint Base Andrews, Maryland—Hotels, Lodging, Inns," Military-Hotels.us.
[27] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.
[28] FY 2008 impacts included data from Andrews Air Force Base, whereas FY 2013 impacts include data from Joint Base Andrews—covering Air Force and Navy personnel.

separate economic impacts of FY 2008 and FY 2013 specific payroll, procurement, visitor spending, and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

Figure 6: Economic Impacts of Joint Base Andrews

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	8,057	1,454	2,994	12,506
Output	$485,700,000	$170,300,000	$367,000,000	$1,023,000,000
Wages	$406,100,000	$63,400,000	$111,300,000	$580,800,000
FY 2013				
Employment	17,546	479	8,930	26,955
Output	$1,624,153,235	$80,393,890	$629,730,413	$2,334,277,538
Wages	$874,650,596	$29,104,444	$204,179,642	$1,107,934,682

Sources: RESI, IMPLAN

As shown in Figure 6, the employees associated with Joint Base Andrews' military facility support a total of 26,955 jobs in FY 2013, an increase of more than 14,000 workers compared to FY 2008.[29] In addition, Joint Base Andrews supports a total of more than $2.3 billion in output and approximately $1.1 billion in wages on an annual basis. The total output increased by roughly $1.3 billion between FY 2008 and FY 2013.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

4.0 Aberdeen Proving Ground

Aberdeen Proving Ground (APG), located in Harford County, Maryland, was established in 1917 to assist the United States Army in testing material. The Edgewood Arsenal was established to provide a facility for the management of chemical warfare materials (i.e. development, production, and testing).[30] Roughly 50 years later, in 1971, the two military installations joined together as Aberdeen Proving Ground.

APG encompassed nearly 24,000 civilian, military, and contractual employees in FY 2012. These employees support "numerous technical achievements in military intelligence, medical research, engineering, and computer technology."[31] In addition, APG supports a spectrum of training programs from chemical and biological defense to health promotion and preventive

[29] FY 2008 impacts included data from Andrews Air Force base, whereas FY 2013 impacts include data from Joint Base Andrews—covering Air Force and Navy personnel.
[30] "APG Facts," U.S. Army, Aberdeen Proving Ground, accessed September 27, 2013, http://www.apg.army.mil/facts.cfm.
[31] Ibid.

medicine. While the military installation hosts 11 major commands, it supports more than 70 tenants as well as various satellite and private activities.[32] The National Guard and the U.S. Army Reserve also utilize facilities located at APG.

To accommodate such large military programs, APG requires significant land space. APG covers approximately 72,500 acres, which includes water and wetlands, as well as the following amenities:

- 567,000 square yards of airfield pavement;
- More than 2,000 buildings (including offices, training facilities, barracks, and family hosting);[33]
- Five human engineering laboratories and a material research laboratory;
- Eight medical research laboratories, ten chemical laboratories, and two physics laboratories;
- Phillips Army Airfield and Weide Army Aviation Support Facility.

In July 2013, APG opened a Science, Technology, Engineering and Mathematics (STEM) Outreach and Education Center where students can interact with scientists and engineers. The outreach program will include roughly 70 organizations to assist in creating student interest in education programs offered by the U.S. Army.[34]

Key tenants at APG include the following:

- U.S. Army Research, Development and Engineering Command (RDECOM);
- U.S. Army Communications-Electronics Research, Development and Engineering Center (CERDEC);
- U.S. Army Communications-Electronics Command (CECOM);
- Joint Program Executive Office Intelligence, Electronic Warfare and Sensors (JPEO IEWS);
- Joint Program Executive Office Command, Control and Communications-Tactical (JPEO C3T);
- Joint Program Executive Office Chemical –Biological Defense (JPEO CBD);
- U.S. Army Edgewood Chemical Biological Center (ECBC);
- U.S. Army Contracting Command Aberdeen Proving Ground (ACC-APG);
- U.S. Army Test and Evaluation Command (ATEC);
- Aberdeen Test Center (ATC);
- U.S. Army Public Health Command (USAPHC);
- U.S. Army 20th Support Command (CBRNE);
- U.S. Army Medical Research Institute of Chemical Defense (MRICD); and

[32] "APG Facts," US Army, Aberdeen Proving Ground.
[33] Ibid.
[34] Tyler Waldman, "Aberdeen Proving Ground Open STEM Center," Aberdeen Patch, July 29, 2013, accessed September 27, 2013, http://aberdeen.patch.com/groups/politics-and-elections/p/aberdeen-proving-ground-to-open-stem-center.

- U.S. Army Chemical Materials Agency (CMA). [35]

Aberdeen Proving Ground Facility Spending

The installation provided data for specific payroll, procurement, and visitor spending for FY 2012. Figure 7 represents facility spending for FY 2008 and FY 2012. In FY 2012, APG supported a total of 15,780 direct workers (not including contractors), an increase of nearly 4,700 workers when compared to FY 2008. Total payroll also increased from approximately $0.7 billion to $1.1 billion as employment grew. Total in-state purchases increased between FY 2008 to FY 2012 by more than $762.5 million.

Figure 7: Aberdeen Proving Ground Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$698,600,000	$ 1,134,968,233
Employment (# of jobs)	11,096	15,780[36]
Purchases	$13,118,200,000	$15,105,694,543
Visitor Spending	n/a	n/a
In-State		
Payroll	$606,300,000	$760,700,000
Employment (# of jobs)	10,111	10,862
Purchases[37]	$1,143,700,000	$1,906,246,795
Visitor Spending	n/a	$43,431,531

Sources: APG, DBED

APG's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure 8 represents the separate economic impacts of APG's FY 2008 and FY 2012 specific payroll, procurement, and visitor spending and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

[35] Waldman, "Aberdeen Proving Ground Open STEM Center."
[36] Total employment included the 1,223 traditional Guardsmen.
[37] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

Figure 8: Economic Impacts of Aberdeen Proving Ground

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	11,096	9,990	7,910	28,995
Output	$1,750,100,000	$1,564,400,000	$966,800,000	$4,281,300,000
Wages	$698,600,000	$589,300,000	$294,700,000	$1,582,700,000
FY 2012				
Employment	15,780	15,585	26,975	58,339
Output	$1,622,488,066	$2,298,357,751	$3,127,716,743	$7,048,562,560
Wages	$1,134,968,235	$975,489,748	$1,242,440,402	$3,352,898,385

Sources: RESI, IMPLAN

As shown in Figure 8, the employees associated with APG's military facility support a total of 58,339 jobs in FY 2012, an increase of more than 29,000 workers compared to FY 2008. In addition, APG supports a total of $7.0 billion in output and approximately $3.4 billion in wages on an annual basis. The total output increased by roughly $2.8 billion between FY 2008 and FY 2012.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

5.0 Fort Detrick

Fort Detrick, the largest employer in Frederick County, is home to the National Cancer Institute, the Army Medical Research Institute of Infectious Diseases, and the U.S. Army Medical Research and Materiel Command.[38] Fort Detrick "leads the way through innovation and business development, endeavoring to provide a positive influence on the local community and state."[39]

Originally named Detrick Field in 1931, the airfield previously operated as an emergency airfield route and served as a Cadet Pilot Training Center. [40] However, in 1943 Detrick Field aviation operations were terminated, and the facility was renamed Camp Detrick.[41] At that time, and again in 1946 and 1952, the facility expanded through new land purchases and facility construction. [42] In 1956, the facility was renamed to the current Fort Detrick and reached its

[38] "Fort Detrick," Military.com, accessed October 1, 2013, http://www.military.com/base-guide/fort-detrick.
[39] "Fort Detrick," Department of Defense, accessed October 1, 2013, http://www.detrick.army.mil/usag/about.cfm.
[40] "History of Fort Detrick," Fort Detrick Alliance, accessed October 1, 2013, http://www.fortdetrickalliance.org/about/history.
[41] Ibid.
[42] "History of Fort Detrick," Fort Detrick Alliance.

current acreage of 1,200 acres in 1962.[43] Today, Fort Detrick serves the following federal departments:

- The Department of Defense (DOD);
- The Department of Justice (DOJ);
- The Department of Agriculture (USDA); and
- The Department of Human Services (DHS). [44]

As part of the 2005 Base Realignment and Closure (BRAC) measures, Fort Detrick assumed installation management of the Walter Reed—Forest Glen Annex installation located in Silver Spring, Maryland.[45] The installation is home to several commands, including the Walter Reed Army Institute of Research (WRAIR), Naval Medical Research Center, the Joint Pathology Center, Armed Forces Pest Management Board and the National Museum of Health and Medicine.[46] The installation, which employs over 2,000 workers, consists of large research laboratories that support a variety of medical research units.[47]

The approximately 7,800 military, federal, and contractor employees assigned at Fort Detrick represent each branch of the U.S. military.[48] Included in Fort Detrick's DOD support are the Air Force, Marine Corps, and Navy, as well as Joint Chiefs of Staff.[49] Additionally, Fort Detrick supports several Unified and Major Army Commands.[50]

Fort Detrick Facility Spending

The installation provided data for specific payroll, procurement, and visitor spending for FY 2012. It is important to note that FY 2012 economic impacts include data from the Walter Reed Forest Glen Annex installation. In the FY 2008 economic impact study, Fort Detrick and Walter Reed Forest Glenn Annex were independent installations and therefore had separate submissions. For this FY 2012 analysis and for the purpose of comparing impacts to the FY 2008 report, RESI combined the Fort Detrick and Walter Reed Forest Glen Annex installations to get a better comparison. Figure 9 represents facility spending for FY 2008 and FY 2012.

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[43] "History of Fort Detrick," Fort Detrick Alliance.
[44] Rob Powers, "Fort Detrick," About.com, 1, accessed October 1, 2013, http://usmilitary.about.com/od/armybaseprofiles/ss/detrick.htm.
[45] "History of Fort Detrick," Fort Detrick Alliance.
[46] "Welcome-Forest Glen Annex," DC Military.com, accessed October 1, 2013, http://ww2.dcmilitary.com/special_sections/sw/090110Ft_Detrick/ss_141149_31955.shtml.
[47] Ibid.
[48] Powers, "Fort Detrick," 3.
[49] Ibid, 1.
[50] Ibid.

Figure 9: Fort Detrick Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$369,900,000	$842,023,092
Employment (# of jobs)	5,214	7,566
Purchases	$3,252,100,000	$3,015,233,519
Visitor Spending	n/a	n/a
In-State		
Payroll	$301,900,000	$841,723,092
Employment (# of jobs)	4,322	6,871
Purchases[51]	$453,000,000	$2,306,001,941
Visitor Spending	$5,900,000	$44,576,103

Sources: DBED, Fort Detrick

In FY 2012, Fort Detrick, including Walter Reed Forest Glen Annex installations, supported a total of 7,566 direct workers (not including contractors), an increase of more than 2,350 workers when compared to FY 2008. Total payroll also increased from approximately $369.9 million to more than $842.0 million as employment grew. Total purchases decreased between FY 2008 to FY 2012 by $236.9 million.

Fort Detrick's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure 10 represents the separate economic impacts of Fort Detrick's FY 2008 and FY 2012 specific payroll, procurement, visitor spending, and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

[51] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

Figure 10: Economic Impacts of Fort Detrick

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	5,214	4,342	3,840	13,395
Output	$760,800,000	$610,100,000	$472,600,000	$1,843,400,000
Wages	$369,900,000	$229,100,000	$143,400,000	$742,600,000
FY 2012[52]				
Employment	7,566	15,844[53]	13,371	36,782
Output	$2,127,218,489	$3,081,804,186	$1,750,179,465	$6,959,202,140
Wages	$842,023,092	$1,289,435,817	$532,542,244	$2,664,001,153

Sources: RESI, IMPLAN

As shown in Figure 10, the employees associated with Fort Detrick's military facilities, including Walter Reed Forest Glen Annex, support a total of 36,782 jobs in FY 2012, an increase of 23,387 workers compared to FY 2008. In addition, Fort Detrick supports a total of nearly $7.0 billion in output and approximately $2.7 billion in wages on an annual basis. The total output increased by roughly $5.1 billion between FY 2008 and FY 2012. Significant increases can be attributed to the in-state procurement and purchases. Specifically, in-state contracts and purchases increased by nearly $1.4 billion when compared to FY 2008. Procurement and purchases in building construction and maintenance also saw a significant increase, $0.5 billion.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

6.0 Fort George G. Meade

Fort George G. Meade boasts a convenient location between Annapolis, Baltimore, and Washington, D.C.[54] The primary goal of the facility is to provide support and services to its numerous partner organizations—including the Army, Navy, Air Force, Marines and Coast Guard—as well as federal agencies, such as the U.S. Army Field Band, the U.S. Army Recruiting Command, the U.S. Cyber Command, the Defense Courier Service, the Defense Information School, the Defense Informations Systems Agency, and the National Security Agency.[55]

The NSA, Fort Meade's largest tenant, "collects, processes, and disseminates intelligence information from foreign electronic signals for national foreign intelligence and

[52] Increased FY 2012 impacts can be attributed in part to the absorption of Walter Reed—Forest Glen Annex following the 2008 BRAC, as well as more than $1.0 billion in construction spending.
[53] Indirect employment includes the embedded contractor jobs located at Fort Detrick.
[54] "Fort George G. Meade," Military.com, accessed October 16, 2013, http://www.military.com/base-guide/fort-george-g-meade.
[55] "About Fort Made," U.S. Army, June 15, 2015, accessed June 18, 2015, http://www.ftmeade.army.mil/pages/about/about.html.

counterintelligence purposes and to support military operations," while also being "tasked with preventing foreign adversaries from gaining access to classified national security information."[56]

Fort George G. Meade Facility Spending

The installation provided data for specific payroll, procurement, and visitor spending for FY 2012. Figure 11 represents facility spending for FY 2008 and FY 2012. In FY 2012, Fort George G. Meade supported a total of 64,727 direct workers (not including contractors), an increase of approximately 16,000 workers as compared to FY 2008. Total payroll increased from approximately $5.6 billion to $6.4 billion as employment increased. Total in-state purchases increased between FY 2008 to FY 2012 by nearly $4.9 billion.

Figure 11: Fort George G. Meade Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$5,640,700,000	$6,371,998,977
Employment (# of jobs)	48,389	64,727
Purchases	10,133,300,000	$14,128,150,877
Visitor Spending	n/a	n/a
In-State		
Payroll	$5,471,400,000	$6,229,060,077
Employment (# of jobs)	46,937	60,297
Purchases[57]	$2,633,300,000	$7,490,105,509
Visitor Spending	n/a	$90,000,000

Sources: DBED, Fort George G. Meade

Fort George G. Meade's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure 12 represents the separate economic impacts of Fort George G. Meade's FY 2008 and FY 2012 specific payroll, procurement, visitor spending, and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

[56] "Frequently Asked Questions," National Security Agency, 2009, accessed October 16, 2013, http://www.nsa.gov/about/faqs/index.shtml.

[57] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

Figure 12: Economic Impacts of Fort George G. Meade

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	48,389	26,440	50,900	125,729
Output	$8,104,700,000	$3,527,300,000	$6,183,700,000	$17,815,700,000
Wages	$5,640,700,000	$1,675,400,000	$1,889,500,000	$9,205,600,000
FY 2012				
Employment	64,727	55,123	70,413	190,264
Output	$9,351,490,819	$9,709,295,904	$7,861,408,505	$26,922,195,228
Wages	$6,371,999,159	$4,076,996,624	$2,571,174,289	$13,020,170,072

Sources: RESI, IMPLAN

As shown in Figure 12, the employees associated with Fort George G. Meade's military facility support a total of 190,264 jobs in FY 2012, an increase of more than 64,500 workers compared to FY 2008. In addition, the Fort George G. Meade military facility supports a total of approximately $26.9 billion in output and approximately $13.0 billion in wages on an annual basis. The total output increased by roughly $9.1 billion between FY 2008 and FY 2012.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

7.0 National Maritime Intelligence Integration Office

In 2012, the National Maritime Intelligence Center (NMIC) was renamed to National Maritime Intelligence Integration Office (NMIO) to better reflect its mission. Located in Suitland, Maryland, NMIO is part of the Office of Naval Intelligence (ONI).[58] NMIO provides collaborations between Department of Defense (DOD) and non-DOD agencies. According to its website, the agency has a national-level, cross-departmental mission to

- Coordinate maritime intelligence;
- Develop participation in a Single Integrated Look-Out (SILO) list;
- Develop a Maritime Domain Awareness (MDA) Information Portal;
- Facilitate the proactive integration of intelligence within the maritime domain;
- Provide direct support to the National Security Staff; and
- Facilitate information sharing and collaboration across the Global Maritime Community of Interest.[59]

[58] "National Office for Maritime Intelligence Integration Announces New Name to Better Reflect Mission," National Maritime Intelligence, January 23, 2012, accessed January 13, 2013, http://www.fas.org/irp/news/2012/01/nmio.pdf.
[59] "Maryland Federal Facility Profile," National Maritime Intelligence, accessed January 13, 2013, http://business.maryland.gov/factsstats/Documents/Military%20Facilities/NMIC.pdf

National Maritime Intelligence Integration Office—Facility Spending

The installation provided data for specific payroll, procurement, and visitor spending for FY 2012. Figure 13 represents facility spending for FY 2008 and FY 2012. In FY 2012, NMIO supported a total of 1,890 direct workers (not including contractors), an increase of more than 160 workers compared to FY 2008. Total payroll decreased from approximately $203.6 million to more than $199.2 million. Total in-state purchases increased between FY 2008 to FY 2012 by $39.6 million.

Figure 13: National Maritime Intelligence Integration Office Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$203,600,000	$199,234,961
Employment (# of jobs)	1,724	1,890
Purchases	$91,000,000	$82,578,817
Visitor Spending	n/a	n/a
In-State		
Payroll	$170,600,000	$167,357,367
Employment (# of jobs)	1,445	1,588
Purchases[60]	$29,800,000	$69,401,197
Visitor Spending	n/a	n/a

Sources: DBED, NMIO

NMIO's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure 14 represents the separate economic impacts of NMIO's FY 2008 and FY 2012 specific payroll, procurement, and visitor spending and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

[60] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

Figure 14: Economic Impacts of National Maritime Intelligence Integration Office

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	1,724	270	1,349	3,343
Output	$200,400,000	$38,900,000	$163,600,000	$402,900,000
Wages	$203,600,000	$13,300,000	$50,000,000	$266,900,000
FY 2012				
Employment	1,890	728	1,409	4,027
Output	$578,370,032	$92,095,010	$184,443,209	$854,908,251
Wages	$199,234,967	$47,302,535	$56,117,261	$302,654,763

Sources: RESI, IMPLAN

As shown in Figure 14, the employees associated with NMIO's military facility support a total of 4,027 jobs in FY 2012, an increase of nearly 700 workers compared to FY 2008. In addition, the NMIO military facility supports a total of nearly $854.9 million in output and approximately $302.7 million in wages. The total output increased by roughly $452.0 million between FY 2008 and FY 2012.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

8.0 Naval Support Activity Bethesda

In 2005, following Base Realignment and Closure Commission (BRAC), plans to consolidate the National Naval Medical Center (NNMC) and the Walter Reed Army Medical Center (WRAMC) into the newly named Naval Support Activity (NSA) Bethesda began.[61] It was not until 2011 that the transition was completed. At this time, a consolidated NNMC and WRAMC formed the new Walter Reed National Military Medical Center (WRNMMC).[62]

Located north of the Nation's Capital in Montgomery County, NSA Bethesda serves 12,000 employees, compiled of military personnel and civilians.[63] NSA Bethesda houses 40 total tenant units, such as the following:

- National Institution of Health (NIH);
- Naval Criminal Investigation Services (NCIS);
- Navy Medicine Professional Development Center;
- Uniformed Services University of the Health Sciences; and

[61] "Installation Overview," Naval Support Activity Bethesda Home of Walter Reed National Military Medical Center, Maryland, Military Installations, February 25, 2014, accessed March 5, 2014, http://www.militaryinstallations.dod.mil/MOS/f?p=MI:CONTENT:0:::P4_INST_ID,P4_CONTENT_TITLE,P4_CONTENT_EKMT_ID,P4_CONTENT_DIRECTORY,P4_TAB:20295,Installation%20Overview,30.90.30.30.30.0.0.0.0.
[62] Ibid.
[63] Ibid.

- Warrior Transition Brigade.[64] [65]

WRNMMC is the nation's largest medical center. The center serves "military beneficiaries in the Washington, D.C. area as well as those from across the country and around the globe."[66] The consolidated WRNMMC provides a combined 170 years of experience.[67]

Naval Support Activity Bethesda—Facility Spending

The installation provided data for specific payroll, procurement, and visitor spending for FY 2012. Figure 15 represents facility spending for FY 2008 and FY 2012. In FY 2012, NSA Bethesda supported a total of 11,686 direct workers (not including contractors), an increase of nearly 3,600 workers when compared to FY 2008. Total payroll also increased from approximately $357.2 million to $527.5 million as employment grew. Total in-state purchases increased between FY 2008 to FY 2012 by $23.7 million.

Figure 15: Naval Support Activity Bethesda Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$357,200,000	$527,456,113
Employment (# of jobs)	8,108	11,686
Purchases	$214,600,000	$293,433,806
Visitor Spending	n/a	n/a
In-State		
Payroll	$331,800,000	$478,893,861
Employment (# of jobs)	7,191	10,764
Purchases[68]	$69,600,000	$93,262,802
Visitor Spending	n/a	$28,600,000

Sources: DBED, Naval Support Activity Bethesda

NSA Bethesda's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure 16 represents the separate economic impacts of NSA Bethesda's FY 2008 and FY 2012 specific payroll, procurement, visitor spending, and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

[64] "Installation Overview," Naval Support Activity Bethesda Home of Walter Reed National Military Medical Center, Maryland.
[65] Ibid.
[66] "Welcome to the Nation's Medical Center," Walter Reed National Military Medical Center, accessed March 5, 2014, http://www.wrnmmc.capmed.mil/SitePages/home.aspx.
[67] Ibid.
[68] Purchases do not include commissary and exchange sales, or lodgings in the total to avoid double counting. NSA Bethesda is the only installation for which medical expenses were included in the total.

Figure 16: Economic Impacts of Naval Support Activity Bethesda

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	8,108	589	2,518	11,216
Output	$401,500,000	$92,200,000	$312,300,000	$806,000,000
Wages	$357,200,000	$28,700,000	$94,400,000	$480,300,000
FY 2012				
Employment	11,686	1,118	7,522	20,326
Output	$838,885,156	$132,880,193	$526,725,835	$1,498,491,183
Wages	$527,456,102	$36,075,864	$164,836,179	$728,368,145

Sources: RESI, IMPLAN

As shown in Figure 16, the employees associated with NSA Bethesda's military facilities support a total of 20,326 jobs in FY 2012, an increase of more than 9,000 workers compared to FY 2008. In addition, NSA Bethesda military facility supports a total of nearly $1.5 billion in output and approximately $0.7 billion in wages on an annual basis. The total output increased by roughly $692.5 million between FY 2008 and FY 2012.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

9.0 Naval Air Station Patuxent River

Naval Air Station (NAS) Patuxent River covers 14,500 acres and hosts more than 50 tenant activities, such as Naval Air Systems Command (NAVAIR) and the Naval Air Warfare Center Aircraft Division (NAWCAD).[69] The station consists of 935 separate buildings, a total of nearly 8.8 million square feet of facilities, 10 hangars, and 5 runways. [70]

The complex, located in St. Mary's County, Maryland, is approximately 65 miles south of the District of Columbia (DC) and 90 miles from the fleet in Norfolk, Virginia.[71] In addition to the main station in Lexington Park, the complex includes facilities at St. Inigoes, Solomons in Calvert County, and Bloodsworth Island in the Chesapeake Bay.[72]

[69] "Naval Air Station Patuxent River," Military.com, accessed October 4, 2013, http://www.military.com/base-guide/naval-air-station-patuxent-river.
[70] "Naval Air Systems Command," U.S. Navy, accessed October 4, 2013, http://www.navair.navy.mil/index.cfm?fuseaction=home.display&key=2A3E4419-AEA4-48CA-AA0D-CA82FA4283D6.
[71] "Naval Air Station Patuxent River," CNIC, accessed October 4, 2013, http://www.cnic.navy.mil/regions/ndw/installations/nas_patuxent_river.html.
[72] Ibid.

Commissioned in 1943, the station saw an influx in the mid-1990s due to Base Realignment and Closures (BRAC) activities—more than 20,000 employees (both military and civilian) were relocated to NAS Patuxent River.[73] The station is the largest employer in St. Mary's County—employing 7,200 civilians, 7,900 contractors, and 3,000 active duty military personnel.[74]

The two largest tenants, NAVAIR and NAWCAD, offer "the full spectrum of acquisition management, research and development capabilities, air and ground test and evaluation, aircraft logistics, and maintenance management" and support "land-based and maritime aircraft and engineering, test, evaluation, integration, and life cycle support for ship/shore electronics."[75] The acquisition support for air combat systems offered at NAS Patuxent River is a unique service within the DOD.[76]

Some of the products and services offered by NAS Patuxent River include:

- NAWCAD's Test Wing Atlantic;
- Air Combat Environment Test & Evaluation Facility (ACETEF);
- Air Vehicles/Materials Labs and Facilities;
- Hush House;
- Propulsion Systems Evaluation; and
- Catapult and Arresting Gear.[77]

Naval Air Station Patuxent River—Facility Spending

The installation provided data for specific payroll, procurement, and visitor spending for FY 2012. Figure 17 represents facility spending for FY 2008 and FY 2012. In FY 2012, NAS Patuxent River supported a total of 11,724 direct workers (not including contractors), an increase of nearly 760 workers when compared to FY 2008. Total payroll also increased from approximately $883.4 million to $1.0 billion as employment grew. Total in-state purchases decreased between FY 2008 to FY 2012 by $32.6 million.

[73] "Naval Air Station Patuxent River," CNIC, accessed October 4, 2013, http://www.cnic.navy.mil/regions/ndw/installations/nas_patuxent_river.html.
[74] "Naval Air Systems Command," U.S. Navy.
[75] "Naval Air Station Patuxent River," CNIC.
[76] "Naval Air Systems Command," U.S. Navy.
[77] Ibid.

Figure 17: Naval Air Station Patuxent River Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$883,400,000	$1,006,004,573
Employment (# of jobs)	10,965	11,724
Purchases[78]	$1,731,800,000	$27,424,197,941
Visitor Spending	n/a	n/a
In-State		
Payroll	$830,400,000	$955,000,000
Employment (# of jobs)	10,307	10,899
Purchases[79]	$1,731,800,000	$1,699,172,357
Visitor Spending	$29,400,000	$1,355,497

Sources: DBED, NAS Patuxent River

NAS Patuxent River's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure 18 represents the separate economic impacts of NAS Patuxent River's FY 2008 and FY 2012 specific payroll, procurement, visitor spending, and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

Figure 18: Economic Impacts of Naval Air Station Patuxent River

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	10,965	17,829	12,392	41,185
Output	$2,591,500,000	$2,443,500,000	$1,542,500,000	$6,577,500,000
Wages	$883,400,000	$1,078,200,000	$465,500,000	$2,427,100,000
FY 2012				
Employment	11,724	13,708[80]	11,524	36,956
Output	$3,795,718,487	$2,171,085,680	$1,508,785,425	$7,475,589,592
Wages	$1,006,004,573	$945,397,394	$459,065,951	$2,410,467,918

Sources: RESI, IMPLAN

As shown in Figure 18, the employees associated with NAS Patuxent River's military facilities support a total of 36,956 jobs in FY 2012, a decrease of 4,229 workers compared to FY 2008. In addition, NAS Patuxent River military facility supports a total of nearly $7.5 billion in output and

[78] At the time of the FY 2008 report, data on total purchases were not available. Purchases are at the state level only.
[79] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.
[80] Indirect employment includes the embedded contractors located at Patuxent River Naval Air Station.

approximately $2.4 billion in wages on an annual basis. The total output increased by roughly $898.1 million between FY 2008 and FY 2012.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

10.0 Coast Guard Yard

Encompassing 113 acres, the Coast Guard Yard (the Yard) is located in both Anne Arundel County and Baltimore City.[81] As the sole shipbuilding and repair facility of the U.S. Coast Guard, the Yard is responsible for building, repairing, and renovating ships. The Yard is also "an essential part of the Coast Guard's core industrial base and fleet support operations."[82] The existing waterfront, completed in the 1940s, consists of three piers and two floating dry docks.[83]

The Yard was established in 1899 as a training academy and boat repair station.[84] Over the next several decades, the Yard added shipbuilding to its services, peaking during World War II.[85] At this time, the Yard employed more than 3,000 workers.[86] Operations lessened after the end of World War II, and continued to be scaled down through the 1990s.[87] Today, the Yard "operates as a revolving fund activity with annual revenue of approximately $100 million."[88]

Coast Guard Yard—Facility Spending

The installation provided data for specific payroll, procurement and visitor spending for FY 2012. Figure 19 represents facility spending for FY 2008 and FY 2012. In FY 2012, the Yard supported a total of 1,691 direct workers, an increase of 173 workers when compared to FY 2008. Total payroll increased from approximately $92.1 million to $103.3 million as employment grew. Total in-state purchases increased between FY 2008 to FY 2012 by nearly $15.6 million.

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[81] "National Priorities List," Coast Guard Yard Curtis Bay, accessed June 12, 2014, http://www.mde.state.md.us/assets/document/brownfields/Coast_Guard_Curtis_Bay.pdf.
[82] "U.S. Coast Guard Yard," U.S. Coast Guard, accessed June 12, 2014, http://www.uscg.mil/yard/.
[83] "National Priorities List," Coast Guard Yard Curtis Bay.
[84] Ibid.
[85] Ibid.
[86] "Curtis Bay Coast Guard Yard," U.S. Environmental Protection Agency, accessed June 12, 2014, http://www.epa.gov/reg3hscd/npl/MD4690307844.htm.
[87] "National Priorities List," Coast Guard Yard Curtis Bay.
[88] "U.S. Coast Guard Yard," U.S. Coast Guard.

Figure 19: Coast Guard Yard Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$92,100,000	$103,331,667
Employment (# of jobs)	1,518	1,691
Purchases	$19,100,000	$34,675,596
Visitor Spending	n/a	n/a
In-State		
Payroll	$87,700,000	$75,159,788
Employment (# of jobs)	1,338	1,249
Purchases[89]	$19,100,000	$34,662,596
Visitor Spending	$300,000	$855,784

Sources: DBED, Coast Guard Yard

The Yard's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure 20 represents the separate economic impacts of the Yard's FY 2008 and FY 2012 specific payroll, procurement, visitor spending, and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

Figure 20: Economic Impacts of Coast Guard Yard

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	1,518	179	698	2,395
Output	$107,200,000	$25,100,000	$85,200,000	$217,500,000
Wages	$92,100,000	$8,700,000	$26,000,000	$126,900,000
FY 2012				
Employment	1,691	279	1,096	3,066
Output	$169,287,260	$44,135,053	$85,499,212	$298,921,525
Wages	$103,421,493	$16,233,374	$27,742,603	$147,397,470

Sources: RESI, IMPLAN

As shown in Figure 20, the employees associated with the Yard's military facility supported a total of 3,066 jobs in FY 2012, an increase of more than 670 workers compared to FY 2008. In addition, the Coast Guard Yard supports a total of more than $298.9 million in output and approximately $147.4 million in wages on an annual basis. The total output increased by roughly $81.4 million between FY 2008 and FY 2012.

[89] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

11.0 Maryland National Guard

The Maryland National Guard has been in existence since the early 1960s.[90] Today, the total work force of the Maryland National Guard, including personnel employed by the Army National Guard, the Air National Guard, Maryland Emergency Management Agency, Maryland Defense Force, and State personnel employed by the Military Department, is approximately 7,000.[91]

The Maryland National Guard has several facilities throughout the state, including 44 sites, more than 5,000 acres of land, and 324 buildings. In addition to 37 Readiness Centers, the facilities include the following:

- One airbase;
- Three Army aviation facilities;
- Four military training reservations; and
- Nine surface equipment maintenance facilities.[92]

It is the goal of the Maryland National Guard to "man, equip, train and deploy its National Guard units, Soldiers and Airmen in support of federal missions as directed by the President of the United States."[93] Additionally, personnel can be employed to assist with major emergencies (both local and out of state), and provide general support to the Military Department.[94] To support homeland readiness, the Maryland National Guard is provides ten core capabilities:

- Aviation/Airlift;
- Chemical, Biological, Radiological, and Nuclear (CBRN) response;
- Command and Control;
- Communications;
- Engineering;
- Logistics;
- Maintenance;
- Medical;
- Security; and

[90] "History," Maryland National Guard, accessed June 12, 2014, http://www.md.ngb.army.mil/absolutenm/templates/?a=732&z=38.
[91] "2013 Annual Report," Maryland Military Department, accessed June 12, 2014, 7, http://www.md.ngb.army.mil/absolutenm/articlefiles/1154-2013_Annual_Report.pdf.
[92] Ibid, 9.
[93] "State Mission," Maryland National Guard, accessed June 12, 2014, http://www.md.ngb.army.mil/absolutenm/templates/?a=730&z=38.
[94] Ibid.

- Transportation.[95]

Maryland National Guard—Facility Spending

The installation provided data for specific payroll, procurement, and visitor spending for FY 2012. Figure 21 represents facility spending for FY 2008 and FY 2012. In FY 2012, Maryland National Guard supported a total of 7,061 direct workers, a decrease of nearly 140 workers when compared to FY 2008. Total payroll increased from approximately $166.3 million to $174.9 million. Total in-state purchases decreased between FY 2008 to FY 2012 by $11.9 million.

Figure 21: Maryland National Guard Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$166,300,000	$174,850,000
Employment (# of jobs)[96]	7,197	7,061
Purchases	$115,200,000	$301,850,000
Visitor Spending	n/a	n/a
In-State[97]		
Payroll	$163,000,000	n/a
Employment (# of jobs)	7,053	n/a
Purchases[98]	$49,500,000	$37,556,000
Visitor Spending	n/a	n/a

Sources: DBED, Maryland National Guard

Maryland National Guard's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure 22 represents the separate economic impacts of Maryland National Guard's FY 2008 and FY 2012 specific payroll, procurement, visitor spending, and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

[95] "2013 Annual Report," Maryland Military Department, 5.
[96] Both 2008 and 2012 include approximately 5,000 Reserve members who are likely to have other full or part-time employment.
[97] The Maryland National Guard did not provide detailed data on Maryland employment or payrolls.
[98] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

Figure 22: Economic Impacts of Maryland National Guard

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	2,156	457	1,237	3,850
Output	$212,500,000	$64,200,000	$154,500,000	$431,200,000
Wages	$166,300,000	$22,500,000	$46,800,000	$235,700,000
FY 2012				
Employment[99]	2,098	364	1,047	3,509
Output	$347,757,250	$37,556,517	$130,649,287	$515,963,054
Wages	$174,849,992	$14,202,308	$42,826,998	$231,879,298

Sources: RESI, IMPLAN

As shown in Figure 22, the employees associated with Maryland National Guard's military facilities support a total of 3,509 jobs in FY 2012, a decrease of 341 workers compared to FY 2008. In addition, Maryland National Guard supports a total of nearly $516.0 million in output and approximately $231.9 million in wages on an annual basis. The total output increased by roughly $84.8 million between FY 2008 and FY 2012.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

12.0 Naval Research Lab—Chesapeake Bay Detachment

With operations beginning in the early 1920s, the Naval Research Laboratory (NRL) is considered to be the U.S. Navy's first modern research institution. Since 1992, NRL has been operating in its current form, following the consolidation of "existing R&D facilities to form a single corporate laboratory."[100]

Occupying a 168-acre site near the Chesapeake Bay, the Chesapeake Bay Detachment (CBD) of the NRL "provides facilities and support services for research in radar, electronic warfare, optical devices, materials, communications, and fire research." [101] Due to its location, the CBD is able to work in conjunction with the Tilghman Island site—16 kilometers away on the other side of the bay—to perform unique experiments.[102] In addition to research—such as in the areas of "radar antenna properties, testing of radar remote sensing concepts, use of radar to sensor ocean waves, and laser propagation"—CBD "hosts facilities of the Navy Technology Center for

[99] To provide a conservative estimate—the impact analysis excludes the approximately 5,000 Reserve members who are likely to have other full or part-time employment.
[100] "Chesapeake Bay Detachment Facility Profile," Naval Research Laboratory, accessed June 12, 2014, 1, http://choosemaryland.org/factsstats/Documents/Military%20Facilities/NRLChesapeake.pdf.
[101] Ibid, 1.
[102] Ibid.

Safety and Survivability, which conducts fire research on simulated carrier, surface and submarine platforms." [103]

Naval Research Lab—Chesapeake Bay Detachment —Facility Spending

The installation provided data for specific payroll, procurement, and visitor spending for FY 2012. Figure 23 represents facility spending for FY 2008 and FY 2012. In FY 2012, Naval Research Lab—Chesapeake Bay supported a total of 15 direct workers (not including contractors), an increase of 2 workers when compared to FY 2008. Total payroll also increased from approximately $0.8 million to $1.5 million as employment grew. Total in-state purchases increased between FY 2008 to FY 2012 by $517,000.

Figure 23: Naval Research Lab—Chesapeake Bay Detachment Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$800,000	$1,563,200
Employment (# of jobs)[104]	13	15
Purchases	$8,400,000	$10,624,200
Visitor Spending	n/a	n/a
In-State		
Payroll	$800,000	$1,494,000
Employment (# of jobs)	12	14
Purchases[105]	$3,800,000	$4,317,000
Visitor Spending	$700,000	$675,890

Sources: DBED, Naval Research Lab—Chesapeake Bay

Naval Research Lab—Chesapeake Bay's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure 24 represents the separate economic impacts of Naval Research Lab—Chesapeake Bay's FY 2008 and FY 2012 specific payroll, procurement, and visitor spending and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

[103] "Chesapeake Bay Detachment Facility Profile," Naval Research Laboratory.
[104] Not including badged contractors.
[105] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

Figure 24: Economic Impacts of Naval Research Lab—Chesapeake Bay Detachment

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	13	50	21	85
Output	$5,300,000	$6,200,000	$2,600,000	$14,100,000
Wages	$800,000	$2,700,000	$800,000	$4,300,000
FY 2012				
Employment	15	41	27	83
Output	$2,116,438	$6,585,960	$3,154,631	$11,857,029
Wages	$1,563,200	$2,545,914	$1,025,132	$5,134,246

Sources: RESI, IMPLAN

As shown in Figure 24, the employees associated with Naval Research Lab—Chesapeake Bay's military facility support a total of 83 jobs in FY 2012, a decrease of 2 workers compared to FY 2008. In addition, Naval Research Lab—Chesapeake Bay supports a total of nearly $11.9 million in output and approximately $5.1 million in wages on an annual basis. The total output decreased by roughly $2.2 million between FY 2008 and FY 2012.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

13.0 Naval Support Activity Annapolis

The Naval Support Activity (NSA) Annapolis is located on the opposite side of the Severn River from the U.S. Naval Academy.[106] This facility provides operating support to the Chesapeake Bay Detachment in Randle Cliff, Maryland; the Navy Operational Support Center in Baltimore, Maryland; the North Severn complex; and the United States Naval Academy.[107] Also falling under NSA Annapolis are the following:

- The Commissary;
- The Fleet and Family Support Center;
- Military housing (including Bachelor Enlisted Quarters); and
- The Navy Exchange.[108]

Naval support has been provided to midshipmen since 1851 when Annapolis "became the home of naval aviation, having both the first naval air station and the first flight from a naval air station to add to its illustrious history."[109] In 2006, NSA Annapolis was established, streamlining

[106] "Installation Information," Commander, Navy Installations Command, accessed March 5, 2014, http://www.cnic.navy.mil/regions/ndw/installations/nsa_annapolis.html.
[107] Ibid.
[108] "History," Commander, Navy Installation Command, accessed March 5, 2014, http://www.cnic.navy.mil/regions/ndw/installations/nsa_annapolis/about/history.html.
[109] Ibid.

"operations to better support the U.S. Naval Academy, eliminating redundancy and providing a more efficient and responsive organization for the training of Midshipmen and the support of Academy faculty, staff, and family members." [110]

Naval Support Activity Annapolis—Facility Spending

The installation provided data for specific payroll, procurement, and visitor spending for FY 2012. Figure 25 represents facility spending for FY 2008 and FY 2012. In FY 2012, NSA Annapolis supported a total of 7,765 direct workers (not including contractors), an increase of more than 1,600 workers when compared to FY 2008. Total payroll also increased from approximately $236.0 million to $509.6 million as employment grew. Total in-state purchases decreased between FY 2008 to FY 2012 by $3.7 million.

Figure 25: Naval Support Activity Annapolis—Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$236,000,000	$509,557,908
Employment (# of jobs)	6,147	7,765
Purchases	$138,400,000	$206,110,000
Visitor Spending	n/a	n/a
In-State		
Payroll	$223,700,000	$483,000,441
Employment (# of jobs)	6,057	7,651
Purchases[111]	$96,100,000	$92,400,000
Visitor Spending	n/a	n/a

Sources: DBED, NSA Annapolis

NSA Annapolis's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure 26 represents the separate economic impacts of Naval Support Activity Annapolis's FY 2008 and FY 2012 specific payroll, procurement, visitor spending, and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

[110] "History," Commander, Navy Installation Command.

[111] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

Figure 26: Economic Impacts of Naval Support Activity Annapolis

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	6,147	850	1,889	8,886
Output	$319,900,000	$125,600,000	$232,000,000	$677,500,000
Wages	$236,000,000	$42,100,000	$70,400,000	$348,600,000
FY 2012				
Employment	7,765	962	4,123	12,850
Output	$936,442,527	$118,903,265	$392,116,184	$1,447,461,976
Wages	$509,557,894	$49,861,502	$127,636,496	$687,055,892

Sources: RESI, IMPLAN

As shown in Figure 26, the employees associated with NSA Annapolis's military facilities support a total of 12,850 jobs in FY 2012, an increase of nearly 4,000 workers compared to FY 2008. In addition, NSA Annapolis supports a total of over $1.4 billion in output and approximately $0.7 billion in wages on an annual basis. The total output increased by roughly $770.0 million between FY 2008 and FY 2012.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

14.0 Naval Surface Warfare Center—Carderock Division

With headquarters in Bethesda, Maryland, the Carderock Division of the Naval Surface Warfare Center (NSWC) consists of nearly 4,000 engineers, scientists, support personnel and encompasses approximately 40 disciplines—such as fundamental science and applied engineering.[112] Since its formation, at the turn of the century, the Carderock division "has earned a distinguished reputation as the birthplace of superior naval technology."[113] The Division is thought of as the "forefront of technologies vital to the success of the U.S. Navy and Maritime Industry"[114] and is recognized as the "Navy's center of excellence for ships and ship systems."[115]

It is the mission of the Carderock Division to "provide: research, development, test and evaluation, fleet support, and in-service engineering for surface and undersea vehicle hull, mechanical, and electrical (HM&E) systems and propulsors; logistics research and development;

[112] "Naval Surface Warfare Center—Carderock Division," Federal Laboratory Consortium, accessed February 6, 2015, http://www.federallabs.org/labs/profile/?id=1373.
[113] "NSWC Carderock Division," NAVSEA, accessed February 6, 2015, http://www.navsea.navy.mil/nswc/carderock/default.aspx.
[114] Ibid.
[115] Ibid.

and support to the Maritime Administration and maritime industry."[116] The facility specializes in the following:

- Environmental Quality Systems;
- Hull Forms and Propulsors;
- Machinery Systems;
- Ship Design and Integration;
- Signatures, Silencing Systems, and Susceptibility;
- Structures and Materials; and
- Vulnerability and Survivability Systems.[117]

Through Work for Private Agreement, as well as Cooperative Research and Development Agreements (CRADA), the facility is available for use by both government and private sectors entities outside of the United States Navy.[118]

NSWC—Carderock Division—Facility Spending

The installation provided data for specific payroll, procurement, and visitor spending for FY 2012. Figure 27 represents facility spending for FY 2008 and FY 2012. In FY 2012, NSWC—Carderock Division supported a total of 1,563 direct workers (not including contractors), an increase of 20 workers when compared to FY 2008. Total payroll also increased from approximately $141.7 million to $174.0 million as employment grew. Total in-state purchases increased between FY 2008 to FY 2012 by $50.7 million.

Figure 27: Naval Surface Warfare Center—Carderock Division Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$141,700,000	$174,000,000
Employment (# of jobs)	1,543	1,563
Purchases	$311,500,000	***
Visitor Spending	n/a	n/a
In-State		
Payroll	$88,400,000	$149,811,659
Employment (# of jobs)	954	1,346
Purchases[119]	$61,400,000	$112,081,400
Visitor Spending	n/a	$1,144,000

Sources: DBED, NSWC—Carderock Division

[116] "Naval Surface Warfare Center - Carderock Division," Federal Laboratory Consortium.
[117] "NSWC Carderock Division," NAVSEA.
[118] Ibid.
[119] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

NSWC—Carderock Division's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure 28 represents the separate economic impacts of NSWC—Carderock Division's FY 2008 and FY 2012 specific payroll, procurement, and visitor spending and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

Figure 28: Economic Impacts of Naval Surface Warfare Center—Carderock Division

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	1,543	649	890	3,082
Output	$149,700,000	$86,300,000	$108,200,000	$344,300,000
Wages	$141,700,000	$39,000,000	$33,100,000	$213,700,000
FY 2012				
Employment	1,563	889	1,608	4,059
Output	$236,081,475	$148,707,553	$171,726,877	$556,515,905
Wages	$173,999,996	$60,523,919	$55,633,091	$290,157,006

Sources: RESI, IMPLAN

As shown in Figure 28, the employees associated with NSWC—Carderock Division's military facility support a total of 4,059 jobs in FY 2012, an increase of 977 workers compared to FY 2008. In addition, NSWC—Carderock Division supports a total of more than $556.5 million in output and approximately $290.2 million in wages on an annual basis. The total output increased by roughly $212.2 million between FY 2008 and FY 2012.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

15.0 Naval Support Facility Indian Head

The Naval Support Facility (NSF) Indian Head is one of nine divisions that compile the Naval Sea System Command Warfare Center Enterprise.[120] The main site, located in Southern Maryland and covering 3,500 acres along the Potomac River is housed at the NSF Indian Head.[121] Indian Head serves as the Energetics Center for the DOD, in addition to acting as the DOD's Explosive Ordnance Disposal (EOD) Technology Program lead.[122] With more than 800 engineers and

[120] "Mission," Naval Surface Warfare Center, Indian Head Explosive Ordnance Disposal Technology Division, accessed March 5, 2014, http://www.federallabs.org/labs/profile/?State=141&RegionOrState=State&Agency=46&id=1376.
[121] Ibid.
[122] Ibid.

scientists, Indian Head contains the largest workforce of chemical engineers dedicated to energetics and EOD working within the Federal government.[123] [124]

It is NSF Indian Head's mission to, "provide research, development, engineering, manufacturing, testing, evaluation and in-service support of energetic systems and energetic materials for the Navy, Joint Forces, and the Nation."[125] The installation's areas of expertise include research and development, testing and evaluation, and also includes systems engineering and integration.[126] Indian Head plays a unique role in the chemical synthesis of energetic materials; as well as the development and processing of propellant and explosives.[127]

NSF Indian Head—Facility Spending

The installation provided data for specific payroll, procurement, and visitor spending for FY 2012. Figure 29 represents facility spending for FY 2008 and FY 2012. In FY 2012, NSF Indian Head supported a total of 2,564 direct workers (not including contractors), a decrease of approximately 350 workers when compared to FY 2008. Total payroll increased from approximately $186.3 million to $243.9 million. Total in-state purchases decreased between FY 2008 to FY 2012 by $71.1 million.

Figure 29: Naval Support Facility Indian Head Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$186,300,000	$243,890,000
Employment (# of jobs)	2,918	2,564
Purchases	$681,600,000	$655,220,206
Visitor Spending	n/a	n/a
In-State		
Payroll	$158,900,000	$197,999,290
Employment (# of jobs)	2,494	2,071
Purchases[128]	$95,900,000	$24,757,824
Visitor Spending	n/a	n/a

Sources: DBED, NSF Indian Head

NSF Indian Head's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure 30 represents the

[123] "Mission," Naval Surface Warfare Center, Indian Head Explosive Ordnance Disposal Technology Division.
[124] Ibid.
[125] Ibid.
[126] Ibid.
[127] "Naval Surface Warfare Center – Indian Head Division," Federal Laboratory Consortium, accessed March 5, 2014, http://www.federallabs.org/labs/profile/?State=141&RegionOrState=State&Agency=46&id=1376.
[128] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

separate economic impacts of NSF Indian Head's FY 2008 and FY 2012 specific payroll, procurement, visitor spending, and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

Figure 30: Economic Impacts of Naval Support Facility Indian Head

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	2,918	879	1,368	5,165
Output	$254,800,000	$125,000,000	$168,900,000	$548,700,000
Wages	$186,300,000	$43,300,000	$51,200,000	$280,800,000
FY 2012				
Employment	2,564	300	2,087	4,951
Output	$333,639,541	$32,202,847	$178,861,123	$544,703,511
Wages	$243,890,006	$12,053,725	$57,984,416	$313,928,147

Sources: RESI, IMPLAN

As shown in Figure 30, the employees associated with NSF Indian Head's military facility support a total of 4,951 jobs in FY 2012, a decrease of more than 200 workers compared to FY 2008. In addition, the NSF Indian Head military facility supports a total of $544.7 million in output and approximately $313.9 million in wages on an annual basis. The total output decreased by roughly $4.0 million between FY 2008 and FY 2012.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

16.0 Adelphi Laboratory Center

The Adelphi Laboratory Center (ALC) encompasses 36 buildings and more than 200 acres across Prince George's and Montgomery Counties; operations include administrative complexes, fabrication shops, maintenance yards, research and laboratory facilities, and utility plants.[129] One of the ALC's largest tenants, the Army Research Laboratory (ARL), is the corporate research laboratory of the United States Army.[130] ARL encompasses a variety of science and technology fields including but not limited to extramural basic research, mobility and logistics, power and energy, and simulation and training technology.[131] The installation is also home to the National Capital Region Information Operations Command.[132]

[129] "U.S. Army Adelphi Laboratory Center," Baltimore Washington Corridor Chamber, accessed June 18, 2015, http://www.bwcc.org/Government-Agencies/US-Army-Adelphi-Laboratory-Center-1993.
[130] "Aberdeen Proving Ground Site," Federal Laboratory Consortium for Technology Transfer, accessed June 12, 2014, http://www.federallabs.org/labs/profile/?State=141&RegionOrState=State&Agency=44&id=1311.
[131] "ARL Sciences & Technology," U.S. Army Research Laboratory, accessed June 12, 2014, http://www.arl.army.mil/www/default.cfm?page=18.
[132] "U.S. Army Adelphi Laboratory Center," Baltimore Washington Corridor Chamber.

Adelphi Laboratory Center—Facility Spending

The installation provided data for specific payroll, procurement, and visitor spending for FY 2012. Figure 31 represents facility spending for FY 2008 and FY 2012. In FY 2012, Adelphi Laboratory Center supported a total of 1,234 direct workers, an increase of approximately 300 workers when compared to FY 2008. Total payroll decreased from approximately $102.9 million to $88.2 million as employment grew. Total in-state purchases increased between FY 2008 to FY 2012 by $7.9 million.

Figure 31: Adelphi Laboratory Center Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$102,900,000	$88,166,895
Employment (# of jobs)	925	1,234
Purchases	$816,900,000	$109,657,926
Visitor Spending	n/a	n/a
In-State[133]		
Payroll	$89,200,000	n/a
Employment (# of jobs)	807	n/a
Purchases[134]	$82,300,000	$90,211,820
Visitor Spending	$4,200,000	$879,379

Sources: DBED, U.S. Army Research Laboratory

Army Laboratory Center's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure 32 represents the separate economic impacts of Army Laboratory Center's FY 2008 and FY 2012 specific payroll, procurement, visitor spending, and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

[133] The Adelphi Laboratory Center did not provide state-level employment and payroll information.
[134] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

Figure 32: Economic Impacts of Adelphi Laboratory Center

Impact	Direct	Indirect	Induced	Total
FY 2008				
Employment	925	915	991	2,831
Output	$175,700,000	$114,400,000	$121,200,000	$411,300,000
Wages	$102,900,000	$54,800,000	$36,800,000	$194,600,000
FY 2012				
Employment	1,234	727	1,281	3,242
Output	$122,495,301	$93,733,640	$84,506,966	$300,735,906
Wages	$88,415,433	$45,133,903	$28,352,198	$161,901,533

Sources: RESI, IMPLAN

As shown in Figure 32, the employees associated with the Adelphi Laboratory Center support a total of 3,242 jobs in FY 2012, an increase of approximately 400 workers compared to FY 2008. In addition, the Adelphi Laboratory Center supports a total of nearly $300.7 million in output and approximately $161.9 million in wages on an annual basis. The total output decreased by roughly $110.6 million between FY 2008 and FY 2012.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

17.0 Army Corps of Engineers—Baltimore District

The Baltimore District of the U.S. Army Corps of Engineers provides environmental engineering solutions to the engineering challenges of their corporate customers.[135] In total, the Baltimore District is composed of ten area offices—located throughout Maryland, Pennsylvania, Virginia, and West Virginia.[136] Baltimore City houses the District's headquarters[137]

In the early 1800s, when coastal attacks became less of a concern, the Baltimore District's mission began. It was at this time that the nation became focused on developing road, rail, and canal systems; as well as communication networks.[138] Today, employees of the Baltimore District provide a variety of expertise—such as design, construction, engineering, and environmental, to name a few.[139]

[135] "Mission and Vision," U.S. Army Corps of Engineers, accessed March 5, 2014, http://www.nab.usace.army.mil/About/MissionandVision.aspx.
[136] "Baltimore District Office Locations," U.S. Army Corps of Engineers, accessed March 5, 2014, http://www.nab.usace.army.mil/Locations/AreaOfficeLocations.aspx.
[137] "Leadership," U.S. Army Corps of Engineers, accessed March 5, 2014, http://www.nab.usace.army.mil/About/Leadership.aspx.
[138] "History of the Baltimore District," U.S. Army Corps of Engineers, accessed March 5, 2014, http://www.nab.usace.army.mil/About/History.aspx.
[139] Ibid.

These areas of expertise aid the Baltimore district in the following:

- Maintaining nearly 300 miles of federal channels;
- Overseeing approximately 150 miles of damage preventing federal flood protection levees;
- Managing reservoir projects;
- Running the Washington Aqueduct (supplying potable water to surrounding areas);
- Supporting local oyster habitats; and
- Protecting expanses of sensitive coastline.[140]

The Baltimore District additionally oversees operations abroad, leases nearly 200 housing units, supports more than 300 Armed Forces recruiting stations, and works with several agencies outside of the DOD.[141]

Army Corps of Engineers—Baltimore District—Facility Spending

The Baltimore District provided data for specific payroll, procurement, and visitor spending for FY 2012. Figure 33 represents facility spending for FY 2008 and FY 2012. In FY 2012, Army Corps of Engineers—Baltimore District supported a total of 1,210 direct workers, an increase of 2 workers when compared to FY 2008. Total payroll also increased from approximately $77.7 million to $98.3 million as employment grew.

Figure 33: Army Corps of Engineers—Baltimore District Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	$77,700,000	$98,262,098
Employment (# of jobs)	1,208	1,210
Purchases	n/a	$240,321,398
Visitor Spending	n/a	n/a
In-State		
Payroll	$41,800,000	$68,384,894
Employment (# of jobs)	647	823
Purchases[142]	n/a	$234,794,145
Visitor Spending	n/a	n/a

Sources: DBED, Army Corps of Engineers—Baltimore District

Army Corps of Engineers—Baltimore District's FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland's Military Installation* study. Figure

[140] "Baltimore District Quick Facts," U.S. Army Corps of Engineers, accessed March 5, 2014, http://www.nab.usace.army.mil/About.aspx.
[141] Ibid.
[142] Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

34 represents the separate economic impacts of Army Corps of Engineers—Baltimore District's FY 2008 and FY 2012 specific payroll, procurement, and visitor spending and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

Figure 34: Economic Impacts of Army Corps of Engineers—Baltimore District

Impact	Direct	Indirect	Induced	Total
FY 2008[143]				
Employment	1,208	0	299	1,507
Output	$41,800,000	$0	$36,800,000	$78,600,000
Wages	$77,700,000	$0	$11,200,000	$88,900,000
FY 2012				
Employment	1,210	1,922	1,678	4,810
Output	$134,601,206	$314,548,013	$167,843,507	$616,992,726
Wages	$98,262,094	$118,041,408	$54,432,897	$270,736,399

Sources: RESI, IMPLAN

As shown in Figure 34, the employees associated with Army Corps of Engineers—Baltimore District's support a total of 4,810 jobs in FY 2012, an increase of 3,303 workers compared to FY 2008. In addition, the Army Corps of Engineers—Baltimore District supports a total of nearly $617.0 million in output and approximately $270.7 million in wages on an annual basis. The total output increased by roughly $538.4 million between FY 2008 and FY 2012.

For additional information regarding RESI's assumptions and an explanation of the IMPLAN input/output model, please refer to Appendix A.

18.0 Conclusion

The fifteen installations analyzed support 410,219 jobs, and generate $57.4 billion in total output and $25.7 billion in total wages. Fort George G. Meade contributed the plurality of impacts, followed by Aberdeen Proving Ground, Patuxent River Naval Air Station, and Fort Detrick. All but two installations saw an increase in impacts between 2008 and 2012. Most notably, Fort Detrick and the Army Corps of Engineers—Baltimore District had higher impacts because of the increased in-state spending. Conversely, a few installations exhibited a decline in impacts. However, the declines, primarily attributed to a decrease in in-state spending, were slight in comparison to the increases seen.

[143] In FY 2008, no indirect impacts were estimated because the Army Corps of Engineers—Baltimore District provided neither total, no in-state, purchases.

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Appendix A—Methodology

A.1 IMPLAN Model Overview

To quantify the economic and fiscal impacts of the installation, RESI used the IMPLAN input/output model. This model enumerates the employment and fiscal impact of each dollar earned and spent by the following: employees of the installation, other supporting vendors (business services, retail, etc.), each dollar spent by these vendors on other firms, and each dollar spent by the households of the installation's employees, other vendors' employees, and other businesses' employees.

Economists measure three types of economic impacts: direct, indirect, and induced impacts. The direct economic effects are generated as businesses, in this case military facilities, create jobs and hire workers to fill new positions. The indirect economic impacts occur as businesses purchase goods and services from one another. In either case, the increases in employment generate an increase in household income, as new job opportunities are created and income levels rise. This drives the induced economic impacts that result from households increasing their purchases at businesses.

Consider the following example. A new firm opens in a region and directly employs 100 workers. The firm purchases supplies, both from outside the region as well as from local suppliers, which leads to increased business for local firms, thereby creating jobs for say, another 100 workers. This is called the indirect effect. The workers at the firm and at suppliers spend their income mostly in the local area, creating jobs for hypothetically another 50 workers. This is the induced effect. The direct, indirect, and induced effects add up to 250 jobs created from the original 100 jobs. Thus, in terms of employment, the total economic impact of the hypothetical firm in our example is 250.[144]

A.2 Assumptions

To maintain consistency between FY 2008 data and FY 2012 data, RESI followed the methodology used in the DBED's 2008 *Measuring Economic Impact of Maryland's Military Installation* study.[145] In addition, RESI reviewed a case study published on the IMPLAN website titled *Economic Impact of Arizona's Principal Military Operations* to quantify the economic impacts that military installations had on the state.[146] Four military installation inputs were used to best quantify the economic impacts. These inputs included employment numbers, payroll totals, purchase/procurement totals, and visitor totals. All of the data were collected from Maryland's military installations and provided by DBED. Suppliers, vendors, and contactors paid to Maryland were used in the calculation of economic impacts.

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[144] Total economic impact is defined as the sum of direct, indirect, and induced effects.
[145] "Mission Maryland: Measuring Economic Impact of Maryland's Military Installations," Jacob France Institute, 3, 15.
[146] "Economic Impact of Arizona's Principal Military Operation," The Maguire Company and ESI Corporation, A-1.

To keep the analysis consistent with the 2008 Maryland military installation study, RESI excluded revenues associated with commissary and exchange sales or on-installation lodging revenues in the spending and procurement figures for each facility. This exclusion avoided double counting of these revenues with visitor and employee spending. Medical spending by the installations was also excluded from the analysis of purchases to avoid double counting with the impacts associated with military and other employee incomes.

Total visitor spending was calculated by using data found in the 2012 *Economic Impact of the Military Community in South Carolina* study. RESI used the total visitor data provided by each installation and an estimated spending of a person when visiting the installation. According to the study, the average visitor to the military installation spends approximately $143 per day.[147]

RESI used the spending and procurement data provided by DBED and classified them into key industries within the IMPLAN model, as shown in Figure 35.

Figure 35: IMPLAN Industry Sectors

IMPLAN Code	Description
Employment	
440	Employment and payroll (federal government, military)
439	Employment and payroll (federal government, non-military)
Procurement and Purchases	
31	Electric power generation, transmission and distribution
32	Natural gas distribution
33	Water, sewage and other treatment and delivery systems
34	Construction of new nonresidential commercial and health care structures
36	Construction of other new nonresidential structures
37	Construction of new residential permanent site-single and multi-family
39	Maintenance and repair construction of nonresidential structures
115	Petroleum refineries
319	Retail stores—wholesale trade businesses
322	Retail stores – electronics and appliances
338	Scenic and sightseeing transportation and support activities for transportation
351	Telecommunications
356	Securities, commodity contracts, investment, and related activities
360	Real estate establishments
363	General and consumer good rental except video tapes and discs
368	Accounting, tax preparation, bookkeeping and payrolls services
369	Architectural, engineering, and related services
371	Custom computer programming services

[147] Wang, "The Economic Impact of the Military Community in South Carolina," 33.

IMPLAN Code	Description
372	Computer systems design services
373	Other computer related services, including facilities management
374	Management, scientific, and technical consulting services
375	Environmental and other technical consulting services
376	Scientific research and development services
380	All other miscellaneous professional, scientific, and technical services
383	Travel arrangement and reservation services
384	Office administrative services
387	Investigation and security services
388	Services to building and dwelling
389	Other support services
390	Waste management and remediation services
391	Private elementary and secondary schools
392	Private junior colleges, colleges, universities, and professional schools
400	Individual and family services
410	Other amusement and recreation industries
411	Hotels and motels, including casino hotels
413	Food services and drinking places
416	Electronic and precision equipment repair and maintenance
418	Personal and household good repair and maintenance
423	Religious organizations
Visitor Spending	
411	Hotels and motels, including casino hotels
413	Food services and drinking places

Sources: IMPLAN, RESI

Appendix B—EIS Questionnaire

Figure 36: EIS Questionnaire—Joint Base Andrews

	FY 2008	FY 2013
On-Base Personnel		
Active duty military	5,730	12,478
Reserve	0	0
Rotational	0	0
Students	0	0
Civilian	2,327	5,068
Total	**8,057**	**17,546**
Maryland Resident Employment		
Active duty military	3,456	7,526
Reserve	0	0
Rotational	0	0
Students	0	0
Civilian	1,402	3,053
Total	**4,858**	**10,579**
Maryland Resident Payroll (in millions)		
Active duty military	$281.3	$605.9
Reserve	$0.0	$0.0
Rotational	$0.0	$0.0
Students	$0.0	$0.0
Civilian	$75.2	$162.0
Total	**$356.5**	**$767.8**
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	$17.1	$16.3
Utilities	$8.7	$18.3
Medical health service	$16.6	$2.1
Contracts and purchases	$101.8	$29.4
Education payments	$0.9	$0.1
Commissary and exchange sales and lodging[148]	$53.4	$0.0
Total	**$145.0**	**$64.1**
Visitors and Spending		
Total visitors	2,132	n/a
Visitor spending (in-state, in millions)	$0.8	n/a

Sources: DBED, Joint Base Andrews

[148] Medical health service expenses and commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 37: EIS Questionnaire—Aberdeen Proving Ground[149]

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	1,730	1,260
Reserve	147	1,680
Rotational	0	n/a
Students	2,861	11
Civilian	6,358	12,829
Total	**11,096**	**15,780**
Maryland Resident Employment		
Active duty military	1,730	1,260
Reserve	147	1,680
Rotational	0	n/a
Students	2,861	11
Civilian	5,373	7,911
Total	**10,111**	**10,862**
Maryland Resident Payroll (in millions)		
Active duty military	$97.6	$109.9
Reserve	$8.3	$8.4
Rotational	$0.0	n/a
Students[150]	$65.2	$0.2
Civilian	$435.3	$626.7
Total	**$606.3**	**$760.7**
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	$86.3	$37.8
Utilities	$42.7	$21.2
Medical health services[151]	$368.3	$0.1
Contracts and purchases	$1,005.1	$1,841.1
Education payments	$9.6	$6.1
Commissary and exchange sales and lodging[152]	$55.2	$36.6
Total	**$1,143.7**	**$1,906.2**
Visitors and Spending		
Total visitors	n/a	199,812
Visitor spending (in-state, in millions)	n/a	$43.4

Sources: DBED, Aberdeen Proving Ground

[149] Please note subtotals in each figure may not add up to the total due to rounding.
[150] Student payroll was not provided by APG, therefore, RESI utilized data provided by other military installations in order to estimate payroll.
[151] Medical health services are not included in the total to avoid double counting.
[152] Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 38: EIS Questionnaire—Fort Detrick

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	1,620	1,644
Reserve	35	223
Rotational	9	n/a
Students	12	25
Civilian	3,538	5,674
Total	**5,214**	**7,566**
Maryland Resident Employment		
Active duty military	1,506	1,644
Reserve	28	198
Rotational	8	n/a
Students	12	25
Civilian	2,768	5,004
Total	**4,322**	**6,871**
Maryland Resident Payroll (in millions)		
Active duty military	$73.3	$115.9
Reserve	$0.3	$2.4
Rotational	$0.2	n/a
Students	$0.3	$0.5
Civilian	$227.9	$722.9
Total	**$301.9**	**$841.7**
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	$104.1	$609.5
Utilities	$31.0	$0.0
Medical health service[153]	$70.1	$13.6
Contracts and purchases	$316.5	$1,696.2
Education payments	$1.3	$0.3
Commissary and exchange sales and lodging[154]	$42.3	$25.2
Total	**$453.0**	**$2,306.0**
Visitors and Spending		
Total visitors	73,804	311,721
Visitor spending (in-state, in millions)	$5.9	$44.6

Sources: DBED, Fort Detrick

[153] Medical health services are not included in the total to avoid double counting.
[154] Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 39: EIS Questionnaire—Fort George G. Meade

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	8,260	1,844
Reserve	0	177
Rotational	19	0
Students	605	0
Civilian	39,505	62,706
Total	**48,389**	**64,727**
Maryland Resident Employment		
Active duty military	8,012	939
Reserve	0	152
Rotational	18	0
Students	587	0
Civilian	38,320	59,205
Total	**46,937**	**60,297**
Maryland Resident Payroll (in millions)		
Active duty military	$901.4	$113.8
Reserve	$0.0	$6.1
Rotational	$2.0	$0.0
Students	$66.0	$0.0
Civilian	$2,246.7	$6,089.2
Total	**$5,471.4**	**$6,229.1**
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	$10.6	$2,204.8
Utilities	$0.0	$0.0
Medical health service	$0.0	$0.0
Contracts and purchases	$2,622.8	$5,285.3
Education payments	$0.0	$0.0
Commissary and exchange sales and lodging[155]	$138.3	$0.0
Total	**$2,633.3**	**$7,490.1**
Visitors and Spending		
Total visitors	n/a	600,000
Visitor spending (in-state, in millions)	n/a	$90.0

Sources: DBED, Fort George G. Meade

[155] Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 40: EIS Questionnaire—National Maritime Intelligence Integration Office

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	437	570
Reserve	0	0
Rotational	0	0
Students	0	0
Civilian	1,287	1,320
Total	**1,724**	**1,890**
Maryland Resident Employment		
Active duty military	366	479
Reserve	0	0
Rotational	0	0
Students	0	0
Civilian	1,079	1,109
Total	**1,445**	**1,588**
Maryland Resident Payroll (in millions)		
Active duty military	$38.4	$31.5
Reserve	$0.0	$0.0
Rotational	$0.0	$0.0
Students	$0.0	$0.0
Civilian	$132.2	$135.8
Total	**$170.6**	**$167.3**
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	$0.0	$0.0
Utilities	$1.0	$0.0
Medical health service	$0.0	$0.0
Contracts and purchases	$28.4	$69.2
Education payments	$0.3	$0.2
Commissary and exchange sales and lodging[156]	n/a	n/a
Total	**$29.8**	**$69.4**
Visitors and Spending		
Total visitors	n/a	n/a
Visitor spending (in-state, in millions)	n/a	n/a

Sources: DBED, National Maritime Intelligence Integration Office

[156] Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 41: EIS Questionnaire—Naval Support Activity Bethesda

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	2,762	4,860
Reserve	5	5
Rotational	0	0
Students	1,321	1,321
Civilian	4,020	5,500
Total	**8,108**	**11,686**
Maryland Resident Employment		
Active duty military	2,234	4,688
Reserve	3	0
Rotational	0	5
Students	1,255	1,176
Civilian	3,699	4,895
Total	**7,191**	**10,764**
Maryland Resident Payroll (in millions)		
Active duty military	$51.1	$123.1
Reserve	$0.2	$0.3
Rotational	$0.0	$0.0
Students	$43.9	$42.4
Civilian	$236.6	$313.2
Total	**$331.8**	**$478.9**
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	$38.3	$19.4
Utilities	$17.9	$18.8
Medical health service	$8.5	$51.8
Contracts and purchases	$4.9	$3.2
Education payments	$0.0	$0.0
Commissary and exchange sales and lodging[157]	$34.4	$36.3
Total	**$69.6**	**$93.3**
Visitors and Spending		
Total visitors	n/a	1,000,000
Visitor spending (in-state, in millions)	n/a	$28.6

Sources: DBED, Naval Support Activity Bethesda

[157] Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 42: EIS Questionnaire—Naval Air Station Patuxent River

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	2,789	2,342
Reserve	0	0
Rotational	0	0
Students	0	0
Civilian	8,176	9,382
Total	**10,965**	**11,724**
Maryland Resident Employment		
Active duty military	2,622	2,037
Reserve	0	0
Rotational	0	0
Students	0	0
Civilian	7,685	8,862
Total	**10,307**	**10,899**
Maryland Resident Payroll (in millions)		
Active duty military	$159.0	$123.5[158]
Reserve	$0.0	$0.0
Rotational	$0.0	$0.0
Students	$0.0	$0.0
Civilian	$671.3	$831.5
Total	**$830.4**	**$955.0**
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	$182.4	$0.0
Utilities	$32.7	$0.0
Medical health service	$30.4	n/a
Contracts and purchases	$1,514.6	$1,696.8
Education payments	$2.2	$2.4
Commissary and exchange sales and lodging[159]	$46.7	$28.5
Total	**$1,731.8**	**$1,699.2**
Visitors and Spending		
Total visitors	72,000	9,479
Visitor spending (in-state, in millions)	$29.4	$1.4

Sources: DBED, Naval Air Station Patuxent River

[158] Maryland resident active duty military payroll for FY 2012 was estimated using FY 2008 data.
[159] Medical health services, commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 43: EIS Questionnaire—Coast Guard Yard

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	489	569
Reserve	151	148
Rotational	0	0
Students	0	0
Civilian	878	974
Total	**1,518**	**1,691**
Maryland Resident Employment		
Active duty military	421	362
Reserve	81	103
Rotational	0	0
Students	0	0
Civilian	836	784
Total	**1,338**	**1,249**
Maryland Resident Payroll (in millions)		
Active duty military	$18.5	$28.1
Reserve	$0.6	$0.3
Rotational	$0.0	$0.0
Students	$0.0	$0.0
Civilian	$68.6	$46.7
Total	**$87.7**	**$75.2**
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	$18.0	$11.9
Utilities	$0.0	$2.8
Medical health service	$0.2	$0
Contracts and purchases	$1.0	$19.8
Education payments	$0.0	$0.1
Commissary and exchange sales and lodging[160]	$1.6	n/a
Total	**$19.1**	**$34.7**
Visitors and Spending		
Total visitors	1,313	4,108
Visitor spending (in-state, in millions)	$0.3	$0.9

Sources: DBED, Coast Guard Yard

[160] Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 44: EIS Questionnaire—Maryland National Guard

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	1,415	1,269
Reserve	5,051	4,963
Rotational	0	0
Students	0	0
Civilian	741	829
Total	**7,197**	**7,061**
Maryland Resident Employment[161]		
Active duty military	1,387	-
Reserve	4,940	-
Rotational	0	-
Students	0	-
Civilian	726	-
Total	**7,053**	**-**
Maryland Resident Payroll (in millions)[162]		
Active duty military	n/a	-
Reserve	n/a	-
Rotational	n/a	-
Students	n/a	-
Civilian	n/a	-
Total	**$163.0**	
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	n/a	$27.9
Utilities	n/a	$1.3
Medical health service	n/a	$0.4
Contracts and purchases	n/a	$8.2
Education payments	n/a	$0.0
Commissary and exchange sales and lodging[163]	n/a	$0.0
Total	**$49.5**	**$37.6**
Visitors and Spending		
Total visitors	n/a	n/a
Visitor spending (in-state, in millions)	n/a	n/a

Sources: DBED, Maryland National Guard

[161] The Maryland National Guard did not provide detailed data on Maryland employment or payrolls.
[162] The Maryland National Guard did not provide a breakdown of Maryland employment or payrolls.
[163] Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 45: EIS Questionnaire—Naval Research Lab—Chesapeake Bay Detachment

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	0	0
Reserve	0	0
Rotational	0	0
Students	0	0
Civilian	13	15
Total	**13**	**15**
Maryland Resident Employment		
Active duty military	0	0
Reserve	0	0
Rotational	0	0
Students	0	0
Civilian	12	14
Total	**12**	**14**
Maryland Resident Payroll (in millions)		
Active duty military	$0.0	$0.0
Reserve	$0.0	$0.0
Rotational	$0.0	$0.0
Students	$0.0	$0.0
Civilian	$0.8	$1.5
Total	**$0.8**	**$1.5**
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	$0.4	$1.8
Utilities	$0.1	$0.1
Medical health service	$0.0	$0.0
Contracts and purchases	$3.4	$2.4
Education payments	$0.0	$0.0
Commissary and exchange sales and lodging[164]	n/a	n/a
Total	**$3.8**	**$4.3**
Visitors and Spending		
Total visitors	5,220	6,000
Visitor spending (in-state, in millions)	$0.7	$0.7

Sources: DBED, Naval Research Lab—Chesapeake Bay Detachment

[164] Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 46: EIS Questionnaire—Naval Support Activity Annapolis

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	650	1,226
Reserve	10	147
Rotational	0	0
Students	4,449	4,000
Civilian	1,038	2,392
Total	**6,147**	**7,765**
Maryland Resident Employment		
Active duty military	611	1,208
Reserve	10	145
Rotational	0	0
Students	4,449	3,941
Civilian	987	2,357
Total	**6,057**	**7,651**
Maryland Resident Payroll (in millions)		
Active duty military	$72.3	$76.3
Reserve	$1.2	$9.1
Rotational	$0.0	$0.0
Students	$62.1	$248.8
Civilian	$88.2	$148.8
Total	**$223.7**	**$483.0**
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	$59.4	$92.4
Utilities	$13.2	$0.0
Medical health service	$0.0	$0.0
Contracts and purchases	$22.9	$0.0
Education payments	$0.6	$0.0
Commissary and exchange sales and lodging[165]	$31.6	$0.0
Total	**$96.1**	**$92.4**
Visitors and Spending[166]		
Total visitors	2.0 million	2.2 million
Visitor spending (in-state, in millions)	n/a	n/a.

Sources: DBED, Naval Support Activity Annapolis

[165] Commissary and exchange sales and lodging are not included in the total to avoid double counting.
[166] The Naval Academy has over 2 million visitors per year as part of its educational mission, for sporting events, and for other military support functions. Because the reason for their visit is unknown, visitor activity at Annapolis is excluded from this analysis.

Figure 47: EIS Questionnaire— Naval Surface Warfare Center—Carderock Division

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	1	2
Reserve	0	0
Rotational	0	0
Students	63	0
Civilian	1,479	1,561
Total	**1,543**	**1,563**
Maryland Resident Employment		
Active duty military	0	2
Reserve	0	0
Rotational	0	0
Students	23	0
Civilian	931	1,344
Total	**954**	**1,346**
Maryland Resident Payroll (in millions)		
Active duty military	$0.0	$0.2
Reserve	$0.0	$0.0
Rotational	$0.0	$0.0
Students	$0.1	$0.0
Civilian	$88.3	$149.6
Total	**$88.4**	**$149.8**
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	$10.0	$50.1
Utilities	$1.1	$8.0
Medical health service	$0.0	$0.0
Contracts and purchases	$50.1	$54.0
Education payments	$0.2	$0.0
Commissary and exchange sales and lodging[167]	n/a	$0.0
Total	**$61.4**	**$112.1**
Visitors and Spending		
Total visitors	n/a	8,000
Visitor spending (in-state, in millions)	n/a	$1.1

Sources: DBED, Naval Surface Warfare Center —Carderock Division

[167] Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 48: EIS Questionnaire—Naval Support Facility Indian Head

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	650	600
Reserve	0	0
Rotational	0	0
Students	0	0
Civilian	2,268	1,964
Total	**2,918**	**2,564**
Maryland Resident Employment		
Active duty military	567	485
Reserve	0	0
Rotational	0	0
Students	0	0
Civilian	1,927	1,586
Total	**2,494**	**2,071**
Maryland Resident Payroll (in millions)		
Active duty military	$23.8	$46.3
Reserve	$0.0	$0.0
Rotational	$0.0	$0.0
Students	$0.0	$0.0
Civilian	$135.1	$151.7
Total	**$158.9**	**$198.0**
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	n/a	$24.7
Utilities	n/a	$0.0
Medical health service	n/a	$0.0
Contracts and purchases	n/a	$0.0
Education payments	n/a	$0.1
Commissary and exchange sales and lodging[168]	n/a	$0.0
Total	**$95.9**	**$24.8**
Visitors and Spending		
Total visitors	n/a	n/a
Visitor spending (in-state, in millions)	n/a	n/a

Sources: DBED, Naval Support Facility Indian Head

[168] Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 49: EIS Questionnaire—Adelphi Laboratory Center

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	13	11
Reserve	70	81
Rotational	0	0
Students	0	0
Civilian	842	1,142
Total	**925**	**1,234**
Maryland Resident Employment		
Active duty military	8	-
Reserve	70	-
Rotational	0	-
Students	0	-
Civilian	729	-
Total	**807**	**-**
Maryland Resident Payroll (in millions) [169]		
Active duty military	$0.8	-
Reserve	$0.0	-
Rotational	$0.0	-
Students	$0.0	-
Civilian	$88.4	-
Total	**$89.2**	**-**
Maryland Procurement and Purchases (in millions)[170]		
Building construction and maintenance	$0.0	$7.2
Utilities	$0.0	$0.4
Medical health service	$0.0	$0.0
Contracts and purchases	$82.1	$82.6
Education payments	$0.2	$0.0
Commissary and exchange sales and lodging[171]	n/a	n/a
Total	**$82.3**	**$90.2**
Visitors and Spending		
Total visitors	15,700	10,709
Visitor spending (in-state, in millions)	$4.2	$0.9

Sources: DBED, Adelphi Laboratory Center

[169] The U.S. Army Research Laboratory did not provide state-level employment and payroll information.
[170] The U.S. Army Research Laboratory did not provide state-level employment and payroll information.
[171] Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 50: EIS Questionnaire—Army Corps of Engineers—Baltimore District

	FY 2008	FY 2012
On-Base Personnel		
Active duty military	7	17
Reserve	0	0
Rotational	0	0
Students	0	0
Civilian	1,201	1193
Total	**1,208**	**1210**
Maryland Resident Employment		
Active duty military	7	17
Reserve	0	0
Rotational	0	0
Students	0	0
Civilian	640	806
Total	**647**	**823**
Maryland Resident Payroll (in millions)		
Active duty military	$0.8	$1.9
Reserve	$0.0	$0.0
Rotational	$0.0	$0.0
Students	$0.0	$0.0
Civilian	$41.0	$66.4
Total	**$41.8**	**$68.4**
Maryland Procurement and Purchases (in millions)		
Building construction and maintenance	n/a	$222.3
Utilities	n/a	$2.1
Medical health service	n/a	$0.0
Contracts and purchases	n/a	$10.4
Education payments	n/a	$0.0
Commissary and exchange sales and lodging[172]	n/a	$0.3
Total	$0.0	**$234.8**
Visitors and Spending		
Total visitors	n/a	n/a
Visitor spending (in-state, in millions)	n/a	n/a

Sources: DBED, Army Corps of Engineers—Baltimore District

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[172] Commissary and exchange sales and lodging are not included in the total to avoid double counting.