

MARYLAND

Economic Impact Study of Military Facilities

FY12 RESULTS



Department of Business & Economic Development

www.ChooseMaryland.org



Table of Contents

1.0	Executive Summary.....	5
1.1	Economic Impacts	5
1.2	Methodology	9
1.3	Limitations.....	10
2.0	Introduction	11
3.0	Joint Base Andrews	12
4.0	Aberdeen Proving Ground	14
5.0	Fort Detrick	17
6.0	Fort George G. Meade	20
7.0	National Maritime Intelligence Center	23
8.0	Naval Support Activity—Bethesda.....	25
9.0	Patuxent River Naval Air Station.....	27
10.0	Curtis Bay Coast Guard Yard	30
11.0	Maryland National Guard	32
12.0	Naval Research Lab—Chesapeake Bay	34
13.0	Naval Support Activity—Annapolis.....	36
14.0	Naval Support Warfare Center—Carderock	38
15.0	Naval Support Warfare Center—Indian Head	40
16.0	Army Research Laboratory—Adelphi	42
17.0	Army Corps of Engineers—Baltimore	45
18.0	Conclusion.....	47
19.0	References	48
	Appendix A—Methodology	53
A.1	IMPLAN Model Overview	53
A.2	Assumptions.....	53
	Appendix B—EIS Questionnaire.....	56

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.....	8
Figure 5: Joint Base Andrews Base Facility Spending.....	13
Figure 6: Economic Impacts of Joint Base Andrews.....	14
Figure 7: Aberdeen Proving Ground Facility Spending.....	16
Figure 8: Economic Impacts of Aberdeen Proving Ground.....	17
Figure 9: Fort Detrick Facility Spending.....	19
Figure 10: Economic Impacts of Fort Detrick.....	19
Figure 11: Fort George G. Meade Facility Spending.....	22
Figure 12: Economic Impacts of Fort George G. Meade.....	22
Figure 13: National Maritime Intelligence Office Facility Spending.....	24
Figure 14: Economic Impacts of National Maritime Intelligence Office.....	24
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: Curtis Bay Coast Guard Yard Facility Spending.....	31
Figure 20: Economic Impacts of Curtis Bay 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 Facility Spending.....	35
Figure 24: Economic Impacts of Naval Research Lab—Chesapeake Bay.....	36
Figure 25: Naval Support Activity Annapolis—Facility Spending.....	37
Figure 26: Economic Impacts of NSA Annapolis.....	38
Figure 27: NSWC—Carderock Division Facility Spending.....	39
Figure 28: Economic Impacts of NSWC—Carderock Division.....	40
Figure 29: NSWC—Indian Head Division Facility Spending.....	41
Figure 30: Economic Impacts of NSWC—Indian Head Division.....	42
Figure 31: U.S. Army Research Laboratory Facility Spending.....	44
Figure 32: Economic Impacts of U.S. Army Research Laboratory.....	44
Figure 33: U.S. Army Corps of Engineers—Baltimore Facility Spending.....	46
Figure 34: Economic Impacts of U.S. Army Corps of Engineers—Baltimore.....	47
Figure 35: IMPLAN Industry Sectors.....	55
Figure 36: EIS Questionnaire—Joint Base Andrews.....	56
Figure 37: EIS Questionnaire—Aberdeen Proving Ground.....	57
Figure 38: EIS Questionnaire—Fort Detrick.....	58
Figure 39: EIS Questionnaire—Fort George G. Meade.....	59
Figure 40: EIS Questionnaire—National Maritime Intelligence Office.....	60
Figure 41: EIS Questionnaire—Naval Support Activity Bethesda.....	61

Figure 42: EIS Questionnaire—Naval Air Station Patuxent River	62
Figure 43: EIS Questionnaire—Curtis Bay Coast Guard Yard.....	63
Figure 44: EIS Questionnaire—Maryland National Guard.....	64
Figure 45: EIS Questionnaire—Naval Research Lab—Chesapeake Bay.....	65
Figure 46: EIS Questionnaire—NSA Annapolis	66
Figure 47: EIS Questionnaire—NSWC—Carderock Division	67
Figure 48: EIS Questionnaire—NSWC—Indian Head Division	68
Figure 49: EIS Questionnaire—U.S. Army Research Laboratory.....	69
Figure 50: EIS Questionnaire—U.S. Army Corps of Engineers—Baltimore.....	70

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 the state'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 Center,
- Naval Support Activity—Bethesda,
- Patuxent River Naval Air Station,
- Curtis Bay Coast Guard Yard,
- Maryland National Guard,
- Naval Research Lab—Chesapeake Bay,
- Naval Support Activity—Annapolis,
- Naval Support Warfare Center—Carderock,
- Naval Support Warfare Center—Indian Head,
- Army Research Laboratory—Adelphi, and
- Army Corps of Engineers—Baltimore.

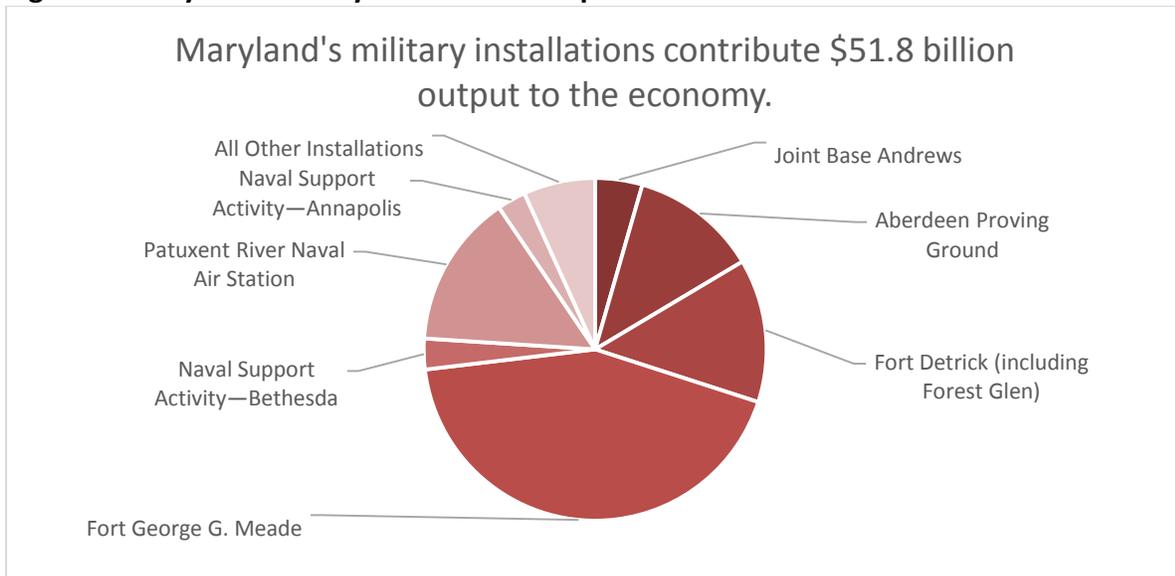
1.1 Economic Impacts

The fifteen installations that RESI analyzed support 350,411 jobs and generate \$51.8 billion in total output and \$23.9 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 \$51.8 billion, 15 percent of the state's total output can be attributed to the military installations.

¹ Joint Base Andrews provided FY 2013 data.

² Bureau of Economic Analysis, "Gross domestic product (GDP) by state (millions of current dollars)," accessed May 7, 2015, <http://www.bea.gov/>.

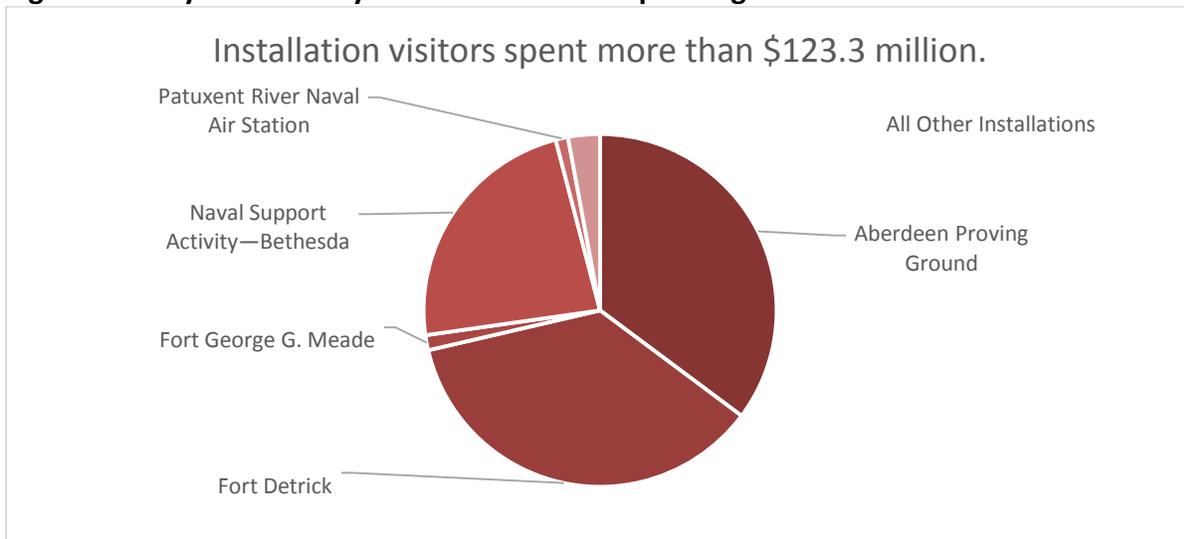
Figure 1: Maryland Military Installation Output



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

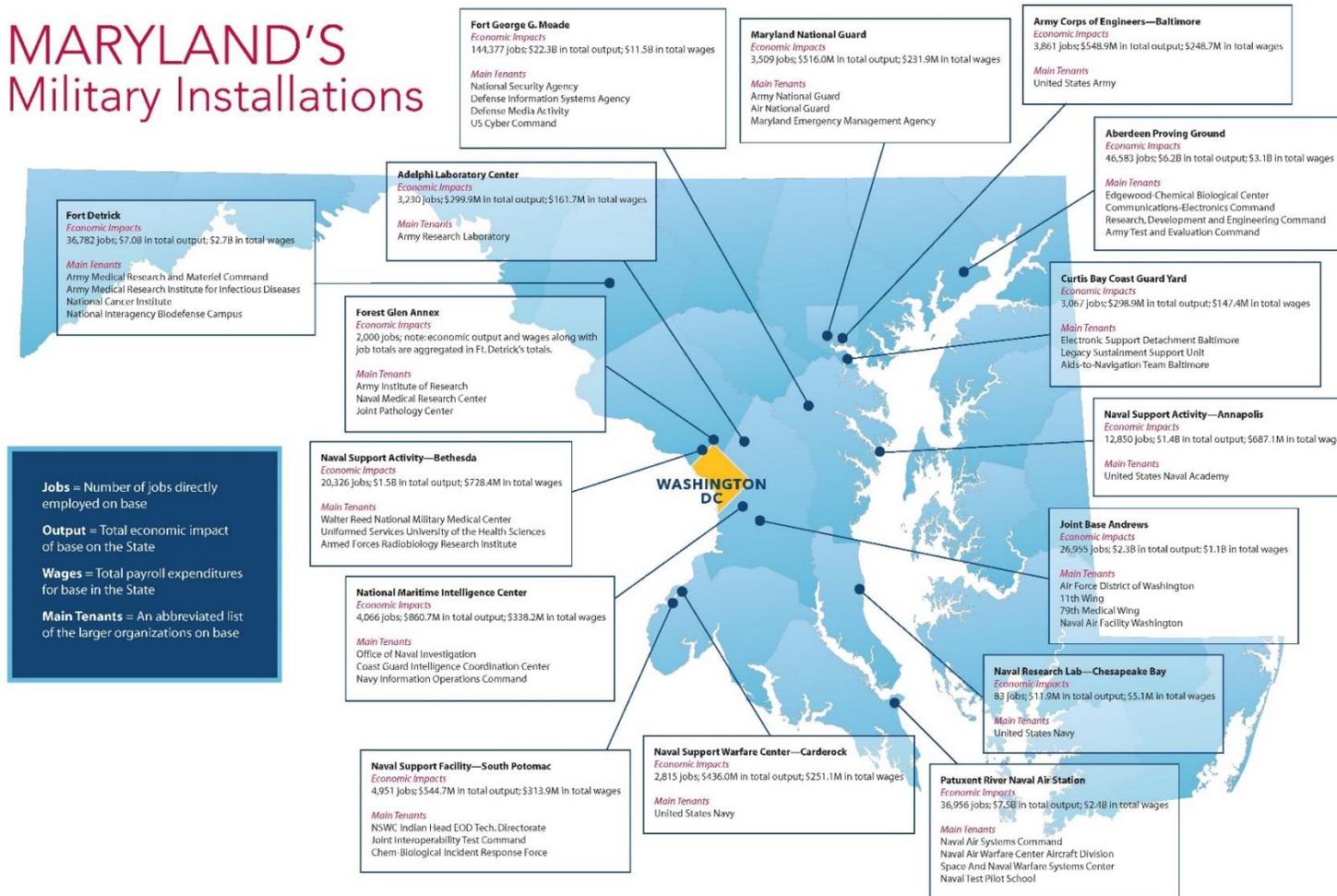


Source: RESI

Maryland's military installation, and their Impacts, are spread throughout the state.

Figure 3: Maryland Military Installation Location and Economic Impacts

MARYLAND'S Military Installations



Sources: DBED, RESI

Regional Economic Studies Institute



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:

Figure 4: Economic Impacts of Maryland Military Installations³

Installation	FY 2008			FY 2012		
	Employment	Output	Wages	Employment	Output	Wages
Joint Base Andrews	12,506	\$1.0	\$0.6	26,955	\$2.3	\$1.1
Aberdeen Proving Ground	28,995	\$4.3	\$1.6	46,583	\$6.2	\$3.1
Fort Detrick	13,395	\$1.8	\$0.7	36,782	\$7.0	\$2.7
Fort George G. Meade	125,729	\$17.8	\$9.2	144,377	\$22.3	\$11.5
National Maritime Intelligence Center	3,343	\$0.4	\$0.3	4,066	\$0.9	\$0.3
Naval Support Activity—Bethesda	11,216	\$0.8	\$0.5	20,326	\$1.5	\$0.7
Patuxent River Naval Air Station	41,185	\$6.6	\$2.4	36,956	\$7.5	\$2.4
Curtis Bay Coast Guard Yard	2,395	\$0.2	\$0.1	3,067	\$0.3	\$0.1
Maryland National Guard	3,850	\$0.4	\$0.2	3,509	\$0.5	\$0.2
Naval Research Lab—Chesapeake Bay	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 Support Warfare Center—Carderock	3,082	\$0.3	\$0.2	2,815	\$0.4	\$0.3
Naval Support Warfare Center—Indian Head	5,165	\$0.5	\$0.3	4,951	\$0.5	\$0.3
Army Research Laboratory—Adelphi	2,831	\$0.4	\$0.2	3,230	\$0.3	\$0.2
Army Corps of Engineers—Baltimore	1,507	\$0.1	\$0.1	3,861	\$0.5	\$0.2
Total	264,170	\$35.5	\$16.8	350,411	\$51.8	\$23.9

Sources: DBED, RESI, Jacob France Institute

³ Output and wages are reported in billions of dollars.

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 350,000 workers, an increase of approximately 86,200 workers when compared to FY 2008. Total output increased by approximately \$16.3 billion, reaching nearly \$51.8 billion in FY 2012. Total wage impacts also increased to more than \$23.9 billion—an increase of more than \$7.1 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.⁴ 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.⁵ 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 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

⁴ The Jacob France Institute of the Merrick School of Business at the University of Baltimore, "Mission Maryland: Measuring Economic Impact of Maryland's Military Installations," Maryland Department of Business and Economic Development and Maryland Department of Labor, Licensing and Regulation, 3, 15, accessed September 6, 2013, <http://www.choosemaryland.org/moveyourbusiness/Documents/B2G%20Docs/missionMd.pdf>.

⁵ The Maguire Company and ESI Corporation. "Economic Impact of Arizona's Principal Military Operation," Arizona Department of Commerce. A-1, accessed September 6, 2013, <http://www.dm.af.mil/shared/media/document/AFD-110822-041.pdf>.

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 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.⁶

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.

⁶ 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:

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

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.⁷ 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.⁸ Four military installation inputs were used

⁷ Jacob France Institute, "Mission Maryland: Measuring Economic Impact of Maryland's Military Installations," 3, 15.

⁸ The Maguire Company and ESI Corporation. "Economic Impact of Arizona's Principal Military Operation," 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 Andrews⁹

Joint Base Andrews is located 10 miles southeast of Washington, D.C.¹⁰ Under the orders of President Franklin D. Roosevelt, construction on the facility began in 1942.¹¹ In 1943, 105 enlisted men and 5 officers arrived, forming the first permanent unit.¹² Originally named Camp Springs Army Air Field, the facility was designed "to train fighter pilots for overseas duty."¹³ In 1945 the name changed to Andrews Field, then changed again in 1947 to Andrews Air Force Base.¹⁴ In 2009, the facility "became a joint base known as Joint Base Andrews Naval Air Facility Washington, or Joint Base Andrews."¹⁵ In addition to serving as the headquarters for "Continental Air Command, Strategic Air Command and the Military Air Transport Service" following World War II, from 1950 to 1992 the facility served as headquarters to "the Air Research and Development Command and its successor, the Air Force Systems Command."¹⁶

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.¹⁷ 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."¹⁸ 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,

⁹ Joint Base Andrews provided FY 2013 data.

¹⁰ Military-Hotels.us, "Joint Base Andrews, Maryland—Hotels, Lodging, Inns," accessed October 9, 2013, <http://military-hotels.us/maryland/andrews-afb-md.html>.

¹¹ Joint Base Andrews, "Joint Base Andrews History," September 21, 2012, accessed October 9, 2013, <http://www.andrews.af.mil/library/factsheets/factsheet.asp?id=4479>.

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Military.com, "Andrews Air Force Base," accessed October 9, 2013, <http://www.military.com/base-guide/andrews-air-force-base>.

¹⁶ Joint Base Andrews, "Joint Base Andrews History."

¹⁷ Joint Base Andrews, "Units," accessed October 9, 2013, <http://www.andrews.af.mil/units/index.asp>.

¹⁸ Ibid.

logistics and communications support for the president, vice president, cabinet members, combatant commanders and other senior military and elected leaders.”¹⁹

Best known for special air missions, the facility provides transportation for senior government and military leaders, as well as “kings, queens, presidents, prime ministers, popes, and local and foreign military leaders.”²⁰ Recent events creating publicity for the facility include “the annual Joint Service Open House aerial and ground demonstrations, and the reception of Pope Benedict XVI by President Bush.”²¹ 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.²²

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 Base 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 ²³	\$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.²⁴ Figure 6 represents the

¹⁹ Joint Base Andrews, “Units.”

²⁰ Joint Base Andrews, “Joint Base Andrews History.”

²¹ Ibid.

²² Military-Hotels.us, “Joint Base Andrews, Maryland—Hotels, Lodging, Inns.”

²³ Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

²⁴ 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, and 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’s military facilities support a total of 26,955 jobs in FY 2013, an increase of more than 14,000 workers compared to FY 2008.²⁵ In addition, Joint Base Andrews military facility 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, located in Harford County, Maryland, was established in 1917 to assist the United States Army in testing material. In the meantime, Edgewood Arsenal was established to provide a facility for the “development, production, and testing of chemical warfare material.”²⁶ Roughly 50 years later, in 1971, the two military installations joined together as Aberdeen Proving Ground.

APG is comprised of 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.”²⁷ In addition, APG supports a spectrum of training programs from chemical and biological defense to health promotion and preventive

²⁵ 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.

²⁶ U.S. Army, Aberdeen Proving Ground, "APG Facts," accessed September 27, 2013, <http://www.apg.army.mil/facts.cfm>.

²⁷ Ibid.

medicine. The military installation is “home to 11 major commands and supports more than 70 tenants, 20 satellite and 17 private activities.”²⁸ 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;
- “17 million square feet of building space in more than 2,000 buildings (including offices, administrative and training facilities, and warehouses, barracks and family hosting);”²⁹
- Five human engineering laboratories, a material research laboratory and a Phillips Army Airfield and Weide Army Aviation Support Facility;
- Eight medical research laboratories, ten chemical laboratories, and two physics laboratories.

In July 2013, APG opened an 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.³⁰ Several officials from Harford, Baltimore, and Cecil Counties have been invited to participate in the opening of the STEM outreach center.

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);

²⁸ US Army, Aberdeen Proving Ground, "APG Facts..

²⁹ Ibid.

³⁰ 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 Medical Research Institute of Chemical Defense (MRICD); and
- U.S. Army Chemical Materials Agency (CMA).³¹

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 ³²
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 ³³	\$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.

³¹ Waldman, "Aberdeen Proving Ground Open STEM Center."

³² Total employment included the 1,223 traditional Guardsmen and does not include embedded

³³ 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	15,584	15,218	46,583
Output	\$1,622,488,066	\$2,268,908,762	\$2,312,340,293	\$6,203,737,121
Wages	\$1,134,968,235	\$962,959,064	\$975,131,182	\$3,073,058,480

Sources: RESI, IMPLAN

As shown in Figure 8, the employees associated with APG’s military facilities support a total of 46,583 jobs in FY 2012, an increase of nearly 17,600 workers compared to FY 2008. In addition, APG military facility supports a total of \$6.2 billion in output and approximately \$3.1 billion in wages on an annual basis. The total output increased by roughly \$1.9 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, located in Frederick, Maryland, is “home to U.S. Army Medical Research and Materiel Command, Army Medical research Institute of Infectious Diseases and the National Cancer Institute” and is the largest employer in Frederick County.³⁴ Fort Detrick “leads the way through innovation and business development, endeavoring to provide a positive influence on the local community and state.”³⁵

Originally named Detrick Field in 1931, the airfield previously operated as an emergency airfield route and served as a Cadet Pilot Training Center.³⁶ However, in 1943 Detrick Field “ceased operations as an aviation center” and was renamed Camp Detrick.³⁷ With newly purchased additional land, the facility became “the site of the US Army Biological Warfare Laboratories (USBWL).”³⁸ Between 1943 and 1945, the facility performed exhaustive biological warfare research, during which it “underwent an additional \$3 million in facilities construction and

³⁴ Military.com, “Fort Detrick,” accessed October 1, 2013, <http://www.military.com/base-guide/fort-detrick>.

³⁵ Department of Defense, “Fort Detrick,” accessed October 1, 2013, <http://www.detrick.army.mil/usag/about.cfm>.

³⁶ Fort Detrick Alliance, “History of Fort Detrick,” accessed October 1, 2013, <http://www.fortdetrickalliance.org/about/history>.

³⁷ Ibid.

³⁸ Ibid.

reached a population of 240 officers and 1,530 enlisted personnel.”³⁹ Additional acreage was purchased in 1946 and 1952. In 1956, the facility was renamed to the current Fort Detrick and reached its current acreage of 1,200 acres in 1962.⁴⁰

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).⁴¹

As part of the 2005 Base Realignment and Closure (BRAC) measures, Fort Detrick assumed control of the Forest Glen Annex installation located in Silver Spring, Maryland.⁴² 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.⁴³ The installation, which employs over 2,000 workers, consists of large research laboratories and “supports Army and Navy medical research units.”⁴⁴

The approximately 7,800 military, federal, and contractor employees assigned at Fort Detrick represent each branch of the U.S. military.⁴⁵ Included in Fort Detrick’s DOD support are the “U. S. Navy, U. S. Marine Corps, U. S. Air Force and the Joint Chiefs of Staff.”⁴⁶ Additionally, Fort Detrick supports several Unified and Major Army Commands.⁴⁷

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, the Fort Detrick and Walter Reed—Forest Glenn Annex installations had separate submissions. Therefore, RESI combined both 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.

³⁹ Fort Detrick Alliance, “History of Fort Detrick.”

⁴⁰ Ibid.

⁴¹ Rob Powers, “Fort Detrick,” About.com, 1, accessed October 1, 2013, <http://usmilitary.about.com/od/armybaseprofiles/ss/detrick.htm>.

⁴² Fort Detrick Alliance, “History of Fort Detrick.”

⁴³ DC Military.com, “Welcome-Forest Glen Annex,” accessed October 1, 2013, http://ww2.dcmilitary.com/special_sections/sw/090110Ft_Detrick/ss_141149_31955.shtml.

⁴⁴ Ibid.

⁴⁵ Powers, “Fort Detrick,” 3.

⁴⁶ Ibid, 1.

⁴⁷ 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 ⁴⁸	\$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, and visitor spending and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

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				
Employment	7,566	15,844 ⁴⁹	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

⁴⁸ Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

⁴⁹ Indirect employment includes the embedded contractor jobs located at Fort Detrick.

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 can be found nestled between Annapolis, Baltimore, and Washington, D.C.⁵⁰ Fort Meade is the largest employer in Maryland and is the “third-largest workforce of any Army installation in the U.S.”⁵¹ The facility houses roughly 40,000 persons, many of which (29,000) are civilian employees; the remaining 11,000 are military personnel.⁵² In addition to employees, there are nearly 6,000 family members in residence at the facility.⁵³

The primary goal of the facility is to “provide a wide range of services to 95 partner organizations from the Army, Navy, Air Force, Marines and Coast Guard, as well as to several federal agencies including the National Security Agency, the U.S. Army Recruiting Command, the Defense Information School, the Defense Courier Service, the U.S. Army Field Band and most recently the U.S. Cyber Command.”⁵⁴ It was at Fort Meade that the “Star Spangled Banner” officially became the “music for the military retreat ceremony.”⁵⁵

Established in the late 1800s, Fort Meade originally housed units of the 1st and 11th infantry, as well as the 7th Cavalry.⁵⁶ The 7th Cavalry “constituted the first permanent garrison of the post.”⁵⁷ It was the responsibility of the facility “to provide military protection against the resentful Sioux for the gold seekers and settlers who had invaded the region both before and

⁵⁰ Military.com, “Fort George G. Meade,” accessed October 16, 2013, <http://www.military.com/base-guide/fort-george-g-meade>.

⁵¹ U.S. Army, “About Fort Meade,” August 15, 2013, accessed October 16, 2013, <http://www.ftmeade.army.mil/pages/about/about2.html>.

⁵² Ibid.

⁵³ Ibid.

⁵⁴ Military.com, “Fort George G. Meade.”

⁵⁵ The Old Fort Meade Museum, “About,” 2011, accessed October 16, 2013, <http://fortmeademuseum.org/fmm/about-2/>.

⁵⁶ The Old Fort Meade Museum, “About.”

⁵⁷ Ibid.

after the Black Hills Treaty of 1877.”⁵⁸ Due to its location, “at the mouth of the natural gap in the hogback ridge forming the outer rim of the Black Hills, on the main Indian trail to the favorite hunting grounds of the Sioux, and near the confluence of the heavily-traveled Bismarck, Fort Pierre and Sidney trails of the pioneers,” Fort Meade was able to aid in maintaining peace.⁵⁹

Today, Fort Meade houses the National Security Agency (NSA). Since 1986, the NSA has been “housed in two high-rise office structures,” as well as other locations at Fort Meade—both on the grounds and underground.⁶⁰ At more than 20,000 employees the NSA is one of the largest employers in Maryland, and the largest in Howard County.⁶¹ The NSA “collects, processes, and disseminates intelligence information from foreign electronic signals for national foreign intelligence and counterintelligence purposes and to support military operations,” while also being “tasked with preventing foreign adversaries from gaining access to classified national security information.”⁶²

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.

⁵⁸ The Old Fort Meade Museum, “About.”

⁵⁹ Ibid.

⁶⁰ The Center for Land Use Interpretation, “National Security Agency (NSA) Headquarters,” accessed October 16, 2013, <http://clui.org/ludb/site/national-security-agency-nsa-headquarters>.

⁶¹ Ibid.

⁶² National Security Agency, “Frequently Asked Questions,” 2009, accessed October 16, 2013, <http://www.nsa.gov/about/faqs/index.shtml>.

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 ⁶³	\$2,633,300,000	\$7,490,105,509
Visitor Spending	n/a	\$1,719,289

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, and visitor spending and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

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	54,940	24,709	144,377
Output	\$9,351,490,819	\$9,683,446,773	\$3,306,930,333	\$22,341,867,925
Wages	\$6,371,999,159	\$4,068,610,109	\$1,098,016,018	\$11,538,625,286

Sources: RESI, IMPLAN

As shown in Figure 12, the employees associated with Fort George G. Meade's military facilities support a total of 144,377 jobs in FY 2012, an increase of nearly 19,000 workers compared to FY 2008. In addition, Fort George G. Meade military facility supports a total of more than \$22.3 billion in output and approximately \$11.5 billion in wages on an annual basis. The total output increased by roughly \$4.5 billion between FY 2008 and FY 2012.

⁶³ 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.

7.0 National Maritime Intelligence Center

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).⁶⁴ NMIO provides collaborations between DOD and non-DOD agencies. According to its website, the agency has the following duties:

A national-level, cross-departmental mission to facilitate the proactive integration of intelligence within the maritime domain provides direct support to the National Security Staff and facilitates information sharing and collaboration across the Global Maritime Community of Interest.⁶⁵

NMIO provides many services, which include the following:

- “Coordinating nationally unified maritime intelligence through a Maritime Intelligence Council;”
- “Developing and building participation in a Single Integrated Look-Out (SILO) list for vessels of domestic and international interest; and,”
- “Joint development with the U.S. Maritime Administration (MARAD) of a Maritime Domain Awareness (MDA) Information Portal.”⁶⁶

National Maritime Intelligence 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.

⁶⁴ National Maritime Intelligence, “National Office for Maritime Intelligence Integration Announces New Name to Better Reflect Mission,” January 23, 2012, accessed January 13, 2013, <http://www.fas.org/irp/news/2012/01/nmio.pdf>.

⁶⁵ National Maritime Intelligence. “Maryland Federal Facility Profile,” accessed January 13, 2013, <http://business.maryland.gov/factsstats/Documents/Military%20Facilities/NMIC.pdf>

⁶⁶ Ibid.

Figure 13: National Maritime Intelligence 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 ⁶⁷	\$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.

Figure 14: Economic Impacts of National Maritime Intelligence 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	611	1,566	4,066
Output	\$578,370,032	\$77,219,907	\$205,070,407	\$860,660,346
Wages	\$199,234,967	\$76,576,738	\$62,392,754	\$338,204,459

Sources: RESI, IMPLAN

As shown in Figure 14, the employees associated with NMIO's military facilities support a total of 4,066 jobs in FY 2012, an increase of 723 workers compared to FY 2008. In addition, the NMIO military facility supports a total of nearly \$860.7 million in output and approximately \$338.2 million in wages. The total output increased by roughly \$457.8 million between FY 2008 and FY 2012.

⁶⁷ 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.

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 Bethesda (NSAB) began.⁶⁸ This restructuring was implemented with the intention “to reduce duplication of efforts and facilities requirements.”⁶⁹ 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 (WRNMM).⁷⁰

Located north of the Nation’s Capital, in Montgomery County, NSAB serves 12,000 employees, compiled of military personnel and civilians.⁷¹ NSAB 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
- Warrior Transition Brigade.^{72 73}

WRNMM, the first continental United States destination for individuals who return wounded, 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.”⁷⁴ The consolidated WRNMM provides a combined the 170 years of experience.⁷⁵

⁶⁸ Naval Support Activity Bethesda Home of Walter Reed National Military Medical Center, Maryland, “Installation Overview,” 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,30.90.30.30.0.0.0.0.

⁶⁹ Ibid.

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² Ibid.

⁷³ Naval Support Activity Bethesda Home of Walter Reed National Military Medical Center, Maryland, “Major Units,” Military Installations, February 25, 2014, accessed March 5, 2014, http://www.militaryinstallations.dod.mil/MOS/f?p=MI:CONTENT:0:::P4_INST_ID,P4_TAB:20295,MU.

⁷⁴ Walter Reed National Military Medical Center, “Welcome to the Nation’s Medical Center,” accessed March 5, 2014, <http://www.wrnmmc.capmed.mil/SitePages/home.aspx>.

⁷⁵ Ibid.

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, Naval Support Activity 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 ⁷⁶	\$69,600,000	\$93,262,802
Visitor Spending	n/a	\$28,600,000

Sources: DBED, Naval Support Activity Bethesda

Naval Support Activity 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 Naval Support Activity Bethesda'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.

⁷⁶ Purchases do not include commissary and exchange sales, or lodgings in the total to avoid double counting. NSAB 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 Naval Support Activity 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, Naval Support Activity 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 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).⁷⁷ The station consists of 935 separate buildings, a total of nearly 8.8 million square feet of facilities, 10 hangars, and 5 runways.⁷⁸

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.⁷⁹ The complex includes the "main station in Lexington Park, Webster Outlying Field in St. Inigoes, Naval Recreation Center Solomons in Calvert County, and Bloodsworth Island Range in the Chesapeake Bay."⁸⁰

⁷⁷ Military.com, "Naval Air Station Patuxent River," accessed October 4, 2013, <http://www.military.com/base-guide/naval-air-station-patuxent-river>.

⁷⁸ U.S. Navy, "Naval Air Systems Command," accessed October 4, 2013, <http://www.navair.navy.mil/index.cfm?fuseaction=home.display&key=2A3E4419-AEA4-48CA-AA0D-CA82FA4283D6>.

⁷⁹ CNIC, "Naval Air Station Patuxent River," accessed October 4, 2013, http://www.cnic.navy.mil/regions/ndw/installations/nas_patuxent_river.html.

⁸⁰ 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.⁸¹ 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.⁸²

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.”⁸³ The acquisition support for air combat systems offered at NAS Patuxent River is a unique service within the DOD.⁸⁴

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.⁸⁵

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 \$1,006.0 million as employment grew. Total in-state purchases decreased between FY 2008 to FY 2012 by \$32.6 million.

⁸¹ CNIC, “Naval Air Station Patuxent River,” accessed October 4, 2013, http://www.cnic.navy.mil/regions/ndw/installations/nas_patuxent_river.html.

⁸² U.S. Navy, “Naval Air Systems Command.”

⁸³ CNIC, “Naval Air Station Patuxent River.”

⁸⁴ U.S. Navy, “Naval Air Systems Command.”

⁸⁵ 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	\$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 ⁸⁶	\$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 Naval Air Station Patuxent River'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 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 ⁸⁷	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 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.

⁸⁶ Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

⁸⁷ Indirect employment includes the embedded contractors located at Naval Air Station Patuxent River.

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

10.0 Curtis Bay Coast Guard Yard

Encompassing 113 acres, Curtis Bay Coast Guard Yard (the Yard) is located across Anne Arundel County and Baltimore City.⁸⁸ 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.”⁸⁹ The existing waterfront, completed in the 1940s, consists of three piers and two floating dry docks.⁹⁰

The Yard was established in 1899 as a training academy and boat repair station.⁹¹ Over the next several decades, the Yard added shipbuilding to its services, peaking during World War II.⁹² At this time, the Yard employed more than 3,000 workers.⁹³ Operations lessened after the end of World War II, and continued to be scaled down through the 1990s.⁹⁴ Today, the Yard “operates as a revolving fund activity with annual revenue of approximately \$100 million.”⁹⁵

Curtis Bay 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.

⁸⁸ Coast Guard Yard Curtis Bay, “National Priorities List,” accessed June 12, 2014, http://www.mde.state.md.us/assets/document/brownfields/Coast_Guard_Curtis_Bay.pdf.

⁸⁹ U.S. Coast Guard, “U.S. Coast Guard Yard,” accessed June 12, 2014, <http://www.uscg.mil/yard/>.

⁹⁰ Coast Guard Yard Curtis Bay, “National Priorities List.”

⁹¹ Ibid.

⁹² Ibid.

⁹³ U.S. Environmental Protection Agency, “Curtis Bay Coast Guard Yard,” accessed June 12, 2014, <http://www.epa.gov/reg3hscd/npl/MD4690307844.htm>.

⁹⁴ Coast Guard Yard Curtis Bay, “National Priorities List.”

⁹⁵ U.S. Coast Guard, “U.S. Coast Guard Yard.”

Figure 19: Curtis Bay 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 ⁹⁶	\$19,100,000	\$34,662,596
Visitor Spending	\$300,000	\$900,000

Sources: DBED, Curtis Bay 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, and 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 Curtis Bay 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	280	1,096	3,067
Output	\$169,287,260	\$44,152,005	\$85,505,519	\$298,944,783
Wages	\$103,421,493	\$16,242,038	\$27,744,652	\$147,408,183

Sources: RESI, IMPLAN

As shown in Figure 20, the employees associated with the Yard's military facilities supported a total of 3,067 jobs in FY 2012, an increase of more than 670 workers compared to FY 2008. In addition, the Yard military facility 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.

⁹⁶ 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.⁹⁷ 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 7,000.⁹⁸

The Maryland National Guard has several installations throughout the state, including 44 sites, more than 5,000 acres of land, and 324 buildings. The installations include:

- 37 readiness centers,
- One airbase,
- Three Army aviation facilities,
- Four military training reservations, and
- Nine surface equipment maintenance facilities.⁹⁹

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.”¹⁰⁰ Additionally, personnel can be employed to assist with major emergencies (both local and out of state), and provide general support to the Military Department.¹⁰¹ To support homeland readiness, the Maryland National Guard provides ten core capabilities:

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

⁹⁷ Maryland National Guard, “History,” accessed June 12, 2014, <http://www.md.ngb.army.mil/absolutenm/templates/?a=732&z=38>.

⁹⁸ Maryland Military Department, “2013 Annual Report,” accessed June 12, 2014, 7, http://www.md.ngb.army.mil/absolutenm/articlefiles/1154-2013_Annual_Report.pdf.

⁹⁹ Ibid, 9.

¹⁰⁰ Maryland National Guard, “State Mission,” accessed June 12, 2014, <http://www.md.ngb.army.mil/absolutenm/templates/?a=730&z=38>.

¹⁰¹ Ibid.

- Maintenance.”¹⁰²

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) ¹⁰³	7,197	7,061
Purchases	\$115,200,000	\$301,850,000
Visitor Spending	n/a	n/a
In-State ¹⁰⁴		
Payroll	\$163,000,000	n/a
Employment (# of jobs)	7,053	n/a
Purchases ¹⁰⁵	\$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, and visitor spending and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

¹⁰² Maryland Military Department, “2013 Annual Report,” 5.

¹⁰³ Both 2008 and 2012 include approximately 5,000 Reserve members who are likely to have other full or part-time employment.

¹⁰⁴ The Maryland National Guard did not provide detailed data on Maryland employment or payrolls.

¹⁰⁵ 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 ¹⁰⁶	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 military facility 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

With operations beginning in the early 1920s, the Naval Research Laboratory (NRL) is considered to be the “first modern research institution created within the U.S. Navy.” While plans for the facility began in 1916, construction was delayed until 1920 due to war-related delays.¹⁰⁷ Since 1992, NRL has been operating in its current form, following the consolidation of “existing R&D facilities to form a single corporate laboratory.”¹⁰⁸ It is the mission of NRL to “conduct a broadly based multidisciplinary program of scientific research and advanced technological development directed toward maritime applications of new and improved materials, techniques, equipment, systems, and ocean, atmospheric, and space sciences and related technologies.”¹⁰⁹

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,

¹⁰⁶ 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.

¹⁰⁷ U.S. Naval Research Lab, “History,” accessed June 12, 2014, <http://www.nrl.navy.mil/about-nrl/history/>.

¹⁰⁸ Naval Research Laboratory, “Chesapeake Bay Detachment Facility Profile,” accessed June 12, 2014, 1, <http://choosemaryland.org/factsstats/Documents/Military%20Facilities/NRLChesapeake.pdf>.

¹⁰⁹ Naval Research Laboratory, “NRL Fact Book 2012,” accessed June 12, 2014, 6, http://www.nrl.navy.mil/content_images/factbook.pdf

optical devices, materials, communications, and fire research.”¹¹⁰ 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.¹¹¹ 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 Safety and Survivability, which conducts fire research on simulated carrier, surface and submarine platforms.”¹¹²

Naval Research Lab—Chesapeake Bay—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 Facility Spending

Facility Spending	FY 2008	FY 2012
Total		
Payroll	\$800,000	\$1,563,200
Employment (# of jobs) ¹¹³	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 ¹¹⁴	\$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

¹¹⁰ Naval Research Laboratory, “Chesapeake Bay Detachment Facility Profile,” 1, accessed June 12, 2014. <http://choosemaryland.org/factsstats/Documents/Military%20Facilities/NRLChesapeake.pdf>.

¹¹¹ Ibid.

¹¹² Ibid.

¹¹³ Not including badged contractors.

¹¹⁴ Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

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

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 facilities 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 military facility 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.¹¹⁵ This facility provides operating support to “the United States Naval Academy, North Severn complex, Chesapeake Bay Detachment in Randle Cliff, MD, and Navy Operational Support Center in Baltimore, MD.”¹¹⁶ Also falling under NSA Annapolis are the following:

- “Military housing and Bachelor Enlisted Quarters,
- The Fleet and Family Support Center, and
- The Navy Exchange and the Commissary.”¹¹⁷

Naval support has been provided to midshipmen since 1851; 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.”¹¹⁸ In 2006, NSA Annapolis was established, streamlining

¹¹⁵ Commander, Navy Installations Command, “Installation Information,” accessed March 5, 2014, http://www.cnic.navy.mil/regions/ndw/installations/nsa_annapolis.html.

¹¹⁶ Ibid.

¹¹⁷ Commander, Navy Installation Command, “History,” accessed March 5, 2014, http://www.cnic.navy.mil/regions/ndw/installations/nsa_annapolis/about/history.html.

¹¹⁸ 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.”¹¹⁹ The facility provides a variety of services, such as the following:

- “Underway seamanship and sail training,
- Small arms weapons familiarization, and
- Navigation and engineering professional development for Midshipmen.”¹²⁰

Naval Support Activity (NSA) 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 ¹²¹	\$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, and visitor spending and operating expenditures. Please note subtotals in each figure may not add up to the total impacts due to rounding.

¹¹⁹ Commander, Navy Installation Command, “History.”

¹²⁰ Ibid.

¹²¹ 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 NSA 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 military facility 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 Support Warfare Center—Carderock

With headquarters in Bethesda, Maryland, the Carderock Division of the Naval Surface Warfare Center (NSWC) consists of nearly 4,000 “scientists, engineers and support personnel” and encompasses approximately 40 disciplines—such as fundamental science and applied engineering.¹²² Since its formation, at the turn of the century, the Carderock division “has earned a distinguished reputation as the birthplace of superior naval technology.”¹²³ The division is thought of as the “forefront of technologies vital to the success of the U.S. Navy and Maritime Industry.”¹²⁴ Helping to preserve and enhance the nation’s sea presence, Carderock is the “Navy’s center of excellence for ships and ship systems.”¹²⁵

It is the mission of this division to “provide: research, development, test and evaluation, fleet support, and in-service engineering for surface and undersea vehicle hull, mechanical, and

¹²² Federal Laboratory Consortium, “Naval Surface Warfare Center - Carderock Division,” accessed February 6, 2015, <http://www.federallabs.org/labs/profile/?id=1373>.

¹²³ NAVSEA, “NSWC Carderock Division,” accessed February 6, 2015, <http://www.navsea.navy.mil/nswc/carderock/default.aspx>.

¹²⁴ Ibid.

¹²⁵ Ibid.

electrical (HM&E) systems and propulsors; logistics research and development; and support to the Maritime Administration and maritime industry.”¹²⁶ The facility specializes in:

- “Ship Design & Integration,
- Environmental Quality Systems,
- Hull Forms & Propulsors,
- Structures and Materials,
- Signatures, Silencing Systems, and Susceptibility,
- Machinery Systems, and
- Vulnerability and Survivability Systems.”¹²⁷

Through Work for Private Agreement, as well as Cooperative Research and Development Agreements (CRADA), the facilities at Carderock are available for use by both government and private sectors entities outside of the United States Navy.¹²⁸

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: NSWC—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 ¹²⁹	\$61,400,000	\$112,081,400
Visitor Spending	n/a	\$1,144,000

Sources: DBED, NSWC—Carderock Division

¹²⁶ Federal Laboratory Consortium, “Naval Surface Warfare Center - Carderock Division.”.

¹²⁷ NAVSEA, “NSWC Carderock Division.

¹²⁸ Ibid.

¹²⁹ 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 NSWC—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	363	2,815
Output	\$236,081,475	\$148,707,553	\$51,237,725	\$436,026,754
Wages	\$173,999,996	\$60,523,919	\$16,573,443	\$251,097,358

Sources: RESI, IMPLAN

As shown in Figure 28, the employees associated with NSWC—Carderock Division’s military facilities support a total of 2,815 jobs in FY 2012, a decrease of 267 workers compared to FY 2008. In addition, NSWC—Carderock Division military facility supports a total of more than \$436.0 million in output and approximately \$251.1 million in wages on an annual basis. The total output increased by roughly \$91.7 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 Warfare Center—Indian Head

The Naval Surface Warfare Center, Indian Head Explosive Ordnance Technology Division (NSWC IHEODTD) is one of nine divisions that compile the Naval Sea System Command Warfare Center Enterprise.¹³⁰ The main site, located in Southern Maryland and covering 3,500 acres along the Potomac River, is housed at the Naval Support Facility Indian Head.¹³¹ 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.¹³² With more than 800 engineers and scientists, Indian Head

¹³⁰ Naval Surface Warfare Center, Indian Head Explosive Ordnance Disposal Technology Division, “Mission,” accessed March 5, 2014,

<http://www.federallabs.org/labs/profile/?State=141&RegionOrState=State&Agency=46&id=1376>.

¹³¹ Ibid.

¹³² Ibid.

contains the largest workforce of chemical engineers dedicated to energetics and EOD working within the Federal government.^{133 134}

It is Indian Head’s mission is 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.”¹³⁵ The installation’s areas of expertise include research and development, testing and evaluation, and also include systems engineering and integration.¹³⁶ Indian Head plays a unique role in the chemical synthesis of energetic materials; as well as the development and processing of propellant and explosives.¹³⁷

NSWC—Indian Head Division—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, NSWC—Indian Head Division 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: NSWC—Indian Head Division 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 ¹³⁸	\$95,900,000	\$24,757,824
Visitor Spending	n/a	n/a

Sources: DBED, NSWC—Indian Head Division

NSWC—Indian Head Division’s FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland’s Military Installation* study. Figure 30

¹³³ Naval Surface Warfare Center, Indian Head Explosive Ordnance Disposal Technology Division, “Mission.”

¹³⁴ Ibid.

¹³⁵ Ibid.

¹³⁶ Ibid.

¹³⁷ Federal Laboratory Consortium, “Naval Surface Warfare Center – Indian Head Division,” accessed March 5, 2014, <http://www.federallabs.org/labs/profile/?State=141&RegionOrState=State&Agency=46&id=1376>.

¹³⁸ Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

represents the separate economic impacts of NSWC—Indian Head 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 30: Economic Impacts of NSWC—Indian Head Division

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 NSWC—Indian Head Division’s military facilities support a total of 4,951 jobs in FY 2012, a decrease of more than 200 workers compared to FY 2008. In addition, NSWC—Indian Head Division 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 Army Research Laboratory—Adelphi

The ARL, headquartered at the Adelphi Laboratory Center (ALC) in Adelphi, Maryland, is the corporate research laboratory of the United States Army.¹³⁹ In 1992, ARL came into existence following “the Base Realignment and Closure (BRAC) process, the LAB 21 study, and other evaluations” to “form a centralized laboratory concentrating on scientific research, technology development, and analysis.”¹⁴⁰ There are ten directorates of the ARL—five of which are housed at Aberdeen Proving Ground:

- Previous Army Ballistic Research Laboratory components include
 - The Advanced Computational and Informational Sciences Directorate,
 - The Weapons Technology Directorate, and
 - The Survivability/Lethality Analysis Directorate;

¹³⁹ Federal Laboratory Consortium for Technology Transfer, “Aberdeen Proving Grounds Site,” accessed June 12, 2014, <http://www.federallabs.org/labs/profile/?State=141&RegionOrState=State&Agency=44&id=1311>.

¹⁴⁰ U.S. Army Research Laboratory, “ARL History,” accessed June 12, 2014, <http://www.arl.army.mil/www/default.cfm?page=516>.

- The Human Research and Engineering Directorate (previously the Human Engineering Laboratory); and
- The Materials Directorate (created from the Materials Testing Laboratory).¹⁴¹

It is ARL’s mission to “provide professional acquisition support to the Army Research Laboratory’s mission to execute fundamental and applied research to provide the Army the technologies and analytical support necessary to assure supremacy in future land warfare.”¹⁴² As well as to, “provide the underpinning science, technology, and analysis that enable full-spectrum operations.”¹⁴³ Furthermore, the ARL’s mission is to “empower, unburden and protect the Warfighter to enable the dominance of the Army.”¹⁴⁴

ARL encompasses a variety of science and technology fields including but not limited to the following:

- Extramural basic research,
- Mobility and logistics,
- Human dimension,
- Networks,
- Lethality,
- Sensors,
- Power and energy, and
- Simulation & training technology.¹⁴⁵

U.S. Army Research Laboratory—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, U.S. Army Research Laboratory 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.

¹⁴¹ Federal Laboratory Consortium for Technology Transfer, “Aberdeen Proving Grounds Site.”

¹⁴² Ibid.

¹⁴³ U.S. Army Research Laboratory, “Home,” accessed June 12, 2014, <http://www.arl.army.mil/www/default.cfm>.

¹⁴⁴ U.S. Army Research Laboratory, “2012 Annual Review,” accessed June 12, 2014, 3, http://www.arl.army.mil/www/pages/172/docs/2012_annual_review.pdf.

¹⁴⁵ U.S. Army Research Laboratory, “ARL Sciences & Technology,” accessed June 12, 2014, <http://www.arl.army.mil/www/default.cfm?page=18>.

Figure 31: U.S. Army Research Laboratory 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-State¹⁴⁶		
Payroll	\$89,200,000	n/a
Employment (# of jobs)	807	n/a
Purchases ¹⁴⁷	\$82,300,000	\$90,211,820
Visitor Spending	\$4,200,000	\$879,379

Sources: DBED, U.S. Army Research Laboratory

U.S. Army Research Laboratory'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 U.S. Army Research Laboratory'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 32: Economic Impacts of U.S. Army Research Laboratory

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	717	1,279	3,230
Output	\$122,495,301	\$92,854,261	\$84,506,966	\$299,856,527
Wages	\$88,415,433	\$44,885,359	\$28,352,198	\$161,652,989

Sources: RESI, IMPLAN

As shown in Figure 32, the employees associated with U.S. Army Research Laboratory's military facilities support a total of 3,230 jobs in FY 2012, an increase of approximately 400 workers compared to FY 2008. In addition, U.S. Army Research Laboratory military facility supports a total of nearly \$299.9 million in output and approximately \$161.7 million in wages on an annual basis. The total output decreased by roughly \$111.4 million between FY 2008 and FY 2012.

¹⁴⁶ The U.S. Army Research Laboratory did not provide state-level employment and payroll information.

¹⁴⁷ 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.

17.0 Army Corps of Engineers—Baltimore

The Baltimore District of the U.S. Army Corps of Engineers’ provides environmental engineering solutions to the engineering challenges of their corporate customers.¹⁴⁸ In total, the Baltimore District is composed of ten area offices—located throughout Maryland, Pennsylvania, Virginia, and West Virginia.¹⁴⁹ Baltimore City houses the District’s headquarters, which is led by Colonel J. Richard Jordan III (District Engineer) and Lieutenant Colonel Brad W. Endres (Deputy District Engineer).¹⁵⁰

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.¹⁵¹ Today, employees of the Baltimore District provide a variety of expertise—such as design, construction, engineering, and environmental, to name a few.¹⁵²

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.¹⁵³

The Baltimore District additionally oversees operations abroad, “leases and supports more than 300 Armed Forces recruiting stations and 180 housing units,” and works with several agencies outside of the DOD.¹⁵⁴

¹⁴⁸ U.S. Army Corps of Engineers. “Mission and Vision,” accessed March 5, 2014, <http://www.nab.usace.army.mil/About/MissionandVision.aspx>.

¹⁴⁹ U.S. Army Corps of Engineers. “Baltimore District Office Locations,” accessed March 5, 2014, <http://www.nab.usace.army.mil/Locations/AreaOfficeLocations.aspx>.

¹⁵⁰ U.S. Army Corps of Engineers. “Leadership,” accessed March 5, 2014, <http://www.nab.usace.army.mil/About/Leadership.aspx>.

¹⁵¹ U.S. Army Corps of Engineers. “History of the Baltimore District,” accessed March 5, 2014, <http://www.nab.usace.army.mil/About/History.aspx>.

¹⁵² Ibid.

¹⁵³ U.S. Army Corps of Engineers. “Baltimore District Quick Facts,” accessed March 5, 2014, <http://www.nab.usace.army.mil/About.aspx>.

¹⁵⁴ Ibid.

U.S. Army Corps of Engineers–Baltimore —Facility Spending

The installation 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, U.S. Army Corps of Engineers–Baltimore 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: U.S. Army Corps of Engineers–Baltimore 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 ¹⁵⁵	n/a	\$234,794,145
Visitor Spending	n/a	n/a

Sources: DBED, .S. Army Corps of Engineers–Baltimore

U.S. Army Corps of Engineers–Baltimore’s FY 2008 data were provided by DBED in the 2008 *Mission Maryland: Measuring Economic Impact of Maryland’s Military Installation* study. Figure 34 represents the separate economic impacts of U.S. Army Corps of Engineers–Baltimore’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.

¹⁵⁵ Purchases do not include medical health services, commissary and exchange sales, or lodgings in the total to avoid double counting.

Figure 34: Economic Impacts of U.S. Army Corps of Engineers–Baltimore

Impact	Direct	Indirect	Induced	Total
FY 2008				
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	729	3,861
Output	\$134,601,206	\$314,548,013	\$99,800,299	\$548,949,518
Wages	\$98,262,094	\$118,041,408	\$32,374,946	\$248,678,448

Sources: RESI, IMPLAN

As shown in Figure 34, the employees associated with U.S. Army Corps of Engineers–Baltimore’s military facilities support a total of 3,861 jobs in FY 2012, an increase of 2,354 workers compared to FY 2008. In addition, U.S. Army Corps of Engineers–Baltimore military facility supports a total of nearly \$548.9 million in output and approximately \$248.7 million in wages on an annual basis. The total output increased by roughly \$470.3 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 350,411 jobs, generates \$51.8 billion in total output and \$23.9 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. The Naval Research Lab—Chesapeake Bay had the smallest overall impacts. Overall, many of the installations saw an increase in impacts between 2008 and 2012, most notably Fort Detrick and the Army Corps of Engineers. Both Fort Detrick and the Army Corps of Engineers saw vastly increased in-state spending, resulting in higher impacts. Conversely, several installations exhibited a decline in impacts. However, the declines were slight in comparison to the increases seen.

19.0 References

- Bureau of Economic Analysis. "Gross domestic product (GDP) by state (millions of current dollars)." Accessed May 7, 2015. <http://www.bea.gov/>.
- Coast Guard Yard Curtis Bay. "National Priorities List." Accessed June 12, 2014. http://www.mde.state.md.us/assets/document/brownfields/Coast_Guard_Curtis_Bay.pdf.
- Commander, Navy Installations Command. "Installation Information." Accessed March 5, 2014. http://www.cnic.navy.mil/regions/ndw/installations/nsa_annapolis.html.
- Commander, Navy Installation Command. "History." Accessed March 5, 2014. http://www.cnic.navy.mil/regions/ndw/installations/nsa_annapolis/about/history.html.
- CNIC. "Naval Air Station Patuxent River." Accessed October 4, 2013. http://www.cnic.navy.mil/regions/ndw/installations/nas_patuxent_river.html.
- DC Military.com. "Welcome-Forest Glen Annex." Accessed October 1, 2013. http://ww2.dcmilitary.com/special_sections/sw/090110Ft_Detrick/ss_141149_31955.shtml.
- Department of Defense. "Fort Detrick." Accessed October 1, 2013. <http://www.detrick.army.mil/usag/about.cfm>.
- Federal Laboratory Consortium. "Naval Surface Warfare Center - Carderock Division." Accessed February 6, 2015. <http://www.federallabs.org/labs/profile/?id=1373>.
- Federal Laboratory Consortium. "Naval Surface Warfare Center – Indian Head Division." Accessed March 5, 2014. <http://www.federallabs.org/labs/profile/?State=141&RegionOrState=State&Agency=46&id=1376>.
- Federal Laboratory Consortium for Technology Transfer. "Aberdeen Proving Grounds Site— Laboratory Information." Accessed June 12, 2014. <http://www.federallabs.org/labs/profile/?State=141&RegionOrState=State&Agency=44&id=1311>.
- Fort Detrick Alliance. "History of Fort Detrick." Accessed October 1, 2013. <http://www.fortdetrickalliance.org/about/history>.

- Jacob France Institute of the Merrick School of Business at the University of Baltimore. "Mission Maryland: Measuring Economic Impact of Maryland's Military Installations." Maryland Department of Business and Economic Development and Maryland Department of Labor, Licensing and Regulation. Accessed September 6, 2013.
<http://www.choosemaryland.org/moveyourbusiness/Documents/B2G%20Docs/missionMd.pdf>.
- Joint Base Andrews. "Joint Base Andrews History." September 21, 2012. Accessed October 9, 2013. <http://www.andrews.af.mil/library/factsheets/factsheet.asp?id=4479>.
- Joint Base Andrews. "Units." Accessed October 9, 2013.
<http://www.andrews.af.mil/units/index.asp>.
- Maguire Company, the, and ESI Corporation. "Economic Impact of Arizona's Principal Military Operation," Arizona Department of Commerce. Accessed September 6, 2013.
<http://www.dm.af.mil/shared/media/document/AFD-110822-041.pdf>.
- Maryland Military Department. "2013 Annual Report." Accessed June 12, 2014.
http://www.md.ngb.army.mil/absolutenm/articlefiles/1154-2013_Annual_Report.pdf.
- Maryland National Guard. "History." Accessed June 12, 2014.
<http://www.md.ngb.army.mil/absolutenm/templates/?a=732&z=38>.
- Maryland National Guard. "State Mission." Accessed June 12, 2014.
<http://www.md.ngb.army.mil/absolutenm/templates/?a=730&z=38>.
- Military.com. "Andrews Air Force Base." Accessed October 9, 2013.
<http://www.military.com/base-guide/andrews-air-force-base>.
- Military.com. "Fort Detrick." Accessed October 1, 2013. <http://www.military.com/base-guide/fort-detrick>.
- Military.com. "Fort George G. Meade." Accessed October 16, 2013.
<http://www.military.com/base-guide/fort-george-g-meade>.
- Military.com. "Naval Air Station Patuxent River." Accessed October 4, 2013.
<http://www.military.com/base-guide/naval-air-station-patuxent-river>.
- Military-Hotels.us. "Joint Base Andrews, Maryland—Hotels, Lodging, Inns." Accessed October 9, 2013. <http://military-hotels.us/maryland/andrews-afb-md.html>.

“Military Pay Overview”. Military Benefits. Accessed September 6, 2013.
<http://www.military.com/benefits/military-pay>.

National Maritime Intelligence. “National Office for Maritime Intelligence Integration Announces New Name to Better Reflect Mission.” January 23, 2012. Accessed January 13, 2013. <http://www.fas.org/irp/news/2012/01/nmio.pdf>.

National Maritime Intelligence. “Maryland Federal Facility Profile.” Accessed January 13, 2013. <http://business.maryland.gov/factsstats/Documents/Military%20Facilities/NMIC.pdf>.

National Security Agency. “Frequently Asked Questions.” 2009. Accessed October 16, 2013. <http://www.nsa.gov/about/faqs/index.shtml>.

Naval Research Laboratory. “Chesapeake Bay Detachment Facility Profile.” Accessed June 12, 2014.
<http://choosemaryland.org/factsstats/Documents/Military%20Facilities/NRLChesapeake.pdf>.

Naval Research Laboratory. “NRL Fact Book 2012.” November 2012. Accessed June 12, 2014. http://www.nrl.navy.mil/content_images/factbook.pdf.

Naval Support Activity Bethesda Home of Walter Reed National Military Medical Center, Maryland. “Installation Overview.” 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,30.90.30.30.0.0.0.0.

Naval Support Activity Bethesda Home of Walter Reed National Military Medical Center, Maryland. “Major Units.” Military Installations. February 25, 2014. Accessed March 5, 2014.
http://www.militaryinstallations.dod.mil/MOS/f?p=MI:CONTENT:0:::P4_INST_ID,P4_TAB:20295,MU.

NAVSEA. “NSWC Carderock Division.” Accessed February 6, 2015.
<http://www.navsea.navy.mil/nswc/carderock/default.aspx>.

Powers, Rod. “Fort Detrick.” About.com. Accessed October 1, 2013.
<http://usmilitary.about.com/od/armybaseprofiles/ss/detrick.htm>.

- The Center for Land Use Interpretation. "National Security Agency (NSA) Headquarters." Accessed October 16, 2013. <http://clui.org/ludb/site/national-security-agency-nsa-headquarters>.
- The Old Fort Meade Museum. "About." 2011. Accessed October 16, 2013. <http://fortmeademuseum.org/fmm/about-2/>.
- U.S. Army, Aberdeen Proving Ground. "APG Facts." Accessed September 27, 2013. <http://www.apg.army.mil/facts.cfm>.
- U.S. Army. "About Fort Meade." August 15, 2013. Accessed October 16, 2013. <http://www.ftmeade.army.mil/pages/about/about2.html>.
- U.S. Army Corps of Engineers. "Mission and Vision." Accessed March 5, 2014. <http://www.nab.usace.army.mil/About/MissionandVision.aspx>.
- U.S. Army Corps of Engineers. "Baltimore District Quick Facts." Accessed March 5, 2014. <http://www.nab.usace.army.mil/About.aspx>.
- U.S. Army Corps of Engineers. "History of the Baltimore District." Accessed March 5, 2014. <http://www.nab.usace.army.mil/About/History.aspx>.
- U.S. Army Corps of Engineers. "Baltimore District Office Locations." Accessed March 5, 2014. <http://www.nab.usace.army.mil/Locations/AreaOfficeLocations.aspx>.
- U.S. Army Corps of Engineers. "Leadership." Accessed March 5, 2014. <http://www.nab.usace.army.mil/About/Leadership.aspx>.
- U.S. Army Research Laboratory. "ARL History." Accessed June 12, 2014. <http://www.arl.army.mil/www/default.cfm?page=516>.
- U.S. Army Research Laboratory. "Home." Accessed June 12, 2014. <http://www.arl.army.mil/www/default.cfm>.
- U.S. Army Research Laboratory. "ARL Sciences & Technology." Accessed June 12, 2014. <http://www.arl.army.mil/www/default.cfm?page=18>.
- U.S. Army Research Laboratory. "2012 Annual Review." March, 2013. Accessed June 12, 2014. http://www.arl.army.mil/www/pages/172/docs/2012_annual_review.pdf.
- U.S. Coast Guard. "U.S. Coast Guard Yard." Accessed June 12, 2014. <http://www.uscg.mil/yard/>.

- U.S. Environmental Protection Agency. "Curtis Bay Coast Guard Yard—Current Site Information." Accessed June 12, 2014. <http://www.epa.gov/reg3hscd/npl/MD4690307844.htm>.
- U.S. Naval Research Lab. "History." Accessed June 12, 2014. <http://www.nrl.navy.mil/about-nrl/history/>.
- U.S. Navy. "Naval Air Systems Command." Accessed October 4, 2013. <http://www.navair.navy.mil/index.cfm?fuseaction=home.display&key=2A3E4419-AEA4-48CA-AA0D-CA82FA4283D6>.
- Waldman, Tyler. "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>.
- Walter Reed National Military Medical Center. "Welcome to the Nation's Medical Center." Accessed March 5, 2014. <http://www.wrnmmc.capmed.mil/SitePages/home.aspx>.
- Wang, Lu., Paul Carlsen, PhD, and David Clayton, "The Economic Impact of the Military Community in South Carolina." Research Division South Carolina Department of Commerce. Accessed September 6, 2013. http://sccommerce.com/sites/default/files/document_directory/the_economic_impact_of_the_military_community_in_south_carolina.pdf.

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 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.

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 250.¹⁵⁶

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.¹⁵⁷ 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.¹⁵⁸ 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 the military installations and provided by DBED. Suppliers, vendors, and contactors paid to Maryland were used in the calculation of economic impacts.

¹⁵⁶ Total economic impact is defined as the sum of direct, indirect, and induced effects.

¹⁵⁷ Jacob France Institute, "Mission Maryland: Measuring Economic Impact of Maryland's Military Installations," 3, 15.

¹⁵⁸ The Maguire Company and ESI Corporation. "Economic Impact of Arizona's Principal Military Operation," 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.¹⁵⁹

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.

¹⁵⁹ Wang, Lu., Paul Carlsen, PhD, and David Clayton, "The Economic Impact of the Military Community in South Carolina." Research Division South Carolina Department of Commerce. 33.

Figure 35: IMPLAN Industry Sectors

IMPLAN Code	Description
Employment	
440	Federal government, military
439	Federal government, non-military
Procurement and Purchases	
31	Electric power generation, transmission and distribution
32	Transport by pipeline
33	Water, sewage and other treatment and delivery systems
34	Architectural, Engineering, and Related Services
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	Miscellaneous
322	Retail stores – electronics and appliances
338	Transportations and support activities
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	Computer services
372	Computer systems design services
373	Other computer related services, including facilities management
374	Management, scientific, and technical consulting services
375	Environmental engineering services
376	Medical support services
380	All other miscellaneous professional, scientific, and technical services
383	Travel arrangements
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	Academies, college or university
400	Community center
410	Other amusement and recreation industries
411	Hotels and motels, including casino hotels
413	Food services
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 ¹⁶⁰	\$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

¹⁶⁰ 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 Ground¹⁶¹

	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 ¹⁶²	\$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 ¹⁶³	\$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 ¹⁶⁴	\$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, APG

¹⁶¹ Please note subtotals in each figure may not add up to the total due to rounding.

¹⁶² Student payroll was not provided by APG, therefore, RESI utilized data provided by other military installation bases in order to estimate payroll.

¹⁶³ Medical health services are not included in the total to avoid double counting.

¹⁶⁴ 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 ¹⁶⁵	\$70.1	\$13.6
Contracts and purchases	\$316.5	\$1,696.2
Education payments	\$1.3	\$0.3
Commissary and exchange sales and lodging ¹⁶⁶	\$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

¹⁶⁵ Medical health services are not included in the total to avoid double counting.

¹⁶⁶ 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	19,505	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	18,920	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 ¹⁶⁷	\$138.3	\$0.0
Total	\$2,633.3	\$7,490.1
Visitors and Spending		
Total visitors	n/a	12,023
Visitor spending (in-state, in millions)	n/a	\$1.7

Sources: DBED, Fort George G. Meade

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

Figure 40: EIS Questionnaire—National Maritime Intelligence 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 ¹⁶⁸	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, NMIO

¹⁶⁸ 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 ¹⁶⁹	\$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

¹⁶⁹ 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	\$123.5 ¹⁷⁰
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 ¹⁷¹	\$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, Patuxent River Naval Air Station

¹⁷⁰ Maryland resident active duty military payroll for FY 2012 was estimated using FY 2008 data.

¹⁷¹ Medical health services, commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 43: EIS Questionnaire—Curtis Bay 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 ¹⁷²	\$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, Curtis Bay Coast Guard Yard

¹⁷² 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 Employment¹⁷³		
Active duty military	1,387	-
Reserve	4,940	-
Rotational	0	-
Students	0	-
Civilian	726	-
Total	7,053	-
Maryland Resident Payroll (in millions)¹⁷⁴		
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 ¹⁷⁵	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

¹⁷³ The Maryland National Guard did not provide detailed data on Maryland employment or payrolls.

¹⁷⁴ The Maryland National Guard did not provide a breakdown of Maryland employment or payrolls.

¹⁷⁵ 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

	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 ¹⁷⁶	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

¹⁷⁶ Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 46: EIS Questionnaire—NSA 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 ¹⁷⁷	\$31.6	\$0.0
Total	\$96.1	\$92.4
Visitors and Spending¹⁷⁸		
Total visitors	2.0 million	2.2 million
Visitor spending (in-state, in millions)	n/a	n/a.

Sources: DBED, NSA Annapolis

¹⁷⁷ Commissary and exchange sales and lodging are not included in the total to avoid double counting.

¹⁷⁸ 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 reason for their visit is unknown, visitor activity at Annapolis is excluded from this analysis.

Figure 47: EIS Questionnaire—NSWC—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 ¹⁷⁹	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, NSWC—Carderock Division

¹⁷⁹ Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 48: EIS Questionnaire—NSWC—Indian Head Division

	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 ¹⁸⁰	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, NSWC—Indian Head Division

¹⁸⁰ Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 49: EIS Questionnaire—U.S. Army Research Laboratory

	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) ¹⁸¹		
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) ¹⁸²		
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 ¹⁸³	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, U.S. Army Research Laboratory

¹⁸¹ The U.S. Army Research Laboratory did not provide state-level employment and payroll information.

¹⁸² The U.S. Army Research Laboratory did not provide state-level employment and payroll information.

¹⁸³ Commissary and exchange sales and lodging are not included in the total to avoid double counting.

Figure 50: EIS Questionnaire—U.S. Army Corps of Engineers—Baltimore

	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 ¹⁸⁴	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, U.S. Army Corps of Engineers—Baltimore

¹⁸⁴ Commissary and exchange sales and lodging are not included in the total to avoid double counting.