

***The Economic Impact of NIWC Atlantic***  
***A National and State-Level Analysis***

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***Naval Information  
Warfare Center***



***ATLANTIC***

***Developed by:***  
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## **Executive Summary**

*The purpose of this study is to complete a comprehensive economic impact analysis of the Naval Information Warfare Center Atlantic (NIWC Atlantic) on the United States. As part of the Department of the United States Navy, the primary purpose of NIWC Atlantic is to design and deploy advanced communications and information systems in the service of national defense. This includes significant engineering and technical support in the development and implementation of C4ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance) solutions that support a wide variety of military operations.*

*NIWC Atlantic maintains facilities in six states in the United States, generating a significant national economic footprint. These impacts can be observed through direct job and income creation as well as procurement efforts that support a vast supplier network consisting of thousands of businesses across the United States. In addition, NIWC Atlantic actively promotes technological development that helps to sustain long-run economic growth. The key findings of this study are as follows:*

- The total economic impact resulting from all activities associated with NIWC Atlantic on the United States is estimated to be approximately \$9.3 billion. This figure reflects the dollar value of all final goods and services that can be attributed (either directly or indirectly) to NIWC Atlantic. This impact corresponds to 45,377 jobs and nearly \$3.9 billion in labor income that would not exist otherwise.*
- The largest state-level economic impacts of NIWC Atlantic are concentrated in South Carolina due to the presence of its headquarters in Charleston (\$3.2 billion). Additionally, NIWC Atlantic also generates significant economic impacts in the states of Virginia (\$1.6 billion), Maryland (\$159.6 million), Washington, DC (\$124.6 million), Louisiana (\$124.1 million), and Florida (\$91.3 million).*
- NIWC Atlantic provides a significant contribution to the knowledge economy through the creation of high-skilled, high-wage jobs. For example, approximately 65 percent of NIWC Atlantic's workforce is employed in various scientific and computer related professions. The most significant contribution to the knowledge economy comes through the employment of engineers, which represents the single largest employment category at NIWC Atlantic.*
- Local regions with a high percentage of technology-driven sectors are among those that are growing at the fastest rates across the country, meaning that NIWC Atlantic facilities are providing a disproportionately large contribution to the health of the local economies in which they are engaged.*
- The average annual wage among all employees at NIWC Atlantic is \$109,535, which is 86 percent above the national average. In addition, the average wage across all jobs supported both directly and indirectly by NIWC Atlantic is \$85,806 – or 45 percent above the national average. These sizable wage premiums are the result of the strong concentration of high-skilled jobs as outlined above.*



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## **Section I – Introduction**

The Naval Information Warfare Center Atlantic (NIWC Atlantic) is a military facility headquartered in Charleston, South Carolina that is responsible for designing and deploying advanced communications and information systems in the service of national defense. To that end, NIWC Atlantic provides systems engineering and technical support for C4ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance) that is used to transform ships, aircraft, and vehicles from individual units into integrated joint forces. As part of the Naval Information Warfare Systems Command, NIWC Atlantic serves as the Navy's technical lead for C4ISR and provides both hardware and software products that aid in these goals.

NIWC Atlantic has facilities located in multiple states and is a major contributor to local economies across the country. For South Carolina in particular, NIWC Atlantic's Charleston facility represents one of the region's largest employers and is a major driver of the overall Charleston economy. The economic impact of each NIWC Atlantic facility can be observed through its effects both at the local and national levels, most notably through job and income creation, local procurement efforts that support a large volume of local suppliers and defense contractors, and through promoting technological development that helps to support and increase long-run economic growth rates.

The contributions of NIWC Atlantic to technological development include a general expansion of the knowledge economy as well as a specific focus on the development of cyber security, which is becoming increasingly important in all regions that rely on technology-driven industries for economic growth. Local regions with a high percentage of technology-driven sectors are among those that are growing at the fastest rates across the country, meaning that NIWC Atlantic facilities are providing



a disproportionately large contribution to the health of the local economies in which they are engaged.

The purpose of this study is to quantify the economic impact of NIWC Atlantic on the state economies of South Carolina, Virginia, Maryland, Florida, Louisiana, Washington, DC, and for the United States overall. The primary results of this study will be expressed as a set of standard economic statistics that measure the impact of an organization on its local economy. These will include total economic output, employment, and labor income. To estimate these impacts, the Division of Research used information on NIWC Atlantic activities for the fiscal years 2019, 2020, 2021, and 2022 and assessed the total impacts using a customized regional input-output model with specific state-level parameters for each region. A separate set of national parameters was used to determine the economic impact of NIWC Atlantic on the United States.

This report begins with a brief overview of the NIWC Atlantic Charleston location – including a description of the labor force that it employs. This description uses the Charleston headquarters as one example to highlight the uniqueness of NIWC Atlantic in both the high-skilled labor it employs as well as the high volume of workers it employs in the United States. Both are important for NIWC Atlantic’s national impact and its broad contribution to the expansion of cyber security and the knowledge economy. Section III of the report then describes the economic impact methodology used, including definitions and descriptions of all economic statistics being estimated and an explanation of economic ripple effects. Section IV presents the state-level and national results of the study. Finally, Section V offers a brief conclusion.



## Section II – Overview of the NIWC Atlantic Labor Force

One of the primary drivers of any regional economy is innovation and technological advancement. NIWC Atlantic contributes to both, as its primary purpose is to provide advanced technology solutions that encompass command, control, communications, computers, intelligence, surveillance, and reconnaissance in support of the United States military. Examples of NIWC Atlantic’s high-technology solutions include battle management systems; undersea, terrestrial and space sensors; information transfer systems; joint and naval satellite communications systems; and information management systems. Through these operations, NIWC Atlantic makes a significant contribution to cultivating the skilled labor force of each local region in which it maintains a presence. The analysis of the NIWC Atlantic Charleston workforce presented below is one example and is representative of how NIWC Atlantic supports high-wage, high-skilled employment at each its facilities in the United States.

### ***Contributions to the Knowledge Economy***

As of FY22, NIWC Atlantic employs a workforce of 3,179 civilians in its Charleston office, many of whom have advanced degrees in technical fields. This makes NIWC Atlantic a significant driver of the knowledge economy in the Charleston tri-county area. Table 1 summarizes the distribution and average wage of each major occupation group across all 3,179 employees.

**Table 1 – NIWC Atlantic Civilian Occupation Groups: FY22**

<b>Occupation Group Description</b>	<b>% of Total Workforce</b>	<b>Avg. Wage</b>
Accounting and Budget	1.9%	\$100,709
Business and Industry	3.2%	\$108,078
Education	0.1%	\$112,336
Engineering and Architecture	32.4%	\$112,318
Equipment, Facilities, and Services	0.3%	\$110,543
General, Administrative, Clerical, and Office Services	20.9%	\$102,874
Human Resources Management	1.3%	\$90,990
Information and Arts	0.4%	\$93,679
Information Technology	19.8%	\$115,314
Inspection, Investigation, Enforcement, and Compliance	0.2%	\$127,861



<b>Occupation Group Description</b>	<b>% of Total Workforce</b>	<b>Avg. Wage</b>
Legal and Kindred	0.4%	\$139,128
Mathematical Sciences	15.4%	\$105,099
Miscellaneous Occupations	1.7%	\$84,071
Physical Sciences	0.3%	\$121,146
Quality Assurance, Inspection, and Grading	0.4%	\$106,321
Social Science, Psychology, and Welfare	0.1%	\$135,721
Supply	0.7%	\$93,828
Transportation	0.7%	\$96,083
<b>Totals</b>	<b>100.0%</b>	<b>\$108,549</b>

Note that the average wage among all employees at NIWC Atlantic in Charleston is approximately \$108,549. This represents a wage that is more than twice that of the average across all jobs in South Carolina (at \$53,166). A closer inspection among 71 specific occupations reveals that 65 pay an average annual salary above this state average. Moreover, NIWC Atlantic's most significant impact on the knowledge economy comes through their employment of engineers, which represents the single largest employment category at NIWC Atlantic.

In general, the field of engineering is highly technical and typically requires extensive academic training in mathematics and science as well as the ability for complex problem solving. Engineering tasks are often both theoretical and practical, combining the creative skills necessary for innovation and technological development with the practical knowledge of commercializing new ideas, which is what leads to regional economic growth and development. The intellectual talent required for jobs in this profession is highly sought after across the world. Regions with high concentrations of engineers generate enormous human capital resources and knowledge spillover effects. In FY22, NIWC Atlantic employed 1,029 engineers in its Charleston office, which covers a broad range of specialty fields, including





aerospace, computer, electronics, environmental, industrial, mechanical, safety, and others.<sup>1</sup>

The single largest category of engineers working at NIWC Atlantic is electronics engineers.<sup>2</sup> Electronics engineers are typically involved in the design, development, testing, and supervision of electronic equipment manufacturing, notably in communications systems. These engineers specialize in communications, signal processing, and control systems. NIWC Atlantic is one of the largest employers of electronics engineers in South Carolina. Of the 1,029 NIWC Atlantic-Charleston engineers, 421 are electronics engineers. This implies that roughly 76.5 percent of all electronics engineers in the Charleston tri-county metropolitan region and 40.5 percent of all electronics engineers in South Carolina are employed with NIWC Atlantic.<sup>3</sup>

### ***Contributions to Cyber Security***

NIWC Atlantic provides a high-skilled, high-wage workforce to the regions in which it operates, supporting a growing knowledge economy; much of this workforce is also actively engaged in cyber security. Cyber security generally refers to the body of technologies, processes, and practices designed to protect networks, devices, programs, and data from damage or unauthorized access. While there are varying definitions of the cyber security sector, it usually incorporates – at minimum – the occupations listed in Table 2.<sup>4</sup> Also listed in Table 2 are the total number of employees and the average wage for each of these occupations in the Charleston region as estimated by the U.S. Bureau of Labor Statistics.

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<sup>1</sup> This employment figure comes from the NIWC Atlantic FY22 engineering and architecture workforce series.

<sup>2</sup> Electronics engineers are defined by NIWC Atlantic as employees classified within the electronics engineering workforce series. The total number of electronics engineers provided in this report refers to FY22.

<sup>3</sup> These estimates are calculated by comparing NIWC Atlantic employment data to employment estimates from the U.S. Bureau of Labor Statistics' Occupational Employment and Wage Statistics.

<sup>4</sup> Source: Division of Research and U.S. Bureau of Labor Statistics, Occupational Employment and Wage Statistics; note that the cyber security sector represents a subset of the knowledge economy.



**Table 2 – Occupation Profile of the Cyber Security Sector in Charleston, SC<sup>5</sup>**

<b>SOC Code</b>	<b>Occupation Description</b>	<b># of Employees</b>	<b>Annual Wage (Median)</b>
11-3021	Computer and Information Systems Managers	730	\$132,440
15-1211	Computer Systems Analysts	1,920	\$99,640
15-1212	Information Security Analysts	490	\$108,860
15-1221	Computer and Information Research Scientists	390	\$114,030
15-1231	Computer Network Support Specialists	440	\$63,640
15-1232	Computer User Support Specialists	1,710	\$54,000
15-1241	Computer Network Architects	290	\$106,020
15-1242	Database Administrators	110	\$100,470
15-1243	Database Architects	80	\$117,890
15-1244	Network and Computer Systems Administrators	690	\$88,260
15-1251	Computer Programmers	NR	NR
15-1252	Software Developers	2,360	\$109,110
15-1253	Software Quality Assurance Analysts and Testers	170	\$89,820
15-1254	Web Developers	150	\$61,070
15-1255	Web and Digital Interface Designers	100	\$105,440
15-1299	Computer Occupations, All Other	1,090	\$112,130
15-2051	Data Scientists	160	\$83,560
17-2011	Aerospace Engineers	NR	NR
17-2031	Bioengineers and Biomedical Engineers	50	NR
17-2061	Computer Hardware Engineers	200	\$117,750
17-2071	Electrical Engineers	440	\$93,000
17-2072	Electronics Engineers, Except Computer	550	\$118,310
17-2112	Industrial Engineers	860	\$90,390
17-2121	Marine Engineers and Naval Architects	NR	NR
17-2131	Materials Engineers	170	NR
17-2141	Mechanical Engineers	630	\$88,730
17-2161	Nuclear Engineers	NR	NR
17-3021	Aerospace Engineering and Operations Technologists and Technicians	50	\$49,620

<sup>5</sup> Note that NR denotes data points that were not reported by the U.S. Bureau of Labor Statistics. This could be due to non-disclosure restrictions or if there are no workers within this particular occupation category in the Charleston region. All data reported are for the year 2022.



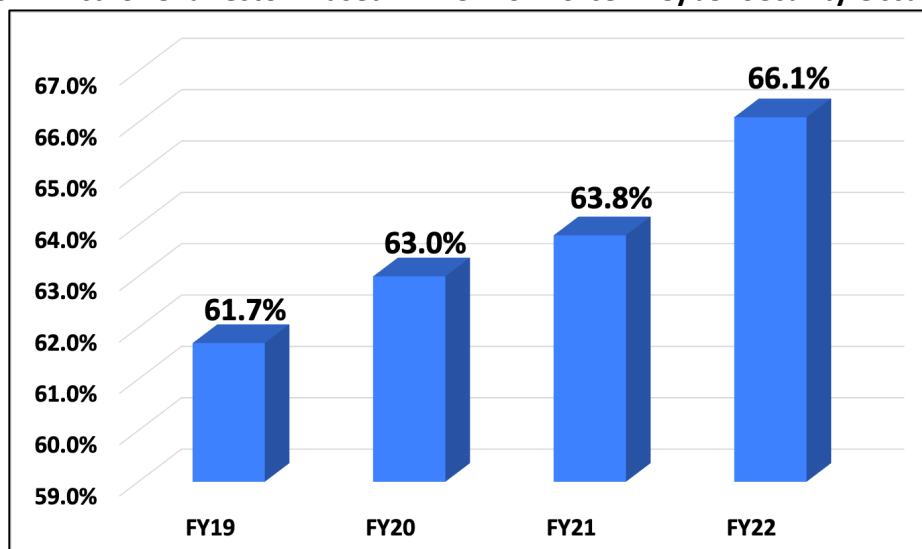
<b>SOC Code</b>	<b>Occupation Description</b>	<b># of Employees</b>	<b>Annual Wage (Median)</b>
17-3023	Electrical and Electronic Engineering Technologists and Technicians	450	\$78,810
17-3024	Electro-Mechanical and Mechatronics Technologists and Technicians	NR	NR
17-3026	Industrial Engineering Technologists and Technicians	150	\$62,600
17-3027	Mechanical Engineering Technologists and Technicians	150	\$65,380
17-3029	Engineering Technologists and Technicians, Except Drafters, All Other	280	\$81,910
25-1021	Computer Science Teachers, Postsecondary	120	\$77,560
27-4011	Audio and Video Technicians	130	\$43,770
27-4012	Broadcast Technicians	30	\$54,790
27-4014	Sound Engineering Technicians	NR	NR
27-4015	Lighting Technicians	NR	NR
27-4032	Film and Video Editors	NR	NR
27-4099	Media and Communication Equipment Workers, All Other	NR	NR
49-2011	Computer, Automated Teller, and Office Machine Repairers	160	\$36,770
49-2021	Radio, Cellular, and Tower Equipment Installers and Repairers	NR	NR
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	500	\$55,140
49-2091	Avionics Technicians	50	\$67,220
49-2092	Electric Motor, Power Tool, and Related Repairers	90	\$48,560
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	NR	NR
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	NR	\$61,140
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	NR	NR
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	NR	NR
49-2097	Audiovisual Equipment Installers and Repairers	NR	NR
49-2098	Security and Fire Alarm Systems Installers	160	\$50,440



SOC Code	Occupation Description	# of Employees	Annual Wage (Median)
51-2022	Electrical and Electronic Equipment Assemblers	NR	NR
51-2023	Electromechanical Equipment Assemblers	NR	NR
51-9161	Computer Numerically Controlled Tool Operators	840	\$52,820
51-9162	Computer Numerically Controlled Tool Programmers	50	\$81,970
<b>Totals</b>	<b>N/A</b>	<b>16,990</b>	<b>\$88,520</b>

As Table 2 denotes, as of 2022, the cyber security industry encompasses a minimum of 16,990 employees earning a median annual wage of \$88,520 in the Charleston region. These data can then be combined with those from Table 1 to illustrate how much of this employment base is supported by NIWC Atlantic. Using the aforementioned conservative definition of the cyber security sector, Figure 1 summarizes the percentage of the NIWC Atlantic workforce in Charleston that currently works in cyber security – which is currently at 66.1 percent as of FY22, or about 2,102 employees.

**Figure 1 – Pct. of Charleston-Based NIWC Workforce in Cyber Security Occupations**



In addition to these 2,102 employees, there is also another large workforce employed in cyber security related fields working at the many local defense contractors that NIWC Atlantic utilizes. Through an analysis using regional econometric input-output models that will be detailed further in Section III, this study finds that up to an additional 2,396 workers in Charleston are employed by defense contractors in cyber security-related fields that are a direct result of the economic activity generated through these contractors' business relationships with NIWC Atlantic. Thus, in sum, NIWC Atlantic is responsible for supporting more than 25 percent of the cyber security sector in Charleston, South Carolina.

### **Section III – Economic Impact Methodology**

This report estimates the economic impact of NIWC Atlantic facilities in South Carolina, Virginia, Maryland, Florida, Louisiana, and Washington, DC on their respective states and on the United States as a whole. This section outlines the nature of economic impact analysis and how the regional impact of NIWC Atlantic facilities can be determined.

The goal of an economic impact analysis is to establish the total impact, or contribution, of an organization to its local economic region. For example, part of this analysis will estimate how many total jobs are generated in South Carolina due specifically to the operations of NIWC Atlantic. To determine the total impact of an organization, an economic impact analysis requires, as a starting point, the identification of a direct effect on the economy. This direct effect will, in turn, lead to additional economic ripple effects over a broader region.

A direct effect represents an initial injection of funds into a local area. For example, consider a firm that opens for business in a particular region and has total annual expenditures of \$100 million – some of which is payroll and some of which is spent on non-labor inputs. The purchases of non-labor inputs from other businesses in the



local region will, of course, increase their demand and sales levels. This increase in sales activity due to the purchases of the original firm represents a direct effect on the local economy. Similarly, expenditures that consist of payroll for employees of the original firm increase household income levels for each of these employees. Part of this additional household income will then be spent in the local economy at a variety of local businesses, again increasing their demand and sales levels. This too, reflects a direct effect on the economy.

These direct effects, however, only represent the initial effects on the local economy. The total impact on the economy will be far greater. The initial direct expenditures (both labor and non-labor) lead to additional rounds of spending in the local economy, known more generally as the economic ripple effect or multiplier effect. These effects take two forms, the indirect effect and the induced effect.

The indirect effect represents all additional rounds of spending that result from inter-industry linkages between local businesses as additional rounds of spending move through a supply chain. For example, consider a firm that purchases computer hardware as an input to its production process. The computer hardware supplier would, as a result of the firm's purchases, see an increase in demand. This would, in turn, require him to purchase additional computer hardware parts from his suppliers. This purchase activity from the computer hardware parts suppliers represents the first round of the indirect effect. The original spending of the local business on the computer hardware supplier led to an additional round of spending by the computer hardware supplier. The computer hardware parts suppliers must then purchase additional inputs to fill

**Direct Impact:** The effects of local expenditures on wages and purchases that are injected into the state's economy

**Indirect Impact:** The ripple effects of spending on in-state suppliers

**Induced Impact:** The ripple effects of expenditures from wages such as household spending



their increased demand, representing a second round of indirect spending. These additional rounds of spending continue on through the supply chain. The total size of the indirect effect is a function of the total size of the local supplier network.

In addition to the direct effects and the indirect effects, there is one further set of impacts that also must be considered: the induced effects. Induced effects reflect all of the additional economic impacts that result from household spending that occurs as the result of income earned directly or indirectly from the initial, direct change in economic activity. For example, consider once again the firm that purchases computer hardware to use as inputs. The computer hardware supplier must hire additional employees to service this rise in demand. These employees will then spend part of their additional income in the local economy on (for example) food, entertainment, and housing. Part of the wages earned in those industries can be attributed to the original firm's spending, which in turn supports further household expenditures. These impacts resulting from household expenditures reflect the induced effects. Taken together, the direct, indirect, and induced effects provide the total economic impact of an organization.

These successive rounds of indirect and induced spending outlined above do not go on forever. In each round, part of the money is "leaked out" of the local economy. For example, households may save a portion of their income or spend it outside of the local region. Businesses too, may purchase some of their inputs and supplies outside of the local economy. Spending that is leaked out cannot be used to support further economic activity in the local area. Thus, in each successive round of spending, the indirect and induced effects become smaller and smaller and eventually drop to zero. Because the successive rounds of spending eventually end, estimates can be generated for both the indirect and induced effects.



The economic multiplier effect is way of measuring the total indirect and induced effects that result from an initial direct effect. An economic multiplier is defined as the ratio of the total economic impact (direct, indirect, and induced) to the initial, direct effect. For example, if a firm was to spend \$100 million within a particular sector and this led to a total economic output of \$250 million, the output multiplier would be 2.5. Multiplier effects are larger when the region being analyzed is larger. For example, the total economic impact resulting from an initial direct effect will be larger in a state than it would be in any given county within that same state. Multiplier effects also vary from sector to sector because the sizes of supply networks vary among different local industries.

As the above discussion implies, an economic impact analysis involves two steps: (1) determining appropriate levels of direct economic activity; (2) determining and applying the appropriate values for economic multipliers to calculate the total impact on economic output, employment, and labor income. These are the three standard variables generally used to measure the major contributions of an organization to its local economy. Total economic output represents an aggregate measure of total spending that results from the initial direct expenditures. This includes spending by both businesses and consumers on goods and services, and is thus a broad, all-inclusive measure of the impact on total economic activity. Employment represents the impact on jobs in terms of the total number of positions associated with the estimated total economic output, while labor income represents the total value of wages, salaries, and benefits associated with total employment. These three economic impact measures are summarized in Table 3.





**Table 3 – Definition of Economic Impact Measures**

<b>Economic Impact Measure</b>	<b>Description</b>
Total Economic Impact (or Output)	The dollar value representing the total contribution to overall economic activity
Employment	The total number of full-time equivalent jobs needed to deliver the demand for the goods and services as measured by total economic output
Labor Income	The dollar value representing total wages, salaries, and benefits associated with total employment

In this analysis, the direct economic impact of NIWC Atlantic was based on employment and expenditure data of NIWC Atlantic at each of its facilities. All multiplier effects were calculated using input-output analysis, which is the industry-standard technique that is widely implemented by economists and statisticians across the United States. The Division of Research (DOR) developed customized input-output models for the U.S. economy and for the states of South Carolina, Virginia, Maryland, Louisiana, Florida, and Washington, DC, which all contain specific information on economic linkages of over 500 different industries for each local region. The *IMPLAN* software package was combined with the DOR models to generate all estimates in this report.

## **Section IV – Current Economic Impacts by Region**

This section contains the main results of this study – the impact estimates for NIWC Atlantic at the national level as well as across all six states in which it maintains facilities: South Carolina, Virginia, Maryland, Washington, DC, Louisiana, and Florida. Tables 4-10 below highlight these impacts for the most recent fiscal year (2022). As illustrated in Table 4, the economic impact of NIWC Atlantic on the United States totals over \$9.3 billion in economic output. This level of economic activity supports 45,377 jobs nationwide and is associated with \$3.9 billion in labor income.



**Table 4 – Economic Impact of NIWC Atlantic: United States (FY22)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	16,574	\$1,875,682,909	\$3,417,159,516
Indirect Impact	10,212	\$797,633,907	\$2,103,938,908
Induced Impact	18,591	\$1,220,304,971	\$3,786,157,071
<b>Total Impact</b>	<b>45,377</b>	<b>\$3,893,621,787</b>	<b>\$9,307,255,495</b>

**Table 5 – Economic Impact of NIWC Atlantic: South Carolina (FY22)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	8,250	\$878,280,382	\$1,674,535,283
Indirect Impact	4,626	\$260,193,789	\$693,945,430
Induced Impact	5,006	\$244,247,056	\$825,960,420
<b>Total Impact</b>	<b>17,882</b>	<b>\$1,382,721,227</b>	<b>\$3,194,441,133</b>

**Table 6 – Economic Impact of NIWC Atlantic: Virginia (FY22)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	4,608	\$527,517,020	\$868,556,425
Indirect Impact	1,654	\$131,529,154	\$312,358,947
Induced Impact	2,540	\$142,779,696	\$451,970,707
<b>Total Impact</b>	<b>8,802</b>	<b>\$801,825,870</b>	<b>\$1,632,886,080</b>

**Table 7 – Economic Impact of NIWC Atlantic: Maryland (FY22)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	429	\$46,982,338	\$88,000,434
Indirect Impact	172	\$12,883,850	\$31,258,555
Induced Impact	221	\$13,616,580	\$40,386,051
<b>Total Impact</b>	<b>822</b>	<b>\$73,482,768</b>	<b>\$159,645,040</b>

**Table 8 – Economic Impact of NIWC Atlantic: Washington, DC (FY22)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	371	\$57,154,896	\$87,214,479
Indirect Impact	93	\$11,000,811	\$21,355,339
Induced Impact	76	\$6,839,132	\$16,013,364
<b>Total Impact</b>	<b>540</b>	<b>\$74,994,839</b>	<b>\$124,583,182</b>



**Table 9 – Economic Impact of NIWC Atlantic: Louisiana (FY22)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	246	\$38,426,159	\$66,521,001
Indirect Impact	160	\$8,584,812	\$23,656,095
Induced Impact	212	\$10,448,748	\$33,932,673
<b>Total Impact</b>	<b>618</b>	<b>\$57,459,719</b>	<b>\$124,109,769</b>

**Table 10 – Economic Impact of NIWC Atlantic: Florida (FY22)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	187	\$22,157,288	\$40,802,338
Indirect Impact	130	\$8,047,506	\$20,901,010
Induced Impact	163	\$9,164,000	\$29,579,651
<b>Total Impact</b>	<b>480</b>	<b>\$39,368,794</b>	<b>\$91,282,999</b>

NIWC Atlantic also represents a strong, consistent presence over time. Tables 11-13 highlight the annual impacts of NIWC Atlantic on the United States for fiscal years 2019, 2020, and 2021. Notice that the total annual impact remains relatively consistent from year to year, underscoring NIWC Atlantic's long-term contributions to the local economic regions in which it is a part. Tables 14-31 in Appendix I break out the economic impact of each state by historical fiscal year (FY19-FY21).

**Table 11 – Economic Impact of NIWC Atlantic: United States (FY19)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	16,671	\$1,886,698,463	\$3,437,227,889
Indirect Impact	10,272	\$802,318,270	\$2,116,294,969
Induced Impact	18,700	\$1,227,471,606	\$3,808,392,501
<b>Total Impact</b>	<b>45,643</b>	<b>\$3,916,488,339</b>	<b>\$9,361,915,359</b>

**Table 12 – Economic Impact of NIWC Atlantic: United States (FY20)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	17,343	\$1,962,667,799	\$3,575,630,462
Indirect Impact	10,686	\$834,624,220	\$2,201,509,181
Induced Impact	19,453	\$1,276,896,676	\$3,961,740,297
<b>Total Impact</b>	<b>47,482</b>	<b>\$4,074,188,695</b>	<b>\$9,738,879,940</b>



**Table 13 – Economic Impact of NIWC Atlantic: United States (FY21)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	17,208	\$1,947,473,932	\$3,547,949,947
Indirect Impact	10,603	\$828,163,030	\$2,184,466,339
Induced Impact	19,303	\$1,267,011,662	\$3,931,070,738
<b>Total Impact</b>	<b>47,114</b>	<b>\$4,042,648,624</b>	<b>\$9,663,487,024</b>

## **Section V – Conclusion**

The primary mission of NIWC Atlantic is to design and deploy advanced communications and information systems in the service of national defense. With facilities located in multiple states, NIWC Atlantic is a major contributor to local economies across the country. This is especially true with respect to the knowledge economy as well as to the specific development of cyber security, which is increasingly important for economic growth within regions containing industrial sectors that are technology-driven. The economic impact of NIWC Atlantic is driven both by the high-skilled, high-wage talent it attracts to the region as well as local procurement efforts that support a large volume of local suppliers and defense contractors.

The total annual economic impact resulting from all activities associated with NIWC Atlantic on the United States is estimated to be approximately \$9.3 billion, which is associated with 45,377 jobs and \$3.9 billion in labor income.

Approximately 65 percent of NIWC Atlantic's workforce is employed in various scientific and computer related professions. The most significant contribution to the knowledge economy comes through the employment of engineers, which represents the single largest employment category at NIWC Atlantic. Regions with high concentrations of workers in the knowledge economy generate high levels of human capital resources and knowledge spillover effects. In the United States today, regions with a well-educated workforce and a strong innovation sector are those that are growing the fastest and those that have workers who are among the most



productive, creative, and well paid in the country. The economic impact of NIWC Atlantic not only helps to support local economic growth through its sheer size, but also through its active support of the knowledge economy and the secondary benefits that such support provides. Because of these twin contributions, NIWC Atlantic continues to serve as a critical element of all of the local economies of which it is a part.



## Appendix I – Economic Impact Results for FY19, FY20, and FY21

Notes: (1) Results are displayed by region; (2) U.S. results are displayed in Section IV;  
(3) Totals may not precisely sum due to rounding

**Table 14 – Economic Impact of NIWC Atlantic: South Carolina (FY19)**

	Employment	Labor Income	Economic Output
Direct Impact	8,467	\$901,378,551	\$1,718,574,408
Indirect Impact	4,748	\$267,036,706	\$712,195,717
Induced Impact	5,138	\$250,670,585	\$847,682,610
<b>Total Impact</b>	<b>18,352</b>	<b>\$1,419,085,843</b>	<b>\$3,278,452,734</b>

**Table 15 – Economic Impact of NIWC Atlantic: South Carolina (FY20)**

	Employment	Labor Income	Economic Output
Direct Impact	8,756	\$932,176,110	\$1,777,293,240
Indirect Impact	4,910	\$276,160,596	\$736,529,433
Induced Impact	5,313	\$259,235,291	\$876,645,530
<b>Total Impact</b>	<b>18,979</b>	<b>\$1,467,571,997</b>	<b>\$3,390,468,203</b>

**Table 16 – Economic Impact of NIWC Atlantic: South Carolina (FY21)**

	Employment	Labor Income	Economic Output
Direct Impact	8,640	\$919,802,091	\$1,753,700,852
Indirect Impact	4,845	\$272,494,748	\$726,752,493
Induced Impact	5,243	\$255,794,115	\$865,008,643
<b>Total Impact</b>	<b>18,727</b>	<b>\$1,448,090,953</b>	<b>\$3,345,461,988</b>

**Table 17 – Economic Impact of NIWC Atlantic: Virginia (FY19)**

	Employment	Labor Income	Economic Output
Direct Impact	4,658	\$533,226,079	\$877,956,387
Indirect Impact	1,672	\$132,952,630	\$315,739,455
Induced Impact	2,568	\$144,324,931	\$456,862,165
<b>Total Impact</b>	<b>8,897</b>	<b>\$810,503,640</b>	<b>\$1,650,558,007</b>

**Table 18 – Economic Impact of NIWC Atlantic: Virginia (FY20)**

	Employment	Labor Income	Economic Output
Direct Impact	4,803	\$549,782,349	\$905,216,274
Indirect Impact	1,723	\$137,080,709	\$325,542,929
Induced Impact	2,647	\$148,806,112	\$471,047,393
<b>Total Impact</b>	<b>9,174</b>	<b>\$835,669,170</b>	<b>\$1,701,806,596</b>



**Table 19 – Economic Impact of NIWC Atlantic: Virginia (FY21)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	4,743	\$542,931,478	\$893,936,321
Indirect Impact	1,702	\$135,372,538	\$321,486,319
Induced Impact	2,614	\$146,951,830	\$465,177,643
<b>Total Impact</b>	<b>9,059</b>	<b>\$825,255,847</b>	<b>\$1,680,600,283</b>

**Table 20 – Economic Impact of NIWC Atlantic: Maryland (FY19)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	457	\$50,013,457	\$93,677,881
Indirect Impact	183	\$13,715,066	\$33,275,236
Induced Impact	235	\$14,495,069	\$42,991,603
<b>Total Impact</b>	<b>875</b>	<b>\$78,223,592</b>	<b>\$169,944,720</b>

**Table 21 – Economic Impact of NIWC Atlantic: Maryland (FY20)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	498	\$54,560,134	\$102,194,052
Indirect Impact	200	\$14,961,890	\$36,300,257
Induced Impact	257	\$15,812,803	\$46,899,930
<b>Total Impact</b>	<b>955</b>	<b>\$85,334,827</b>	<b>\$185,394,240</b>

**Table 22 – Economic Impact of NIWC Atlantic: Maryland (FY21)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	443	\$48,497,897	\$90,839,158
Indirect Impact	178	\$13,299,458	\$32,266,895
Induced Impact	228	\$14,055,825	\$41,688,827
<b>Total Impact</b>	<b>849</b>	<b>\$75,853,180</b>	<b>\$164,794,880</b>

**Table 23 – Economic Impact of NIWC Atlantic: Washington, DC (FY19)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	382	\$58,876,429	\$89,841,421
Indirect Impact	96	\$11,332,161	\$21,998,572
Induced Impact	78	\$7,045,130	\$16,495,694
<b>Total Impact</b>	<b>556</b>	<b>\$77,253,720</b>	<b>\$128,335,687</b>



**Table 24 – Economic Impact of NIWC Atlantic: Washington, DC (FY20)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	393	\$60,597,962	\$92,468,363
Indirect Impact	99	\$11,663,510	\$22,641,805
Induced Impact	81	\$7,251,128	\$16,978,024
<b>Total Impact</b>	<b>573</b>	<b>\$79,512,600</b>	<b>\$132,088,193</b>

**Table 25 – Economic Impact of NIWC Atlantic: Washington, DC (FY21)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	418	\$64,385,335	\$98,247,636
Indirect Impact	105	\$12,392,480	\$24,056,918
Induced Impact	86	\$7,704,323	\$18,039,151
<b>Total Impact</b>	<b>608</b>	<b>\$84,482,138</b>	<b>\$140,343,705</b>

**Table 26 – Economic Impact of NIWC Atlantic: Louisiana (FY19)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	234	\$36,551,712	\$63,276,074
Indirect Impact	152	\$8,166,041	\$22,502,139
Induced Impact	202	\$9,939,053	\$32,277,421
<b>Total Impact</b>	<b>588</b>	<b>\$54,656,806</b>	<b>\$118,055,634</b>

**Table 27 – Economic Impact of NIWC Atlantic: Louisiana (FY20)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	260	\$40,613,014	\$70,306,749
Indirect Impact	169	\$9,073,379	\$25,002,377
Induced Impact	224	\$11,043,392	\$35,863,801
<b>Total Impact</b>	<b>653</b>	<b>\$60,729,784</b>	<b>\$131,172,927</b>

**Table 28 – Economic Impact of NIWC Atlantic: Louisiana (FY21)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	265	\$41,394,033	\$71,658,802
Indirect Impact	172	\$9,247,867	\$25,483,192
Induced Impact	228	\$11,255,765	\$36,553,489
<b>Total Impact</b>	<b>666</b>	<b>\$61,897,665</b>	<b>\$133,695,483</b>





**Table 29 – Economic Impact of NIWC Atlantic: Florida (FY19)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	161	\$19,076,596	\$35,129,286
Indirect Impact	112	\$6,928,601	\$17,994,987
Induced Impact	140	\$7,889,861	\$25,466,972
<b>Total Impact</b>	<b>413</b>	<b>\$33,895,058</b>	<b>\$78,591,245</b>

**Table 30 – Economic Impact of NIWC Atlantic: Florida (FY20)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	173	\$20,498,454	\$37,747,618
Indirect Impact	120	\$7,445,019	\$19,336,229
Induced Impact	151	\$8,477,925	\$27,365,132
<b>Total Impact</b>	<b>444</b>	<b>\$36,421,398</b>	<b>\$84,448,978</b>

**Table 31 – Economic Impact of NIWC Atlantic: Florida (FY21)**

	<b>Employment</b>	<b>Labor Income</b>	<b>Economic Output</b>
Direct Impact	174	\$20,616,942	\$37,965,812
Indirect Impact	121	\$7,488,054	\$19,447,999
Induced Impact	152	\$8,526,930	\$27,523,312
<b>Total Impact</b>	<b>447</b>	<b>\$36,631,926</b>	<b>\$84,937,122</b>

