

SAN DIEGO MILITARY ECONOMIC IMPACT STUDY

April 2011

Commissioned by:



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April 2011

Dear SDMAC Members and Supporters,

The San Diego Military Advisory Council (SDMAC) is delighted to present the 2011 San Diego Military Economic Impact Study (SDMEIS).

San Diego is home to the largest concentration of military in the world. It is the homeport to over 60 percent of the ships of the U.S. Pacific Fleet, and over one-third of the combat power of the U.S. Marine Corps. There are over 100,000 active-duty Navy and Marine Corps personnel assigned to the ships and bases in the San Diego region. These courageous men and women continue to defend our freedom on a daily basis while facing operational deployments in frequencies that are unprecedented in our nation's history.

The strategic value of the San Diego region cannot be overstated. It is our intention in this Study to make you aware of the impact that these ships and bases, and the Sailors and Marines who serve on them, have on our regional economy. The presence of Department of Defense facilities, personnel, and equipment generates an economic impact on the San Diego region that far outpaces other industries in the area.

There is no doubt that a unique relationship exists between the military and the San Diego community that exists nowhere else in the country. We sincerely hope that the information in this year's Study will give you a better understanding of that relationship and how it impacts the lives of all of us who choose to call San Diego our home.

This is the third edition of the Study, which SDMAC first published in 2008. Section I contains the most recent quantitative economic data available. Sections II and III have been updated to reflect the initiatives the Navy and Marine Corps are taking in energy conservation and environmental stewardship, and includes demographic information on the major bases and installations in the San Diego region.

I would like to extend our deepest appreciation to Rear Admiral Bill French, USN, Commander Navy Region Southwest; Major General Tony Jackson, USMC, Commanding General Marine Corps Installations West; Rear Admiral Pat Brady, USN, Commander SPAWAR; Rear Admiral Forrest Faison III, MC, USN, Commander Navy Medicine West; and Major General Ron Bailey, USMC, Commanding General Marine Corps Recruit Depot San Diego. These outstanding officers and their staffs provided support to our research team throughout this effort. We thank them for their leadership, insight, and contributions to this Study.

Sincerely,

A handwritten signature in black ink that reads 'John Pettitt'. The signature is written in a cursive, flowing style.

John Pettitt
President 2011



School of International Relations
and Pacific Studies
University of California, San Diego

The University of California, San Diego School of International Relations and Pacific Studies (IR/PS) equips talented students and promising junior professionals with a broad set of practical skills and marketable tools. Throughout the program, students are encouraged to work on real-world projects with actual clients and prospective employers. Accordingly, success in the program depends on a student's ability to perform technical analyses and clearly communicate the importance of their results.

For 17 years, Export Access, our student-managed consulting group, has served an important role in providing quality services to the community while enabling our students, under the supervision of our faculty, to apply their advanced training in finance, statistics, econometrics, public policy and business management. This economic impact report is a fine example of work conducted by our students.

Peter Cowhey, Dean
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Table of Contents

List of Illustrations	vii
List of Tables	vii
List of Acronyms	viii
Executive Summary	1
Introduction.....	1
Economic Impact of Defense Spending in San Diego County, FY2009	2
Projected Economic Impact of Defense Spending in San Diego County, FY2011	5
Summary of Economic Analysis.....	6
Section I: Region-wide Economic Impact	7
1. Overview of the Military in San Diego	7
2. Methodology.....	8
3. Data Sources and Definitions	11
4. Direct Defense Spending in San Diego County.....	12
4.1 Direct Employment	13
4.2 Direct Procurement.....	14
4.3 Benefits Paid to Retirees and Veterans.....	16
4.4 Government Purchase Card Spending.....	17
5. Indirect and Induced Effects of Defense Spending	17
5.1 Impact on Regional Economic Output	17
5.2 Impact on Regional Employment.....	19
5.3 Impact on Regional Personal Earnings.....	20
6. Total Impact on the San Diego Economy.....	21
7. Future Regional Military Projects	22
8. Conclusion.....	23
9. Assumptions	23
Section II: Socioeconomic Impact	26
Environmental Stewardship	26
Labor Force Strengthening.....	31
Local Community Engagement.....	36
Summary	42
Section III: Navy and Marine Corps Installations	43
Navy Region Southwest.....	44
Naval Base Coronado	45
Naval Base Point Loma.....	46
Naval Base San Diego.....	47
Marine Corps Installations West.....	48
Marine Corps Base Camp Pendleton.....	49
Marine Corps Air Station Camp Pendleton.....	51
Marine Corps Air Station Miramar	52
Marine Corps Recruit Depot San Diego	53
Appendix 1 – Explanation of Economic Multipliers	
Appendix 2 – North American Industry Classification System (NAICS) Impact Breakdowns and Definitions	
Appendix 3 – Frequently Asked Questions	

List of Illustrations

Figure 1. Economic Impact of Defense Spending in San Diego County, FY2009.....	3
Figure 2. DoD Spending in San Diego Over Time (\$ billions)	4
Figure 3. Economic Impact Trends.....	4
Figure 4. Projected Economic Impact of Defense Spending in San Diego County, FY2011*	5
Figure 5. San Diego as the Military Hub in the Region.....	7
Figure 6. Multiplier Diagram	10
Figure 7. Direct Defense Spending by Category, FY2009 (in millions).....	12
Figure 8. Direct Employment by Category, FY2009 (# of jobs)	13
Figure 9. Military Retirees by Congressional District, FY2009	16
Figure 10. Regional Output Impact of Spending by Category, FY2009 (billions).....	18
Figure 11. Output Impact of \$1 of DoD Procurement in San Diego County, FY2009.....	19
Figure 12. Indirect Employment Impact of DoD Spending by Sector, FY2009 (number of jobs).....	20
Figure 13. Total Economic Output Impact, FY2009 (in millions)	21
Figure 14. Total Employment Impact, FY2009	21
Figure 15. Total Earnings Impact, FY2009 (in millions).....	21

List of Tables

Table 1. Historical Trend of Economic Impact of Defense Spending	3
Table 2. Direct Defense Spending by Category and Annual Change, FY2009 (in millions)	13
Table 3. Direct Employment by Category and Annual Change, FY2009 (# of jobs).....	14
Table 4. Number of Employees by Installation, FY2009	14
Table 5. Top 10 Types of DoD Procurement Performed in San Diego County, FY2009	15
Table 6. Ten Largest Recipients of DoD Contracts Performed in San Diego County, FY2009.....	15
Table 7. Top Five Types of GPC Purchases Within San Diego County.....	17
Table 8. Earnings Impact of Defense Spending in San Diego County, FY2009	21
Table 9. Construction Spending, Marine Corps and Navy by Fiscal Year (in millions)	22
Table 10. Planned Deployment Gains and Losses in San Diego County, FY 2010 – FY 2013	22

List of Acronyms

ACSP	Audubon Cooperative Sanctuary Program
APF	Appropriated Funds
BEA	Bureau of Economic Analysis
C&D	Construction and Demolition
CFFR	Consolidated Federal Funds Report
CNRSW	Commander, Navy Region Southwest
DECA	Defense Commissary Agency
DFAS	Defense Finance Accounting System
DJMS	Defense Joint Management System
DMDC	Defense Management Data Center
DoD	Department of Defense
FPDS	Federal Procurement Data System
GPC	Government Purchase Card
IR/PS	International Relations and Pacific Studies
MAG	Marine Aircraft Group
MAW	Marine Air Wing
MCAS	Marine Corps Air Station
MCB	Marine Corps Base
MCRD	Marine Corps Recruit Depot
MCI	Marine Corps Installations
NAICS	North American Industry Classification System
NAVMEDCEN	Naval Medical Center
NAVSUP	Naval Supply Systems Command
NAB	Naval Amphibious Base
NAF	Non-appropriated Funds
NASNI	Naval Air Station North Island
NAVSUP	Naval Supply Systems Command
NBC	Naval Base Coronado
NBPL	Naval Base Point Loma
NBSD	Naval Base San Diego
NEX	Navy Exchange Service Command
NMCS	Naval Medical Center San Diego
NRSW	Navy Region Southwest
NWS	Naval Weapons Station
R&D	Research and Development
RIMS	Regional Input-Output Modeling System
SDPTA	San Diego Port Tenants Association
SIC	Standard Industrial Classification
SPAWAR	Space and Naval Warfare Systems Command
SSC	SPAWAR Systems Center
STARS-FL	Standard Accounting Reporting System - Field Level
STEM	Science, Technology, Engineering, and Mathematics
VAD	Veterans Administrative Database

Executive Summary

Introduction

The centennial celebration of the birth of naval aviation in San Diego reflects the continued importance and strength of the United States Navy and United States Marine Corps and their relationship to San Diego County. In San Diego, they have found a unique location that provides a deepwater port, access to essential training ranges, support from the local community, and access to a highly skilled workforce. As a result, San Diego County is now home to the largest concentration of military in the world and plays a critical role in the defense of the Nation and its actions abroad. In return, the military has catalyzed a steady and growing infusion of federal spending that has become an essential part of the San Diego County economy. The relationship between the military and San Diego County has proven to be mutually beneficial and will continue to evolve and grow in the future.

In 2007, the San Diego Military Advisory Council (SDMAC) believed it was necessary to accurately document the economic impact that the military has on the San Diego community. To achieve this goal, SDMAC retained the services of Export Access, a global market research group based at the School of International Relations and Pacific Studies (IR/PS) at the University of California, San Diego to document the economic impact the military provides to the San Diego region. The end product of this effort was the initial SDMAC *San Diego Military Economic Impact Study* published in August 2008.

As a result of the interest shown in the 2008 study, the current SDMAC Board of Directors again engaged Export Access not only to produce this updated version of the study, but also to provide annual updates for the foreseeable future. Since it takes the various governmental bureaus and agencies a minimum of two years to collate and release the statistical data necessary to create economic impact reports, the hard data in this study is based on information from fiscal year 2009 (October 1, 2008 – September 30, 2009).

This report is divided into three sections: Section I analyzes the available quantitative data; Section II provides an overview of the socioeconomic influence that the presence of defense installations, defense contractors, and military personnel have on a wide spectrum of day-to-day activities in San Diego county; and Section III provides information on the major Navy and the Marine Corps installations in San Diego County and their contributions to the region.

Economic Impact of Defense Spending in San Diego County, FY2009

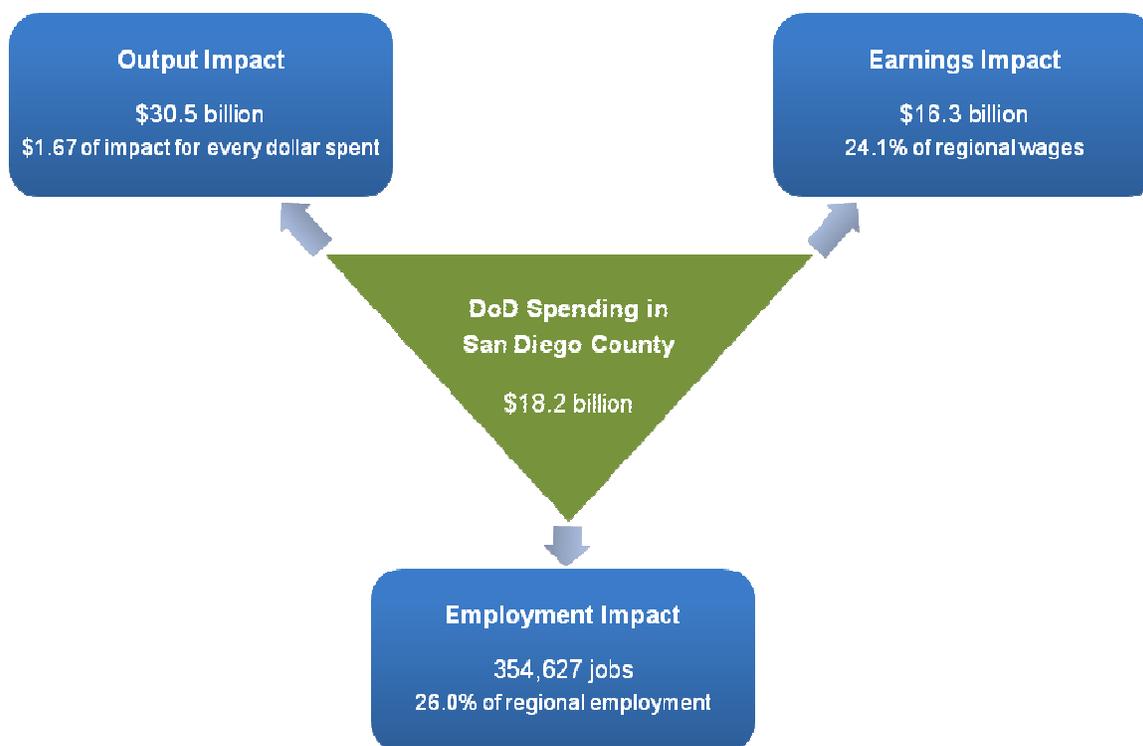
The military has been a vital catalyst for San Diego's economic growth and development by providing high-quality middle-class and upper-middle-class jobs, contracting with local companies, and investing in cutting-edge research. The 2008-2009 global recession drove unemployment up in San Diego, California, and across the Nation. Nonetheless, military spending in San Diego County continued to serve as a significant support to employment, earnings, and overall economic activity throughout San Diego County, actually increasing the total number of jobs over this difficult period.

This report summarizes relevant local economic data and estimates the overall economic impact of the circulation of federal dollars in the regional economy. With the assistance of the Commander Navy Region Southwest, Marine Corps Installation West, Marine Corps Recruit Depot San Diego, Space and Naval Warfare Systems Command, and Naval Medical Center San Diego, as well as other regional military commands, Export Access collected the relevant local economic data, which includes employment numbers, salaries, military procurement, purchases made with government purchase cards, and retiree benefits that took place in fiscal year 2009.

To estimate the indirect economic impact of the military's presence in San Diego, this report uses the [Regional Input-Output Modeling System \(RIMS II\)](#) ~~RIMS II~~ economic multiplier program developed by the U.S. Bureau of Economic Analysis. This methodology is a widely respected tool which assigns specific multipliers to specific categories of spending. These multipliers estimate the "ripple" effect that military spending has in San Diego County. The resulting calculations are estimates, but they provide a reliable measure of the indirect economic impact of the military in San Diego County.

Based on the RIMS II economic multiplier program, we calculate that in FY2009 direct spending catalyzed \$30.5 billion in economic impact and sustained approximately 354,627 jobs with earnings impact of \$16.3 billion, as shown in Figure 1. These impacts represent 15.1%, 8.1%, and 10.9% increases, respectively, from FY2008, which exceed the projections in the 2010 SDMAC Military Economic Impact Study. Note that tourism (another important sector to San Diego) had \$15.9 billion in economic impact during 2009, approximately half the impact of defense spending.¹

¹ Source: San Diego Convention and Visitors Bureau



Sources: CNRSW, CFFR, DMDC, DJMS, DFAS, NAVSUP, STARS-FL, VAD, US Census Bureau, RIMS II & Export Access

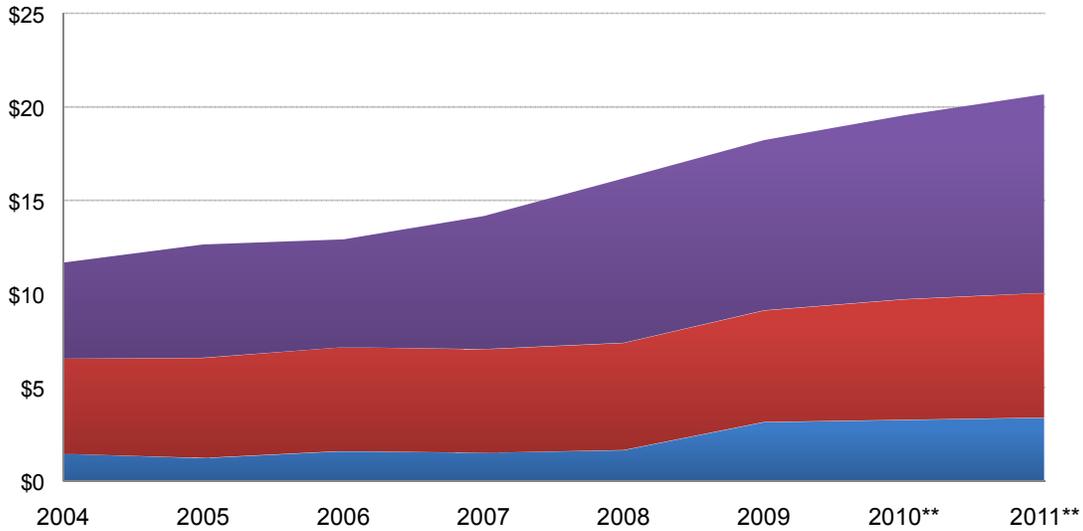
Figure 1. Economic Impact of Defense Spending in San Diego County, FY2009

To put these numbers in perspective, it is helpful to know the economic impact that the military had on San Diego in the past. The following table and charts show the three-year trends for DoD spending in San Diego as well as how the military’s presence has affected economic output, employment, and personal earnings within the region. As can be seen in the charts, the military’s impact on the region has grown steadily over the years, with a significant boost in spending occurring in 2008 and 2009. This growth in spending was attributable mainly to a \$1.7 billion increase in procurement spending from 2007 to 2008 and a \$1.7 billion increase from 2008 to 2009.

Table 1. Historical Trend of Economic Impact of Defense Spending

	2007		2008		2009		2010*	2011*
	Impact	Annual Change	Impact	Annual Change	Impact	Annual Change		
Direct Spending (\$ billions)	14.2	10.1%	16.2	14.1%	18.2	12.3%	19.9	20.6
Economic Output (\$ billions)	23.8	17.2%	26.5	11.3%	30.5	15.1%	33.5	34.7
Earnings (\$ billions)	12.9	9.3%	14.7	14.0%	16.3	10.9%	17.6	18.2
Employment	315,648	2.6%	328,080	3.9%	354,627	8.1%	372,359	385,391

*FY09 to FY10 growth rate projection is based on historical annual averages between FY04 and FY09. FY10 to FY11 growth rate projection is based on 3.5% growth rate due to uncertainties surrounding the FY11 and FY12 DoD budgets.



*Other category includes retirement/disability payments, base expenditures, and other spending
 **2010 & 2011 figures assume 3.5% growth
 Sources: CNRSW, CFFR, DMDC, NAVSUP, VAD and Export Access

Figure 2. DoD Spending in San Diego Over Time (\$ billions)

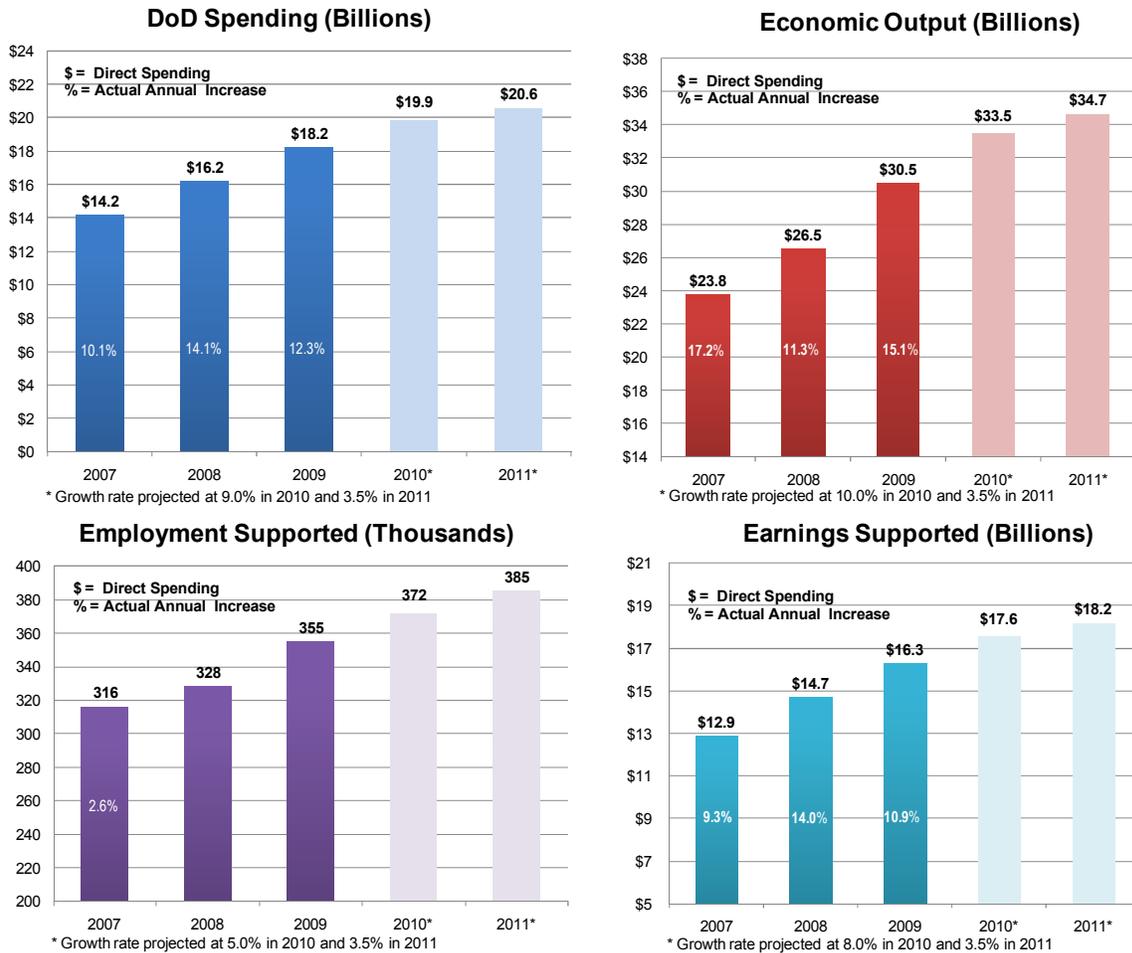


Figure 3. Economic Impact Trends

Projected Economic Impact of Defense Spending in San Diego County, FY2011

The military's presence in San Diego will continue to substantially impact the regional economy in the foreseeable future. As the military continues to shift a greater portion of its forces to the Pacific area of operations and bolster its infrastructure in San Diego, expenditures within the region are likely to increase. In the upcoming years, both the Navy and Marine Corps are already slated to spend significant amounts of money on construction projects.

The deployment of ships and personnel is also set to increase in the near future. Twenty-one ships will either be newly deployed or will redeploy to San Diego by 2012. Furthermore, the Marine Corps "Grow the Force Expansion" initiative will bring more than 4,000 new Marines to the San Diego region from 2010-2012. Figure 4 shows the projected economic impact that the military will have on San Diego in 2011.



*Projection for 2011 based on conservative 3.5% growth rate from 2010

Figure 4. Projected Economic Impact of Defense Spending in San Diego County, FY2011*

From FY2008 to FY2009, direct spending, economic output, employment supported, and earnings supported grew by 12.3%, 15.1%, 8.1%, and 10.9%, respectively. These high growth rates report and represent the continued and growing importance of the military in San Diego County.

By combining macro-level economic data with socioeconomic impacts and base profiles, this report shows that the military's presence in San Diego county continues to be a large driving force of economic activity.

Summary of Economic Analysis

- **Direct Economic Impact** – The DoD spent approximately \$18.2 billion in San Diego County in FY2009, a 12.3% increase from FY2008. Of this \$18.2 billion, about \$5.9 billion was spent on the salaries of 136,664 people within the region.
- **Indirect and Induced Economic Impact** – The indirect and induced effects of the military's presence in San Diego County were \$12.3 billion in economic output and \$10.3 billion in household earnings (salaries), 18.3% and 14.4% respective increases from FY2008. In turn, this spending supported 217,963 local jobs.
- **Total Economic Impact** – The military's presence in San Diego was responsible for \$30.5 billion in economic output, \$16.3 billion in household earnings, and 354,627 jobs. These impact figures represent 15.1%, 10.9%, and 8.1% respective increases from FY2008.
- **Regional Employment** – The military and its spending within the region support approximately 26% of the total jobs in San Diego County, a 3% increase from FY2008.
- **Impacted Sectors** – The two business sectors that gain the most financially from the military's presence in San Diego are the manufacturing and professional/technical services sectors. The total economic impact in terms of output is \$7.2 billion for manufacturing and \$5 billion for professional/technical services, 30.9% and 16.3% respective increases from FY2008.

Section I: Region-wide Economic Impact

1. Overview of the Military in San Diego

San Diego County boasts the presence of a number of military installations that form the core of America's defense establishment in the southwestern region of the United States, as shown in Figure 5. Recruitment, basic training, special training, intelligence, analysis, research and development (R&D), manufacturing, and construction activities all play into the greater San Diego economy, creating a highly integrated and uniquely symbiotic relationship. Anchored by Marine Corps Base Camp Pendleton, Marine Corps Air Station Miramar, Marine Corps Recruit Depot San Diego, Naval Base San Diego, Naval Base Coronado, Naval Base Point Loma, and the Naval Medical Center San Diego, the economic influence of these military facilities is substantial. From providing stable, well-paid manufacturing jobs to advancing high-tech industries and supporting cutting-edge research in healthcare, the presence of the military and its related activities have helped to soften the blow of a number of economic recessions in San Diego's history.

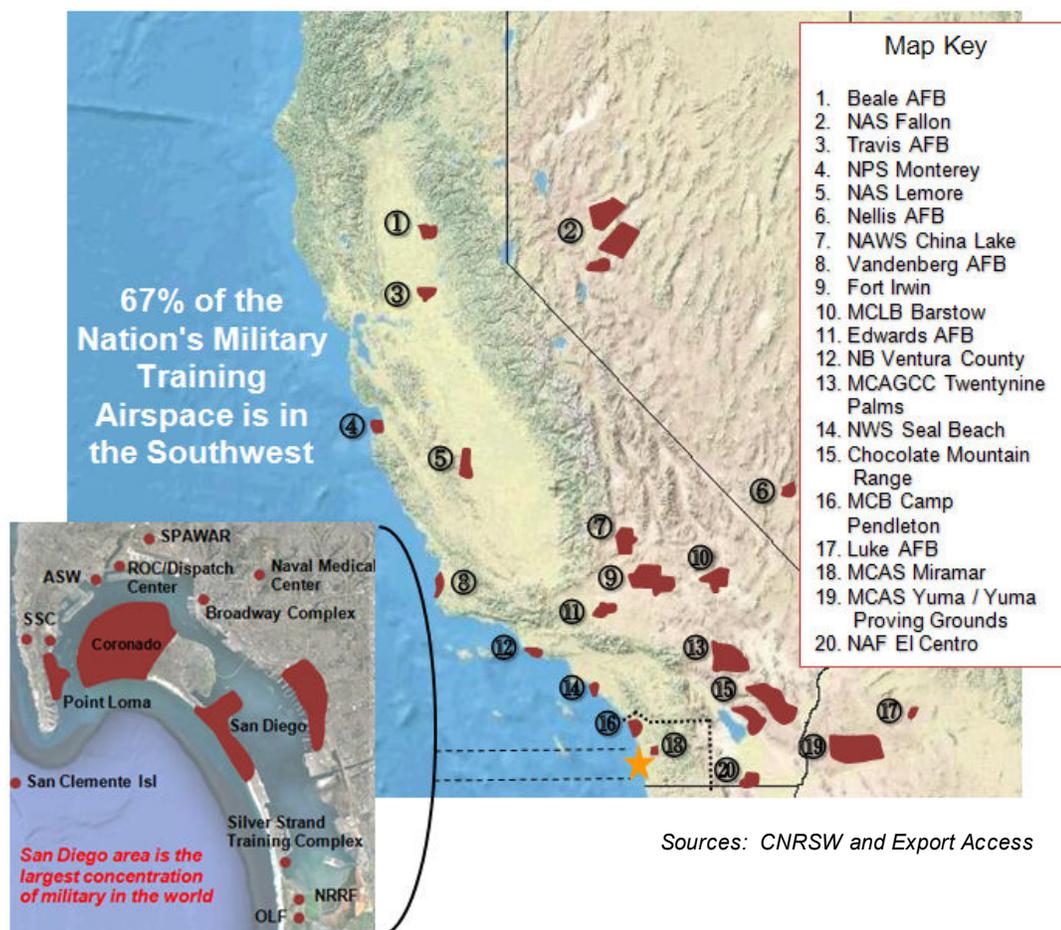


Figure 5. San Diego as the Military Hub in the Region

As this report shows, the DoD directly employs 136,664 individuals and indirectly supports 217,963 jobs with its spending within the region. Direct DoD employment alone makes the military the largest single employer in the county². Additionally, contracting with local high-tech companies has promoted numerous technological advancements and helped to support San Diego County's other economic sectors in fields like biotechnology, communications, information technology, manufacturing, and aerospace. Together, the impact of these activities is substantial, providing a relationship between San Diego and the military similar to that of New York and finance, Los Angeles and entertainment, and Houston and energy.

Using well-documented information about fiscal expenditures related to the military combined with estimation techniques from the U.S. Bureau of Economic Analysis (BEA), this section of the report will document and highlight the many economic benefits that stem from the presence of the military in San Diego for the fiscal year starting October 1, 2008 and ending on September 30, 2009.

2. Methodology

Assessing the total economic impact of military activities can be thought of as a two-step process. The first step is accounting for all of the direct DoD dollars spent on activities in the area; the second step is applying the BEA's economic multipliers to these direct numbers to calculate the "indirect" effect of the military's presence.

The raw data on DoD spending was obtained from a variety of sources such as the Federal Procurement Data System, Consolidated Federal Funds Report, and a number of other DoD authoritative databases (see paragraph 3, Data Sources and Definitions, for more detail). To calculate the indirect impact, this report employs the Regional Input-Output Modeling System (RIMS II) developed by the BEA. RIMS II is designed to measure how fiscal expenditures in the economic activity of a particular industry affect a local economy. This widely respected estimation technique can be used to measure the broad effects of an industry on a local economy, including employment and personal earnings. It can also be used for more specific analyses. For example how the real estate industry affects the construction industry, or how changes in the shipping industry influence manufacturing activity. These economic effects are calculated by applying multipliers to specific dollar amounts across a multitude of industries, each of which have their own multiplier derived from regional and national data by economists at the BEA. To calculate the effect that spending has on the local economy, the dollar amount spent on a certain industry is multiplied by its corresponding regional multiplier, resulting in a fairly accurate estimate of the influence of defense spending in San Diego County.

² San Diego County 2009 Comprehensive Annual Report, Table 14
http://www.co.san-diego.ca.us/auditor/annual_report09/pdf/cafr0809stat.pdf

The basic process consists of:

- a. **Data Collection.** Primary data for DoD spending were collected from various DoD authoritative data sources, then prepared and validated by Commander Navy Region Southwest Regional Business Office.
- b. **Data Cleansing.** Irrelevant, inaccurate, or incomplete data sets were removed or corrected, so that it will be consistent with requirements of the economic impact modeling tool.
- c. **Price Conversion.** For the RIMS II system to work as precisely as possible, the dollar amount the military pays for a good (purchaser price) must be converted to the price that the supplier pays (producer price). Producer prices exclude retail and wholesale margins as well as transportation costs.
- d. **Multiplier Assignment.** Data are assigned the appropriate RIMS II multiplier for the type of expenditure. For example, when the Navy pays for the construction of a new building, that amount is documented as “construction” and given its corresponding multiplier.
- e. **Estimation of Impact**
 - 1) *Economic Output* – The categorized spending by the DoD is multiplied by the corresponding RIMS II coefficient to estimate the economic output impact. Since the government is a final user of goods instead of an intermediate industry, the initial change in government output is *not* added into the model. For example, if direct spending were \$1.00 then the entire economic output generated by that \$1.00 would be found by multiplying \$1.00 by 1.67(average output multiplier) to get \$1.67 in total economic output. The initial \$1.00 is not re-added.
 - 2) *Earnings* – Estimation of the indirect and induced earnings caused by military spending is calculated by multiplying the earning amount by its RIMS II coefficient, and is added to the amount that the government directly pays employees, yielding the total impact.
 - 3) *Employment* – Estimation of the indirect and induced effects on employment caused by military spending is likewise calculated and added to the number of people that the government directly employs.

As an example of how this process works, if the military were to spend \$1 million in a year on manufactured computer parts in San Diego, the RIMS II multiplier for computer/electronics manufacturing would be utilized. When using RIMS II for procurement, producer prices (as opposed to purchaser prices) are used. If the producer’s price of the computer parts was \$1 million and the multiplier for computer/electronics manufacturing is 2.08 in San Diego, the military’s spending would lead to an increase in economic output of \$2,080,000 ($\$1 \text{ million} \times 2.08$).

The methodology used to estimate earnings and employment is similar to that used to estimate economic output, except that because the military directly employs and pays individuals, these initial changes (direct employment/earnings) must be factored into the total impact. Suppose, for example, the earnings multiplier

for computer/electronics manufacturing is 0.6 and the employment multiplier is 10 jobs per \$1 million spent. If the military were to spend \$1 million on computer parts, the total employment impact would be 10 plus the number of people the military directly employs³. The total earnings impact would be \$600,000 plus the amount that the military directly pays its employees⁴.

Any economy has many interrelated industries working with each other. As such, all of the above estimated impacts can be broken into 19 general categories. They include sectors such as retail, manufacturing, healthcare, education, and professional services. See Appendix 2 for a complete list. This makes comparison of the impact of military spending across sectors easier and reveals their relative importance. To illustrate, a change in the output of the light manufacturing industry would be more likely to cause a greater effect in the shipping and transportation industry than in the arts, entertainment, and recreation industry.

According to the BEA, economic impact estimates produced using RIMS II multipliers are comparable to the estimates generated by more region-specific surveys. Nevertheless, some studies have found RIMS II multipliers to overestimate the economic impact that certain industries have. Some empirical tests have found that RIMS multipliers have the potential to overestimate economic impact by approximately 5%⁵. While such a difference is noteworthy, it is still well within the industry standard for impact studies. Furthermore, the amount of resources necessary to make a more precise estimate of the economic impact that the military has on San Diego County would be excessive. Thus, to achieve the best combination of accuracy and cost-effectiveness, the RIMS II method is the optimal methodology.

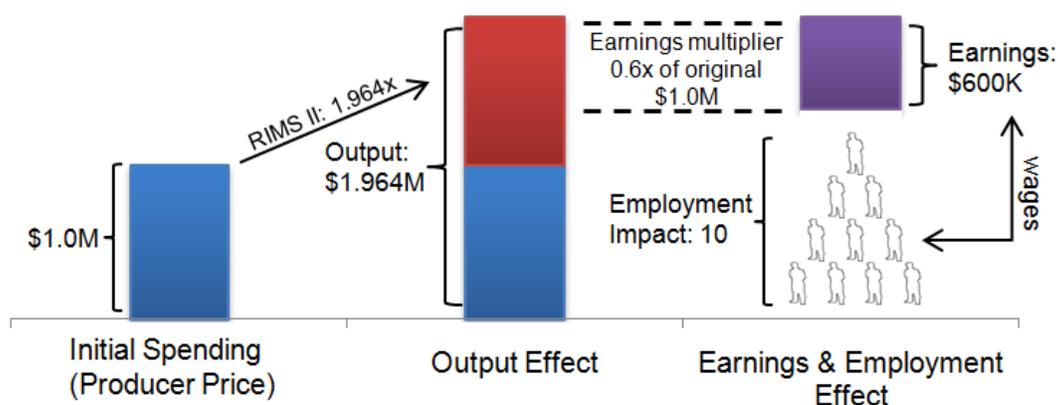


Figure 6. Multiplier Diagram

³ $10 = \$1,000,000 * (10/1,000,000)$

⁴ $\$600,000 = \$1,000,000 * .6$

⁵ See Lynch, Tim, *Analyzing The Economic Impact of Transportation Projects Using RIMS II, IMPLAN and REMI*, Center for Economic Forecasting and Analysis, October 2000

3. Data Sources and Definitions

This study is based on data obtained from a number of sources. The majority of the primary data (procurement data, employment numbers, etc.) were sourced from DoD authoritative databases. All primary data values, with the exception of Salary numbers, are from FY2009. The definitions and sources of the main categories of spending are as follows:

- **Procurement.** Any purchase of a good or service performed in San Diego County by the DoD is included in the “Procurement” category. Between October 1, 2008, and September 30, 2009, the DoD made approximately 27,600 procurement actions in San Diego County. Procurement data were obtained from the Federal Procurement Data System (FPDS) and the Defense Management Data Center (DMDC). Procurement amounts were based on obligations awarded in FY2009. An obligation legally encumbers a specified amount of money that will require outlays or expenditures in the future based on the contract. The duty to make payment of money is incurred as soon as a contract is awarded. Actual payments may have been made at a later month or over a series of months as the fulfillment of contracts takes place. Assuming a relatively steady state of year-to-year procurement, this study assumes that the yearly obligations of the military are representative of the yearly funds entering the local economy. Additionally, all contracts (including service contracts) are captured in the procurement data.
- **Government Purchase Card (GPC).** Purchases made with a GPC are included in this category. GPC purchases are made to vendors for goods or services and are the preferred method for purchasing or for paying for goods under \$3,000. The GPC program is intended to streamline small purchases and payment processes, or generally simplify the administrative process associated with procuring goods or services. Naval Supply Systems Command (NAVSUP), the GPC program coordinator for the Navy, provided the GPC data used in this study.
- **Salary (Earnings).** Salaries paid to active-duty military personnel and DoD civilians residing in San Diego County are included in this category. Salaries represent actual gross pay disbursements made to people, but do not include the value of benefits and fringe payments. Housing entitlements for active duty military, for example, are not included in this category. Salary data was taken from the Consolidated Federal Funds Report (CFFR). Complete salary data from FY2009 was not available at the time of the report. This report uses estimated FY2009 data based on FY2008 figures. The estimation adjusted FY2008 salary information by scheduled increase in salary (3.9% for FY2009) to estimate salaries that DoD employees received in FY2009⁶. DoD employees receive yearly pay raises to cover the corresponding increase in the cost of living that occurs each year.

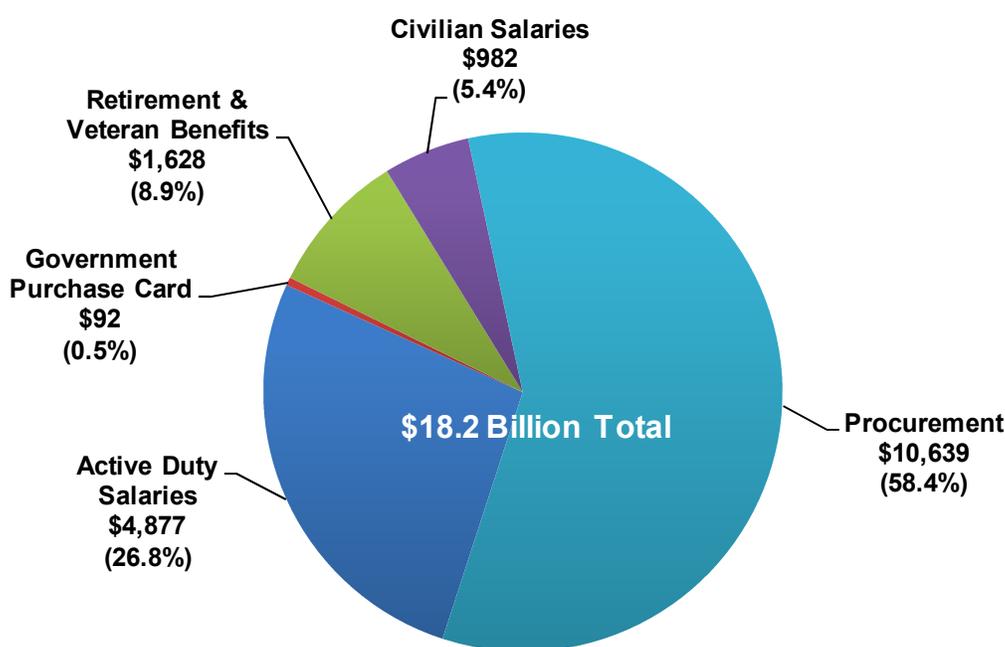
⁶ The salaries of DoD employees in San Diego increased by 3.9% from FY2008 to FY2009. See <http://www.navycs.com/09militarypaychart.html> for more detail.

- **Retirement/Veteran Benefits.** Funds provided to retirees and veterans are included in this category. “Retirees” as used in this report only include military retirees.

4. Direct Defense Spending in San Diego County

Direct defense spending represents the amount of money the military expends within San Diego for all procurement actions, pay and salary outlays, and benefits or monetary compensation to military retirees and veterans. These direct dollars that are injected into the economy via the DoD represent a significant portion of income and business activity in San Diego County. Indeed, these dollars on their own support thousands of jobs and business contracts throughout the area. To put the magnitude of these numbers in the area into perspective, military spending equates to roughly \$6,000 in per capita spending for each of San Diego County’s approximately three million residents⁷.

Direct DoD spending in the region is broken down into the following categories: (a) procurement, (b) salaries, (c) government purchase card transactions, and (d) benefits for retirees/veterans⁸. In FY2009, direct DoD spending totaled approximately \$18.2 billion in the San Diego County. Of this \$18.2 billion, more than half went to procurement, roughly a quarter to active duty salaries, a fifth to civilian salaries, and a ninth to retirement and veteran benefits.



Sources: CNRSW, CFFR, DMDC, NAVSUP, VAD and Export Access

Figure 7. Direct Defense Spending by Category, FY2009 (in millions)

⁷ US Census Bureau, *State and County QuickFacts: San Diego County*, <http://quickfacts.census.gov/qfd/states/06/06073.html>

⁸ Please refer to the Data Sources and Definitions section for definitions of these categories

Table 2. Direct Defense Spending by Category and Annual Change, FY2009 (in millions)

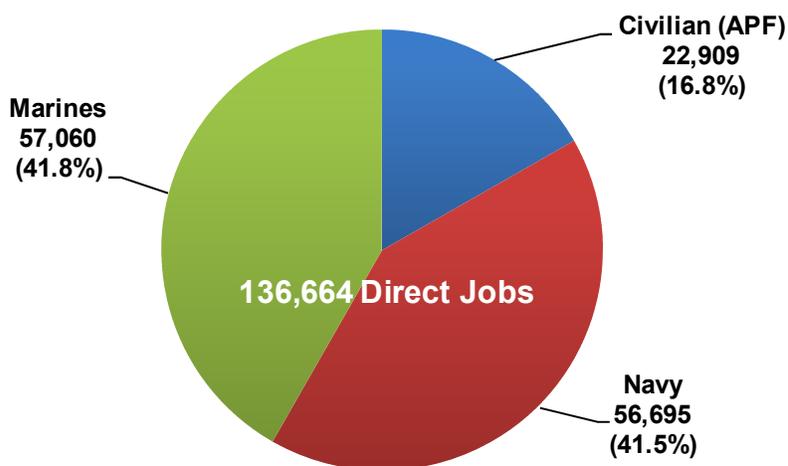
	2009 Direct Spending	2008 Direct Spending	Annual Change (2008-2009)
Procurement	\$10,639	\$8,887	19.7%
Active Duty Salaries	\$4,877	\$4,777	2.1%
Retirement & Veteran Benefits	\$1,628	\$1,489	9.4%
Civilian Salaries	\$982	\$945	3.9%
Government Purchase Card	\$92	\$40	130.7%
Total	\$18,219	\$16,138	12.9%

Sources: CNRSW, CFFR, DMDC, NAVSUP, VAD and Export Access

4.1 Direct Employment

DoD spending directly supported 136,664 jobs in the area in FY2009. These direct jobs include active duty service men and women as well as civilian employees. Contractors affiliated with the military bases were not included in the employment counts.

Of the 136,664 DoD-funded positions, 56,695 were Navy personnel and 57,060 were Marines. The majority of Navy personnel were stationed in Naval Base San Diego and Naval Base Coronado, while most Marines were stationed at the Marine Corps Base Camp Pendleton (see Table 4 on the next page for details). The DoD also employed 22,909 civilians in San Diego County. Typical civilian positions included engineers, project managers, and supply chain managers.



Sources: CNRSW and Export Access

Figure 8. Direct Employment by Category, FY2009 (# of jobs)

Table 3. Direct Employment by Category and Annual Change, FY2009 (# of jobs)

	2009 Direct Employment	2008 Direct Employment	Annual Change (2008-2009)
Marines	57,060	57,162	-0.2%
Navy	56,695	56,394	0.5%
Civilian (APF)	22,909	23,173	-1.1%
Total	136,664	136,729	-0.05%

Sources: CNRSW and Export Access

It should be noted that civilians employed by the Defense Commissary Agency (DECA) are included in the total civilian appropriated funds (APF) employment figures in this report. DECA is an agency of the DoD that is responsible for operating commissaries that sell groceries and other household supplies on U.S. military installations. DECA, unlike a Base Exchange⁹, receives money from the federal government to pay its employees.

Table 4. Number of Employees by Installation, FY2009

Installation*	Civilian (APF)	Marine Corps	Navy	Total
MCAS Miramar	680	9,237	510	10,427
MCB & MCAS Camp Pendleton	2,384	41,685	4,415	48,484
MCRD San Diego	394	5,571	146	6,111
NAVMEDECEN San Diego	2,140	30	3,623	5,793
NB Coronado (Imperial Beach)	76		512	588
NB Coronado (NAB Coronado)	574	143	5,289	6,006
NB Coronado (NASNI and SCI)	4,115	86	15,107	19,308
NB Point Loma (NMAWC)	193	3	1,904	2,100
NB Point Loma (OTC)	794	80	354	1,228
NB Point Loma	7,316		2,292	9,608
NB San Diego	2,396	20	22,021	24,437
NB San Diego (Broadway)	1,390		373	1,763
Navy Operational Support Center San Diego	3	98	42	143
NWS Seal Beach DET Fallbrook	98		18	116
Other	356	107	89	552
Total	22,909	57,060	56,695	136,664

*For list of acronyms, see p.viii

Sources: CNRSW and Export Access

4.2 Direct Procurement

Procurement expenditures, defined as purchases of goods or services by the DoD within San Diego County, totaled approximately \$10.6 billion in FY2009. These funds were spent on a range of contracts with local industries on activities such as manufacturing, shipbuilding, R&D, and logistical operations necessary to run San Diego's vast military establishment. As in years past, procurement spending was predominantly manufacturing and professional/technical services. Manufacturing related expenditures totaled \$4.8 billion, or 45% of all procurement, while professional and technical services expenditures totaled \$3.8 billion, or 36% of

⁹ A Base Exchange is a type of retail store that operates on U.S. military installations.

all procurement. Table 5 summarizes the ten types of procurement that the DoD spent the most money on in FY2009.

Total defense spending has significantly helped stabilize San Diego County's economy through several substantial economic contractions by providing stable employment to defense personnel and by placing procurement orders with private companies in the County. These procurement orders have helped to provide a growing source of jobs during a period of increased unemployment. Much of this spending was directed to local defense contractors like General Dynamics and General Atomics among others. Table 6 indicates the size of the contracts allocated to the top ten vendors in the San Diego County for FY2009.

These defense contractors provide well-paying, high-tech jobs for local residents and inject valuable economic and social resources into the local economy through their own purchases from other companies and firms in the region.

Table 5. Top 10 Types of DoD Procurement Performed in San Diego County, FY2009

Type of Procurement	Navy	All Other Agencies	Total
1) Ship Building and Repairing	\$1,797,528,455	\$986,941	\$1,798,515,396
2) Engineering Services	\$1,223,279,277	\$469,671,460	\$1,692,950,737
3) R&D in Physical, Engineering and Life Sciences	\$481,147,027	\$777,361,614	\$1,258,508,641
4) Construction	\$1,197,808,335	\$11,403,858	\$1,209,212,194
5) Aircraft Manufacturing	\$131,963,536	\$993,439,441	\$1,125,402,977
6) Misc. Communications Equipment Manufacturing	\$101,286,495	\$567,188,258	\$668,474,754
7) Other Aircraft Parts and Aux. Equipment Manufacturing	\$157,907,394	\$65,815,676	\$223,723,070
8) Electronic Component Manufacturing	\$458,193	\$198,316,042	\$198,774,235
9) Wireless Communications Equipment	\$17,949,051	\$176,439,875	\$194,388,926
10) Other Professional and Technical Services	\$44,422,343	\$123,746,875	\$168,169,218
Top Ten Total	\$5,153,750,107	\$3,384,370,039	\$8,538,120,147

Sources: CNRSW, DMDC and Export Access

Table 6. Ten Largest Recipients of DoD Contracts Performed in San Diego County, FY2009

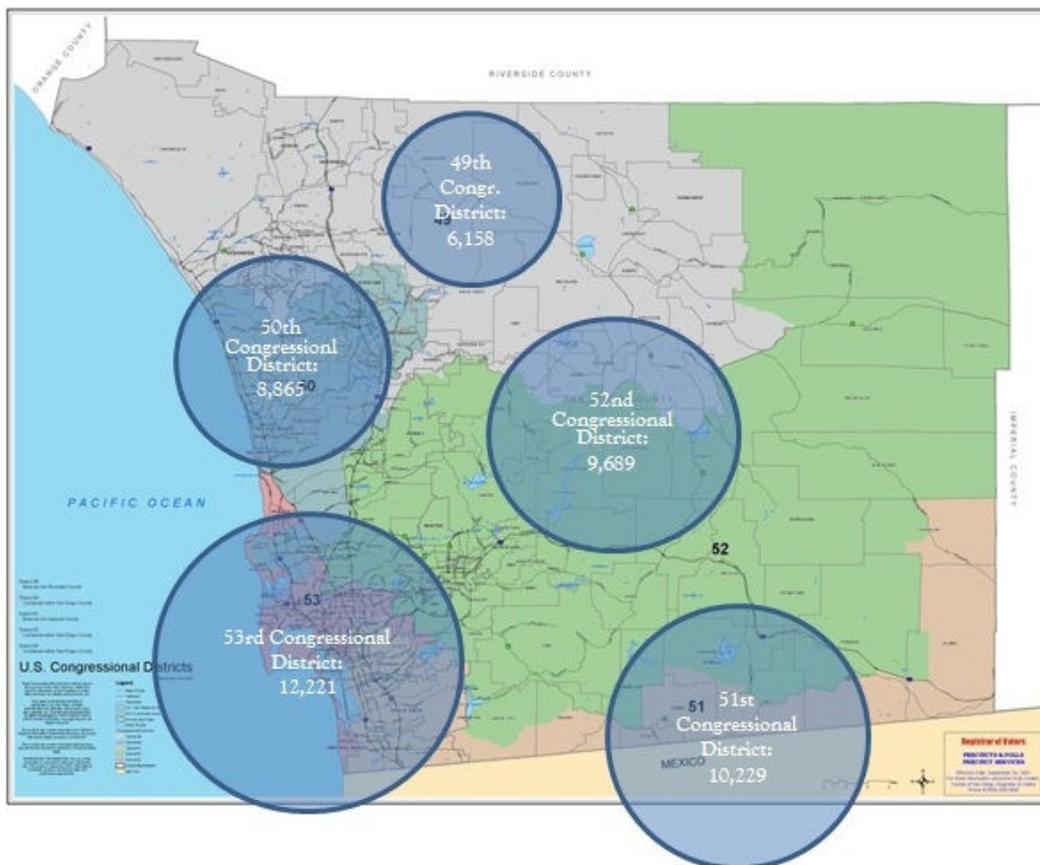
Type of Procurement	Navy	All Other Agencies	Total
1) General Dynamics*	\$1,481,408,742	\$12,065,862	\$1,493,474,604
2) Science Applications International	\$287,162,378	\$1,188,748,199	\$1,475,910,577
3) Northrop Grumman*	\$437,234,187	\$1,017,856,834	\$1,455,091,021
4) General Atomics*	\$275,293,824	\$1,040,353,502	\$1,315,647,326
5) Harper Construction	\$324,498,526	\$0	\$324,498,526
6) BAE Systems*	\$195,372,223	\$67,473,999	\$262,846,222
7) Turner-Penick	\$213,303,344	\$0	\$213,303,344
8) Hensel Phelps Construction	\$177,640,072	\$0	\$177,640,072
9) Cubic Corporation*	\$36,194,075	\$137,826,298	\$174,020,374
10) Booz Allen Hamilton*	\$135,562,060	\$0	\$135,562,060
Top Ten Total	\$3,563,669,432	\$3,464,324,694	\$7,027,994,126

*Includes Subsidiaries

Sources: CNRSW, DMDC and Export Access

4.3 Benefits Paid to Retirees and Veterans

The military also benefits the local economy through the presence of the large number of retirees and veterans in the region. On the whole, DoD spending accounted for slightly more than one billion dollars in benefit payments to approximately 47,160 retirees. Additionally, another \$500 million of payments went to slightly more than 244,000 military veterans in San Diego County in FY2009. Retirees and veterans are not mutually exclusive categories of people. However, the veteran and retirement benefits that these individuals receive come from separate sources (thus there is no double counting in terms of the funds they receive). Payments to retirees and veterans were used for compensation, pension, education, and vocational rehabilitation for military veterans in the region¹⁰. It should be noted that benefit payments to DoD civilian retirees are not included in this study. The presence of retirees and veterans also benefit the economy in other indirect ways. For example, San Diego boasts top-notch health care facilities located at Sharp, Mercy, UCSD Scripps, and the Naval Medical Center with the help of demand from the presence of these retirees. Figure 9 shows the breakdown of military retirees by congressional district.



Sources: CNRSW, DFAS, DJMS and Export Access

Figure 9. Military Retirees by Congressional District, FY2009

¹⁰ The Compensation and Pension category includes expenditures for the following programs: veterans' compensation for service-connected disability; dependency and indemnity compensation for service-connected deaths; veterans' pension for non-service-connected disabilities; and burial and other benefits to veterans and their survivors.

4.4 Government Purchase Card Spending

Although the smallest component of the total direct DoD spending in the area, spending from GPCs by local military employees provides real benefit to San Diego’s local businesses. In total, approximately \$92.3 million worth of government procurement card appropriated funds entered the San Diego economy in FY2009. GPC spending is derived from the micro-purchases related to operations that total less than \$3,000 per transaction. These purchases inject money into the county’s economy through a variety of sectors ranging from food service to retail. Table 7 depicts a summary of the major types of GPC purchases that were made.

Table 7. Top Five Types of GPC Purchases Within San Diego County

Type of Purchase	Dollar Amount
1) Misc. Retail	\$ 35,423,665
2) Industrial Supplies	\$ 26,362,785
3) Business Support Services	\$ 11,053,939
4) Electronics	\$ 7,868,339
5) Hardware	\$ 3,274,565
Top 5 Total	\$ 83,983,292

Sources: CNRSW, NAVSUP and Export Access

Most GPC transactions occur to cover areas of need when filling a contract. For example, the purchase of safety goggles and hardhats for use in construction areas by non-construction personnel could be bought with GPC funds. Another example could be the purchase of small electrical components that are needed as soon as possible to allow an on-base project to continue. Essentially, GPC funds are used to fill needs that occur in the course of a job that were unforeseen in the original budget.

5. Indirect and Induced Effects of Defense Spending

The total economic impact of military spending in San Diego County takes into account the direct spending numbers presented on the previous pages along with the estimated impact of these dollars circulating in the economy. For example, the total impact of employment in the area sums the number of active duty and civilian jobs employed *directly* by defense spending, and the jobs that spending supports *indirectly* through private contracting by procurement and the spending in the local economy by active duty, civilian, and retirees. The indirect and induced impacts were estimated using the RIMS II economic multipliers developed by the BEA. For a more detailed explanation on how economic multipliers work, please refer to Appendix 1.

5.1 Impact on Regional Economic Output

The economic effect of defense spending in San Diego County goes further than just the dollar amounts directly attributed to the DoD. As military employees and local businesses receive money from the DoD, they then spend a portion of that money on other goods and services in San Diego. The result is a “ripple effect” across the economy whose impact is greater than the initial amount spent (direct spending). On average, each

defense dollar spent in the San Diego economy results in \$1.67 in *total* economic activity. As such, the approximately \$18.2 billion spent in FY2009 becomes \$30.5 billion of economic activity, adding an additional \$12.3 billion to the local economy.

Figure 10 shows the economic output impact of spending by category. As can be seen in the chart, the multiplier effect of procurement is significantly higher than that of the other categories. This difference is due to the fact that the RIMS multipliers take into account the dampening effect that taxes and savings have on expenditures. In other words, individuals save a greater portion of their income and pay a higher tax rate than businesses do. As a result, the output multipliers for the various types of procurement are almost always higher than the multipliers used for salaries.

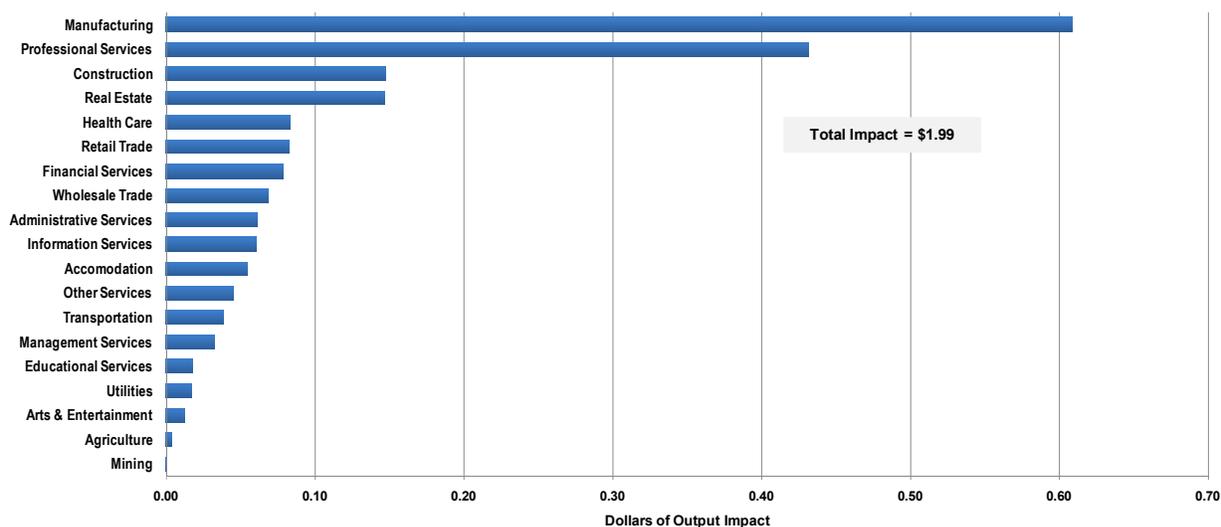


*Other spending includes retirement/disability payments and GPC spending
 Sources: CNRSW, CFFRR, DMDC, NAVSUP, VAD and Export Access

Figure 10. Regional Output Impact of Spending by Category, FY2009 (billions)

As the military spends in a multitude of different sectors, the impact of this spending is likewise spread across the local economy. The two sectors with the largest *total* impact on economic output due to military spending are manufacturing (approximately \$7.2 billion) and professional and technical services (\$5.0 billion). As a result, the military continues to attract and retain a significant level of both manual and highly skilled professional jobs in San Diego County, providing important stabilization to the economy in times of recession especially during the current period of high unemployment.

Figure 11 details how a dollar spent on procurement affects various industries in San Diego. As can be seen in the graph, every dollar of procurement leads to an average of almost \$2 in economic output, with the majority of the output going to the manufacturing and professional service sectors. Overall, however, every dollar of DoD spending leads to roughly \$1.67 in economic output in the area. As noted before, the reason that the effect of procurement spending is larger than the effect of salaries (the other major component of DoD spending) is that individuals save more and are taxed less than the businesses that receive procurement orders. As such, procurement spending leads to more money being circulated within the local economy than paying out salaries.



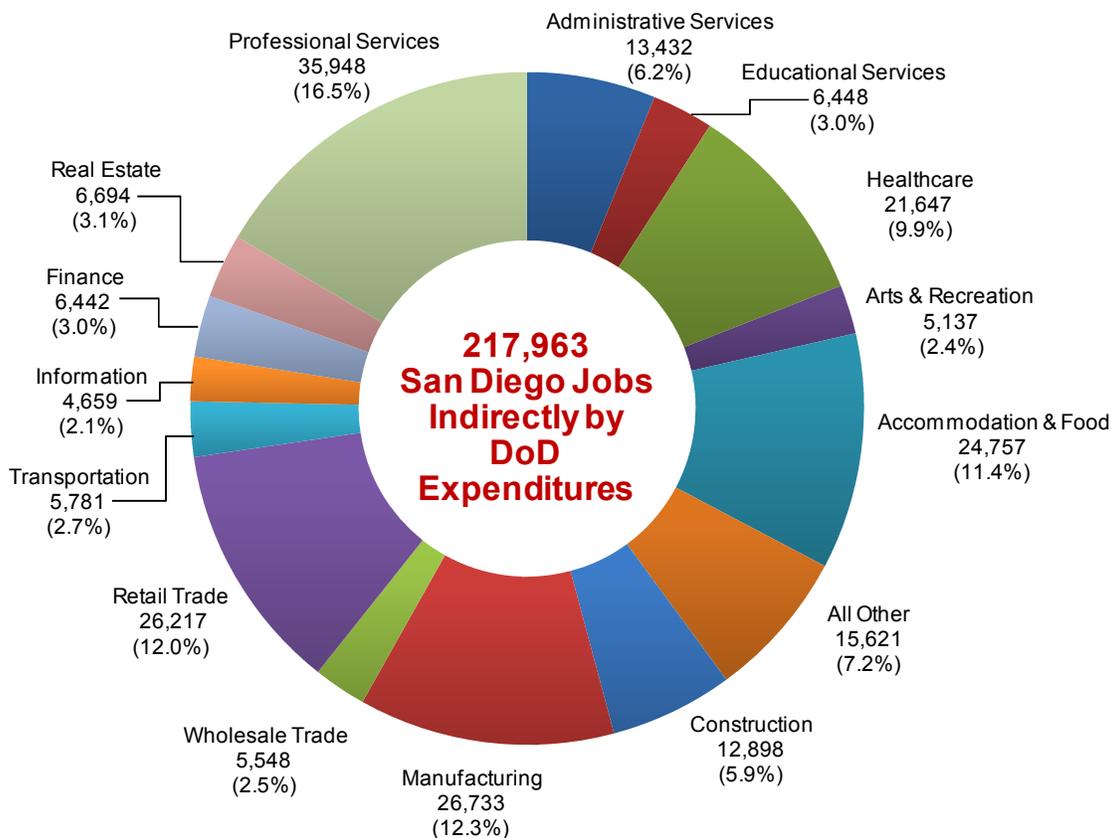
Sources: RIMS II and Export Access

Figure 11. Output Impact of \$1 of DoD Procurement in San Diego County, FY2009

5.2 Impact on Regional Employment

As shown in Figure 12, as a result of the increase of money circulating in the local economy, 217,963 additional local jobs were created by defense spending in FY2009. When combined with the other 136,664 that military defense spending directly employs, this accounts for 354,627 local jobs. As total employment in San Diego County numbered approximately 1,250,000 in FY2009¹¹, it is estimated that the military's presence in San Diego was directly and indirectly tied to approximately 26.0% of the region's employment.

¹¹ Source: BLS, Quarterly Census of Employment and Wages



Sources: RIMS II and Export Access

Figure 12. Indirect Employment Impact of DoD Spending by Sector, FY2009 (number of jobs)

The areas of employment in the local economy that benefited most from DoD spending were professional services, retail, accommodation and food services, health care, and manufacturing. Other economic areas considerably influenced included administrative services, construction, and educational services. In light of how hard-hit construction, education, and manufacturing jobs have been over the past three years, the presence of the military has acted as an increasing source of job growth. Given high national unemployment levels, the military in San Diego County has been one of the few sources of steady, well-paying jobs.

5.3 Impact on Regional Personal Earnings

In FY2009, DoD spending introduced approximately \$10.3 billion in personal earnings in the local economy, in addition to the roughly \$5.9 billion in personal earnings going to those directly employed by the military.

As seen in Table 8, procurement spending in FY2009 generated approximately \$7.4 billion of personal earnings as a result of circulating DoD dollars. This amount comes in the form of salaries paid by the major defense contractors in the region (General Dynamics, General Atomics, etc.) as well as other smaller local businesses to employees. Salaries paid by the DoD were then spent by military personnel on personal

consumption items like food, entertainment, and consumer goods. This spending in turn supported jobs in the local economy that paid a total of \$2.3 billion in personal earnings. Lastly, military pensioners and government purchase card activities created a small but significant impact in the level of personal earnings in San Diego County.

Table 8. Earnings Impact of Defense Spending in San Diego County, FY2009

	Procurement	GPC	Salaries	Retirement & Veteran Benefits	Total
Initial Changes (direct)*	\$ --	\$ --	\$ 5,945,364,023	\$ --	\$ 5,945,364,023
Multiplier Effect (indirect)**	\$ 7,425,111,738	\$ 57,985,885	\$ 2,251,816,613	\$ 584,117,514	\$ 10,319,031,751
Total	\$ 7,425,111,738	\$ 57,985,885	\$ 8,197,180,637	\$ 584,117,514	\$ 16,264,395,774

*Initial Changes refers to the amount of money directly paid to military employees

**Multiplier Effect calculated by multiplying spending in category by RIMS II multiplier. See methodology section for more detailed explanation.

Sources: RIMS II, CNRSW, CFFR, DMDC, NAVSUP, VAD and Export Access

6. Total Impact on the San Diego Economy

The overall effect of defense spending can be much larger than just the direct amount spent because of the multiplier effect of each dollar spent. On the whole, military spending supported roughly \$30.5 billion in economic activity, more than 354,000 local jobs, and \$16.3 billion in personal earnings, as shown in Figures 13 through 15.

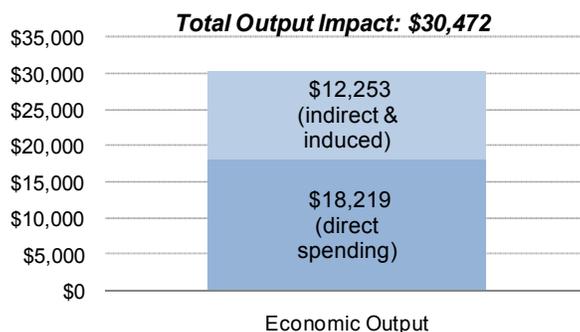


Figure 13. Total Economic Output Impact, FY2009 (in millions)

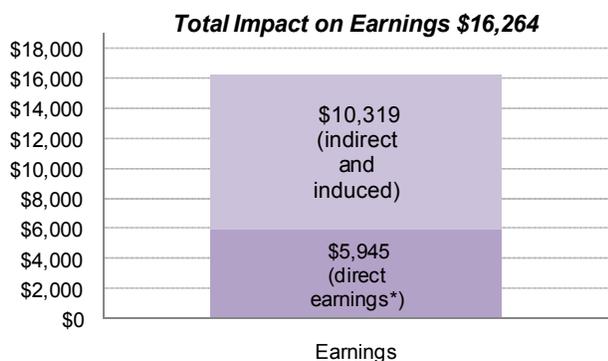


Figure 14. Total Employment Impact, FY2009

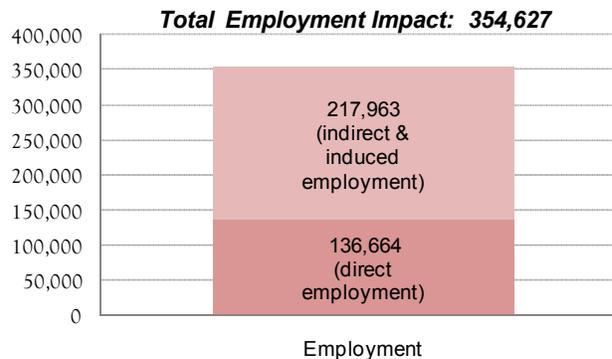


Figure 15. Total Earnings Impact, FY2009 (in millions)

*Earnings and Salaries are synonymous

Sources for Figures 13-14: RIMS II, CNRSW, CFFR, DMDC, DJMS, DFAS, NAVSUP, STARS-FL, VAD and Export Access

7. Future Regional Military Projects

As the military continues to shift from an Atlantic-oriented force to a more Pacific-oriented force, San Diego will continue to be an extremely important military hub. Furthermore, as the U.S. continues to team with foreign governments in order to fight terror across the globe, the military's activities in San Diego will remain elevated for the near future. This section will outline some of the future construction and redeployment plans for the region.

The figures in Table 9 represent the amount budgeted for Navy and Marine Corps construction projects. A few things are worth noting about these figures. First, construction budgets are spread out over time. As such, the figures do not necessarily represent the amount spent in the given year. Spending could “spill over” to ensuing years. Second, the amount budgeted is not necessarily the amount of money paid to the contractor. A general rule of thumb is that 90% of these values are paid to contractors, with the figures taking into account estimated contingency costs.

Table 9. Construction Spending, Marine Corps and Navy by Fiscal Year (in millions)

	2006	2007	2008	2009	2010	2011*	2012*
Navy	\$ 46.0	\$ 70.0	\$ 142.7	\$ 194.5	\$ 162.7	\$ 282.2	\$ 189.2
Marine Corps	\$ 56.1	\$ 193.3	\$ 375.7	\$ 993.4	\$ 778.0	\$ 592.7	\$ 335.1
Total	\$ 102.1	\$ 248.6	\$ 518.4	\$ 1,187.9	\$ 940.7	\$ 874.9	\$ 524.3

Redeployment is another manner in which the military's economic impact on San Diego is expected to grow, as redeployed ships and their crews will pump money into the region. Examples include the stationing of four additional littoral combat ships in San Diego, an increase in helicopters and the general expansion of the Marine Corps presence in the area from FY2010 through FY2013.

Table 8 provides a sample of some of the planned deployments in the region (list is not all-inclusive). Pay was estimated by multiplying the planned increase in personnel by the annual average gross pay of respective personnel.

Table 10. Planned Deployment Gains and Losses in San Diego County, FY 2010 – FY 2013

Action	Personnel	Annual Earnings (in millions)
Littoral Combat Ship Homeport Gains (four ships)	400	\$ 26.3
NB San Diego Additional Ship Homeport Gains	1,300	\$ 85.3
Navy Helicopter Gains (twenty five)	750	\$ 49.2
Naval Medical Center San Diego Growth	84	\$ 6.6
Grow the Force Marine Expansion		
MCB Pendleton	3,700	\$ 214.4
MCAS Pendleton	750	\$ 43.5
MCAS Miramar	600	\$ 38.0
Total	7,584	\$ 463.3

Sources: CNRSW, MCI West, and Export Access

8. Conclusion

On the whole, DoD spending in FY2009 helped to support \$30.5 billion in economic activity, 354,627 jobs and \$16.3 billion in personal earnings in San Diego County. Military activities provided funding for numerous projects across engineering and manufacturing fields, contributing to a wide and diverse base of employment in the region that fosters job growth, retail trade, and real estate development. Along with San Diego's high quality of life, these well-paying blue- and white-collar jobs help to attract and retain an educated and skilled workforce.

In the context of the larger economic recession, the military's activities serve as a catalyst for many careers. The external benefits that accompany an educated work force help San Diego combat the growing threat of high income inequality. The presence of the Navy, Marines, and their related organizations have helped to stabilize San Diego's economy in difficult times by directly supporting approximately 136,000 solid middle-class jobs and another 217,900 jobs indirectly through the circulation of DoD dollars.

9. Assumptions

A number of assumptions were made in Section I. They are worth noting because some of them bias the estimated economic impact either upwards or downwards. The major assumptions in this study are:

- a. ***DoD Procurement is Always Attributable to Military Presence.*** It is assumed that all DoD procurement of goods and services in San Diego County is directly attributable to the presence of the military in the region. In most cases, this approach is completely reasonable. For example, when the Navy requests Northrop Grumman to perform repairs or maintenance for its ships stationed in San Diego, it places an order with Northrop Grumman's San Diego office. However, if the Air Force orders an unmanned aerial vehicle from Northrop Grumman's San Diego office, it could be argued that the economic impact should not be counted within this report because the Air Force does not have a sizeable presence in San Diego. On the other hand, if it were not for the presence of the Navy in San Diego, Northrop Grumman would not have operations in the region¹². Following this logic, the economic impact of the procurement of the unmanned aerial vehicle is attributable to the presence of the military's existence in San Diego. As stated previously, DoD procurement in the region is always attributable to the presence of the military in this report.
- b. ***Military Personnel Consumption Habits.*** It is assumed that the consumption habits of military personnel are roughly similar to those of the average consumer. This assumption was made so that the RIMS "household" multiplier could be used to estimate the impact of spending personal income of military personnel, as there is no RIMS multiplier specific to them. The household multiplier estimates the impact

¹² http://www.irconnect.com/noc/press/pages/news_releases.html?d=81415

that personal consumption expenditures have on the economy as a whole¹³. However, the spending habits of military personnel likely differ from those of the average consumer. A large portion of military personnel, for example, do not have to purchase food while on the job. Because military personnel use less of their disposable income on food, the economic impact that their spending has on the food and grocery industries is smaller. While the estimated economic impact on certain industries may differ as a result of employing the household multiplier instead of doing a comprehensive study of the spending habits of military personnel to estimate the economic impact of their expenditures, the overall economic impact is not expected to be significantly different.

- c. **Impact Year.** The estimated economic impacts of this report are for the 2009 fiscal year. It is worth noting that there is a difference between when a procurement contract is signed and when it is completed. For reporting purposes, the DoD will note an expenditure item in the period it was approved. However, the local economy will not realize the full impact of that contract until it is completed. Depending on the contract this impact may range from immediately, in the case of a simple purchase of materials, to five or six years in the case of shipbuilding. Therefore, although estimates of economic impacts are assigned to the year in which they are reported, they tend to be spread out over a number of years. This leads to a small upward bias in the estimates because the figures do not account for the time value of money, in that a dollar today is worth more than a dollar tomorrow if there is positive inflation.
- d. **Impact Location.** All procurement contracts are organized by place of performance, regardless of the headquarters of the firm providing the good or service. Science Applications International, for example, is headquartered in Virginia but has a substantial number of permanent employees that work in San Diego. In addition, when the Navy places an order with Science Applications International, the company collaborates with local subcontractors in San Diego. Place of performance is thus viewed as the best way to sort procurement orders.
- e. **Impact of Spouses.** The positive economic impact that family members of military personnel generate are not accounted for in this report. Many of these family members are gainfully employed and thus generate and spend additional money within the local economy. Because there is no data available on the personal incomes of the family members of military personnel, it is impossible to estimate the economic effect that the presence of family members has on the local economy. The total economic impact is downwardly biased as a result.
- f. **Impact of Civilians Paid with Non-Appropriated Funds.** The economic impact of civilians that are not paid with funds appropriated by the federal government are not included in this report. Civilians not paid with appropriated funds are remunerated with non-appropriated funds (NAF), defined as funding

¹³ The household multiplier takes into account that individuals pay taxes and save a portion of their income. It thus does not assume that every dollar paid as salary is expended.

generated by DoD military and civilian personnel and used to augment funds appropriated by Congress to improve the well-being of military personnel and their dependents. An example of a job supported by non-appropriated funds would be a civilian working for a bowling alley or movie theater on a military base. These employees would be paid using the revenues from the operation of the facilities. Theoretically, these jobs and earnings would be provided by the private sector if the military did not internally provide them. As such, these jobs should be captured by RIMS II under the indirect and induced impacts of salaries paid to military personnel. For this reason, employees paid with NAFs are not included in the calculations of this report. In a similar vein, the thousands of people employed by various Base Exchanges (such as the Navy Exchange or Marine Exchange) are handled the same way.

Section II: Socioeconomic Impact

The presence of defense installations, defense contractors, and military personnel has significant influence on a wide spectrum of day-to-day activities in the San Diego region. The military increasingly utilizes the local economy to supply technologies and housing that are important support elements for military operations and training.

Some of the military's impact on San Diego and its citizens cannot be quantified by economic estimates of jobs, personal earnings, or output described in Section I of this report. These include environmental stewardship and conservation, labor market stratification effects, and engagement with local communities through personal volunteer efforts and long-term partnerships with schools and charitable organizations.

Environmental Stewardship

The Navy and Marine Corps go to great lengths to balance their operations with protection of our natural resources. Commander, Navy Region Southwest (CNRSW) Sustainability Program goals include addressing environmental concerns and improving resource allocation. The program advocates the need to think systematically about environmental impacts and overall efficiency. To this end, CNRSW has instituted best management practices that result in sustainability across its many facilities. National environmental sustainability goals are managed through the objectives and targets established by Navy installation in their Environmental Management System (EMS). Marine Corps Installations West (MCI West), CNRSW's Marine Corps counterpart that oversees seven regional bases including Marine Corps Base Camp Pendleton and Marine Corps Air Stations Miramar and Camp Pendleton, implements similar environmental preservation and energy and natural resource conservation programs.

Responsible land use, a sustainable solid waste program, water energy conservation, and alternative energy development highlight how the Navy and Marine Corps have effectively adopted "green" programs and initiatives, serving as a leadership model for other local industries. CNRSW and MCI West recognize that the wise use of natural resources contribute to both environmental security and economic prosperity within the San Diego region.

Stewards of the Land

Federal agencies, including those within the Department of Defense (DoD), control 28 percent of acreage in San Diego County. Much of this acreage is connected in large pieces that lend themselves to wildlife habitat. Currently there are over 32 endangered species on military controlled land in the San Diego region.

Marine Corps Base Camp Pendleton is a major training base encompassing more than 125,000 acres. The training areas and protected reserves on the base provide natural habitats and complex ecosystems for over

700 species of mammals, birds, fish, reptiles and amphibians including 16 federally-listed threatened and endangered species. The base takes special precautions to ensure nesting and feeding areas are undisturbed by training operations and restricts all access to designated areas with sensitive wildlife or vegetation. Camp Pendleton also contains the last significant stretch of 17 miles of undeveloped land on the Southern California coastline. This base is truly an essential and priceless environmental asset benefiting all of those who live and work in the San Diego region.

The provision of environmental amenities is not limited to the open space preserved by the Marine Corps. Local installations, including Naval Base Coronado (NBC), also support habitat and living resources. NBC is host to many rare, threatened, and endangered species such as the California Least Tern, Western Snowy Plover, San Diego Fairy Shrimp, Burrowing Owl, and the Salt Marsh Bird's Beak. NBC maintains an aggressive role in managing the preservation and protection of the environment, by ensuring strict enforcement programs are in place to comply with environmental protection programs.

Naval Base San Diego hosts the Admiral Baker Golf Course, the first Navy course in the U.S. to receive certification as an Audubon Cooperative Sanctuary Program (ACSP) golf course. The certification is one of the first fifty in California, marking a high standard of achievement in environmental responsibility and species protection.

Finally, Point Loma is home to Naval Base Point Loma (NBPL) and various operational tenant commands. In partnership with Cabrillo National Park, Veterans Administration's Fort Rosecrans National Cemetery and the Point Loma Wastewater Treatment Plant the Navy works to preserve the habitat and cultural resources of this historical area. A jointly held ecological conservation area, hosting rare plant life that is subject to academic and conservation study, with visitors from all over the world, is a shared community jewel.

Sustainable Solid Waste Program

The Navy has operated recycling centers throughout the San Diego region since 1998. Recycling efforts have had a considerable impact on San Diego's environment and economy. Thousands of tons of materials a year are diverted from the waste stream. This stimulates businesses within the local area, provides jobs and extends the life of the Miramar Landfill.

In addition to the traditional recycling programs, the Sustainable Solid Waste Program manages a very robust Construction and Demolition (C&D) Debris Program. Projects are tracked from inception through completion for compliance with mandated diversion goals. Diverting a minimum of 52 percent of potentially landfill-destined materials is the current goal. Solid Waste Management Plans are reviewed and approved prior to project start, and monthly Diversion Summary Reports are required.

The San Diego Environmental Services Department and the Navy's Sustainable Solid Waste Program have a long history of effort and cooperation. The Navy's diversion efforts contribute greatly to San Diego maintaining solid waste diversion goals outlined in California's Integrated Waste Management Act.

Since 2003, the Navy has diverted in excess of 600,000 tons of material, saving 2.4 million cubic yards of landfill space, resulting in extending the life of the Miramar Landfill for use by both the military and the citizens of San Diego. Marine Corps Base (MCB) Camp Pendleton has operated an aggressive recycling program since 1989.

Commander, Navy Region Southwest's Construction and Demolition Debris Program recently received the California Resource Recovery Association Outstanding C&D Diversion Program Award, as well as a Special Recognition Award from the Industrial Environmental Association.



CNRSW established a Furniture Reuse Program and found reuse opportunities for over 370 tons of used furniture. The diversion of this tonnage equals over 1400 cubic yards of space saved at the Miramar Landfill.

Marine Corps Recruit Depot (MCRD) San Diego's solid waste reduction plan reduced solid waste by 59 percent, primarily through a well-instituted systematic monitored recycling effort and minimized the procurement of waste-related products, which exceeded both the DoD and the State of California mandated requirement for a 40 percent solid waste reduction.

Water Conservation

Navy and Marine Corps installations continue to aggressively pursue water conservation measures in response to the ongoing water supply crisis in California. The City of San Diego is the primary provider of water to San Diego military. Reduced allocations of water and restrictions on outdoor watering have been instituted. To aid in this effort, military installations in the San Diego region have installed waterless urinals (saving an estimated 6.3 million gallons annually), 6,000 showerheads and 5,500 faucet aerators. Contracts totaling \$2.5 million for irrigation improvements and coordinated water conservation efforts with landscape contractors have been awarded.

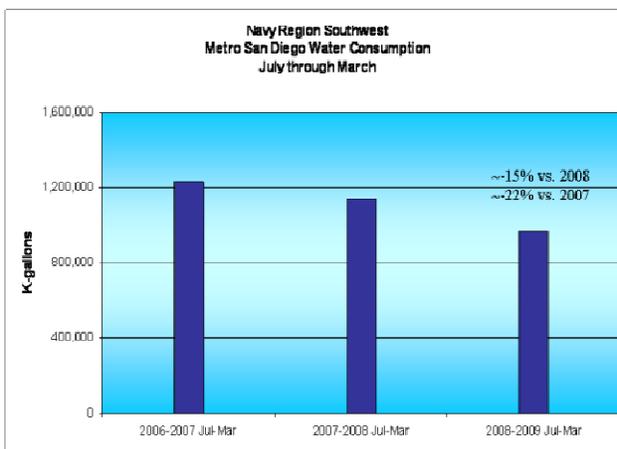
Navy and Marine Corps installations have incorporated "Smart Landscaping" initiatives that conserve resources through creative and appropriate landscape design and management. These efforts include replacing obsolete irrigation valves with state-of-the-art systems, installing synthetic grass and artificial trees, curtailing

irrigation watering to vegetation in training areas, limiting turf area, using mulches and replacing water consuming vegetation with non-watering, indigenous, and drought tolerant plants and foliage. On Naval Base San Diego alone, the implementation of automated, smart, central control irrigation systems have saved more than four million gallons annually. Artificial turf projects have saved 2.7 million gallons annually. Navy Region Southwest installations have collectively reduced water consumption by over 30% since the 2007 baseline year. This equates to over one billion gallons savings annually.

New barracks and facilities constructed or refurbished by regional Marine Corps bases are designed with a “Black/Grey” water recycling system. This system collects waste water from sinks and shower drains, recycles through a state-of-the-art filtration system, and is then used to flush commodes and urinals.

Marine Corps Air Station (MCAS) Miramar is a leader among the DoD in water conservation and is the largest user of recycled water in the San Diego metropolitan area. A wastewater reclamation project that will be completed in 2011 will bring recycled water throughout the installation. These efforts in water conservation reduce the strain on the surrounding utility infrastructure and reduce the operating costs to the installation.

The graph to the right shows purchased water data from 2009 (the 9-month period July-March), compared to the same period of time during two previous years. San Diego region installations have reduced their water consumption by 15 percent compared to the same period the year before and 22 percent compared to the two previous years. Overall annual water consumption was reduced by 1 billion gallons compared to FY2000.

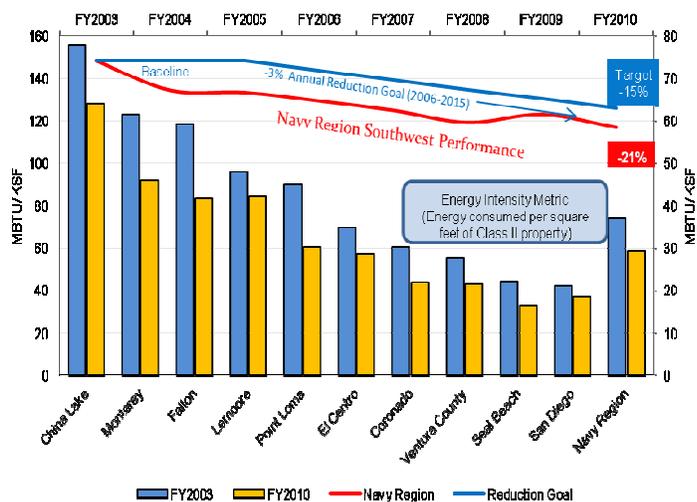


Source: U.S. Navy

Energy Conservation & Alternative Energy Development

During October 2009, the Secretary of the Navy released Department of the Navy (DoN) energy goals. These DoN goals include demonstrating a green strike group of nuclear vessels and ships using biofuel in local operations by 2012; reducing petroleum use in the commercial fleet of 50,000 vehicles by 50 percent by 2015; deploying a “Great Green Fleet” composed of nuclear ships, surface combatants with hybrid electric power systems using biofuel and aircraft flying only on biofuels by 2016; and halving ashore energy requirements with the majority of the remaining consumption derived from alternative sources by 2020.

By the end of fiscal year 2010, the Navy we reduced overall energy use — per square foot of building space — by 21%, relative to the 2003 baseline, which was ahead of the -15% goal. This continues a longstanding trend of exceeding energy efficiency requirements across the Region. The Navy is well on the way toward achieving the 2015 goal of a 30% reduction. NRSW installations reported executing \$126.5 million in energy projects in FY 2010 that are projected to achieve over 200,000 MBtus of energy annually.



Source: U.S. Navy

During FY10, NRSW completed many American Recovery and Reinvestment Act (ARRA) funded renewable energy projects. Renewable energy project contracts totaling \$109 million were planned and executed during FY2009-10. The ARRA projects resulted in 4 mega-watts (MW) of new solar infrastructure, increasing the Navy total capacity to more than 7 MW solar energy panels across the Region. The ARRA projects also included over \$6M of facility energy

improvements at many buildings and locations at Metro San Diego installations. Naval Base San Diego replaced nearly all street and parking lot lighting with LED fixtures.

Naval Base Point Loma has completed construction on seven ARRA projects valued at \$27.1 million and continued a \$140 million, five-year construction project replacing WWII era fuel storage tanks with a Leadership in Energy and Environmental Design (LEED) silver rated fuel storage system. Partnering with two California companies and using conservation and recycling measures in the project, this will be the first LEED certified fuel depot in the United States.

An initiative developed here in the Southwest is shipboard shore energy management. This relatively new concept of energy efficiency on ships while in port was initially pilot tested in San Diego during 2007-2008, and continues to be successfully implemented across the waterfront. The Navy has been working with the Fleet to reduce energy consumption. Over the past three years, the ship’s crews have saved the Navy over \$7 million, and about 59-million kilo-watt hours of electricity, through the implementation of no-cost or low-cost measures such as plant re-alignments and securing redundant equipment. This is the equivalent to the full annual electricity requirement each of those three years for about 1,800 average homes.

MCI West’s bases have made substantial progress in the development of alternative sources of energy such as solar, wind turbines, and biodiesel. Marine Corps Base Camp Pendleton has installed 300 solar streetlight

systems, a 1.5 megawatt photovoltaic solar array, and in July broke ground on what will be the largest photovoltaic solar array in the Marine Corps, anticipated to supply 1 percent of the base's peak electrical needs. Camp Pendleton also has the first hydrogen refueling station in California that is located on a military base and has the only commercial nuclear power plant in the entire country that is located on a DoD installation.

MCAS Miramar has received several Federal awards for their innovative energy and water conservation programs, and is planning a 3-megawatt landfill-to-gas project to generate electricity from methane gas produced by the San Diego landfill.

In addition to harnessing alternative energy sources, new Marine Corps construction incorporates natural ventilation and insulation systems to reduce cooling and heating costs. MCI West is integrating building designs with the environment to optimize energy efficiency. The design process to minimize environmental impact is ever improving. All military construction conforms to the four-tiered national construction standard LEED and must achieve a Silver rating. Recently, MCI West achieved several LEED Gold standards building and by the end of 2011 should have the greatest number of LEED Gold facilities in the Marine Corps. More LEED Gold standard projects are being planned in MCI West, and buildings meeting LEED Platinum standard (the highest rating) are being planned.

Naval Medical Center San Diego has participated in energy conservation initiatives by installing Energy STAR Cool Roofs on buildings 1, 2 and 3 (providing up to 100 MWH savings per year), using high-efficiency fluorescent replacement bulbs (resulting in 22 percent lighting energy savings) and optimizing the Central Plant Operation OR HVAC Project (with a projected savings of up to 2 percent, to be realized in FY10).

Labor Force Strengthening

The presence of the military also has a qualitative impact on the nature of employment in the area. Its presence draws significant educational opportunities and resources to the region. From the medical education opportunities at Naval Medical Center San Diego to academic relationships among acquisition commands such as Space and Naval Warfare Systems Command (SPAWAR) and SPAWAR Systems Center Pacific, defense contractors and universities, the military provides resources for training and innovation. Military personnel take their training with them if they join the private sector. At the same time, the military raises the demand for highly skilled workers through procurement contracts for professional services such as research and development and trades work such as shipbuilding and aircraft maintenance.

The following labor and financial concerns were summarized by various panel members consisting of the University of San Diego Assistant Professor of Economics and Chief Economist of San Diego Association of Governments (SANDAG) at the 2009 Economic Roundtable:

- In the past San Diego fared better than the rest of the U.S. during a recession. The recession of 2009 hit San Diego very hard due to a fall in housing prices, a decreasing wealth effect and significant losses in construction and financial industry jobs.
- The construction industry should be improving considering the \$4B of construction projects on the Marine Corps bases.
- San Diego County is falling behind the state and the nation in per capita income — the average real wage rate in San Diego was higher in 1972 than it is today.

San Diego Workforce Partnership CEO views the military leaving active duty as a trained, competent element of the work force and recommended positive action to focus on keeping military service members in San Diego after their active duty service ends.

San Diego has fewer opportunities (or less demand) in the high skill end of the job market. Jobs can be categorized into four groups based on educational requirement – No Degree, Associates Degree Required, Bachelors, and Graduate. In San Diego, the only category where jobs outpace candidates significantly is in the No Degree required group; consequently San Diego has relative job shortages in engineering, mathematics, health services, biology and communications. The military helps alleviate these shortages by locally outsourcing highly technical services, such as information systems, ship design and research and development.

San Diego County's four-year high school dropout rate is 9 percent.¹⁴ This contributes to an 'hourglass' economy — where there are workers and jobs at the bottom and top of the income — levels, but the middle is minimal and stagnant, minimizing workers' ability to migrate upward. The military establishes basic minimum requirements for enlistment and offers extensive training to its members. This ensures the military workforce has a strong middle wage scale, in contrast to the 'hour glass' that lacks middle income earners.

¹⁴ KPBS.org, May 12, 2009. <http://www.kpbs.org/news/2009/may/12/san-diego-unifieds-high-school-dropout-rate-falls/>

Ships and Aircraft

In response to the 2006 Quadrennial Defense Review shifting naval forces to the Pacific area of operations, regional installations will gain 17 ships and 11,250 personnel by 2012.

Naval Base San Diego serves as the homeport for the Navy's first Littoral Combat Ship, Freedom (LCS 1). A total of 14 LCS platforms are anticipated by 2017. These ship increases will require more supporting elements, potentially opening up more mid-level jobs.



Over the next few years, new equipment will be arriving throughout the region. Once the National Environmental Protection Act analysis is completed and the final sites approved, the region will see the introduction of the F-35 Joint Strike Fighter. The MV-22 Osprey replacement for the CH-46E Sea Knight helicopter will be based at MCAS Miramar and MCAS Camp Pendleton. These cutting edge warfighting platforms require sophisticated logistics, which will result in the importing of greater technological development to stimulate and support San Diego's economic growth.

Fleet Introduction Teams will maintain a long-term presence at MCAS Camp Pendleton to ease the transition to these new aircraft, thus bolstering San Diego's service industry. The approximately 5,000 people working at MCAS Camp Pendleton, including about 250 civilian contract employees, may temporarily increase to nearly 6,000 people within the next four years to assist with the transitioning of aircraft and their crews and the construction of a new hangar. In addition, taxiway improvements, repair and expansion of hangars and buildings, and installation of new aircraft training simulators are all scheduled to occur within the next few years. Aviation technical training will increase from 600 to 900 students over the next five years.

Health Care Industry

Naval Medical Center San Diego (NMCS) operates in the highly competitive health care industry. NMCS attracts top performers because of patient case volume and complexity, the emphasis on research, and access to cutting edge equipment such as femtosecond lasers for refractive ophthalmologic surgery and San Diego's only dual source CT scanner. The result is sustained quality mid-level jobs, with the potential for future growth.



NMCSD supports 10 local Schools of Nursing through the provision of 400 student clinical rotations annually, helping the San Diego community address the shortage of qualified registered nurses, while contributing to the addition of mid-level income earners.

NMCSD maintains the highest quality physician and other health professional training programs to develop medical personnel for the Navy. Many of these trained physicians spend much of a full Navy or civilian career in San Diego.

NMCSD's unique quality culture and patient base attracts not only physicians, but research projects and dollars as well. The medical center maintains 626 active research protocols and 58 cooperative research agreements with non-military organizations. Partner organizations contributed approximately \$6.3 million to the studies.

The AbilityOne Program is the largest source of employment for people who are blind or have other severe disabilities in the United States. This contract provides 187 jobs to the local community of which at least 75 percent of the direct labor hours are done by people with severe disabilities. These employees earn more than a wage; they develop job skills.

Creating Business Opportunities

Nearly \$2.5 billion of NAVFAC's \$3.4 billion annual budget is contracted out to businesses in the San Diego region. NAVFAC has been recognized for exceeding its small and minority-owned business contracting targets and is committed to inclusion, fairness, and efforts to create equality of opportunity.

Included in NAVFAC's budget is Marine Corps construction in excess of \$3.3 billion from 2009 through 2015 for Miramar and Camp Pendleton. The majority of these funds are tied to the increase in size of the Marine Corps and the expected arrival of the MV-22 Osprey and the Joint Strike Fighter. Ground was broken in early 2010 for the new Camp Pendleton Naval Hospital, which will use \$563 million in American Recovery and Reinvestment Act (ARRA) funding, the largest ARRA funded project in the Department of the Navy. With about 2500 workers coming aboard Camp Pendleton and MCAS Miramar daily, a majority of the labor, material and service contracts for these projects will be infused directly into the local economy with designated job order contracts for service disabled veterans, minority and women-owned businesses.

In San Diego, SPAWAR and its subordinate command, SPAWAR Systems Center (SSC) Pacific design, develop and deploy advanced communications and information capabilities that give Navy, joint and coalition forces the strategic advantage from senior-level decision makers to tactical operators.



With more than 9,000 professionals, around the world, close to the fleet, and serving as embedded technical advisors to virtually every major command, SPAWAR and SSC Pacific are at the forefront of research, engineering, acquisition and support services that provide vital decision superiority to our forces.

SPAWAR's national footprint is \$8.8 billion, with \$520 million going directly toward salaries in San Diego. SPAWAR headquarters awarded more than \$2.9 billion in contracts in FY2009.

SSC Pacific awarded more than \$1.1 billion in contracts in FY2009. Over the past 10 years, SSC Pacific has seen a steady growth in total obligation authority with annual orders well over \$2 billion last fiscal year. Of that amount, more than 60 percent supports partnership with industry and small businesses.

When compared to other sectors in San Diego, SPAWAR typically ranks in the top six sources for new patents. SPAWAR's Technology Transfer Office seeks opportunities to transfer innovative technologies



developed and patented by SSC Pacific scientists and engineers to San Diego based companies through patent license agreements. These technology transfer agreements provide economic benefit to the region by facilitating job creation through expansion of technology based businesses. Since January 2005, SSC Pacific established more than a dozen technical collaborations with San Diego area companies that were formalized through Cooperative Research and Development

Agreements. SSC Pacific also finalized the largest licensing agreement in the history of the Department of Defense and Department of the Navy, involving more than 60 inventions and more than 90 inventors.

Training

In 2003, the Navy restructured the Training Support Centers (TSC) under the Navy Personnel Development Command. The new systems focus is on letting subject-matter experts drive curriculum development and delivery at fifteen learning centers throughout the Navy's operational regions. Training Support Center San Diego, formerly known as the Fleet Training Center, has led the way. It provides administrative and personnel overhead functions to facilitate the delivery of the Learning Center modules.

TSC San Diego delivers 449 educational modules to 66,000 students per year. Courses range from single day workshops to six month, in-depth seminars. The topics include engineering, fleet maintenance, information technology support, and leadership. TSC operates a fully functional Littoral Combat Ship simulator which allows Sailors to get hands-on experience before their first day at sea. Another Littoral Combat Ship training

platform is planned, doubling capacity to train new Sailors on ship systems. By providing this stimulating, technology oriented education amongst its members, the Navy cultivates greater skills in the workforce.

TSC delivers both journeyman and master-level apprenticeship programs. Many TSC graduates have become Microsoft Certified System Engineers through TSC training. These programs meet and exceed the requirements of civilian certifications issued by the Department of Labor. Many of the TSC programs can lead to associate of arts degrees when combined with supplemental courses. Armed with these certifications and degrees, many Navy men and women navigate into civilian careers in technical industries, which in turn support San Diego's high technology community, enhance the labor/job mix, and increase the number of high skilled workers in the San Diego labor force.

The Navy Region Southwest Fleet and Family Support Program's Transition Assistance Management Program adds to the local economy by preparing separating service members and their families for transition into the local civilian population and job market. Potential employers are encouraged to post job advertisements on base to access this well educated, highly skilled labor source. Members planning for military retirement or separation are taught the finer points of preparation for job search and interviews. Especially important is learning how to articulate their military job skills on resumes and in interviews. Employers often save on training by hiring separating military members who come with the requisite training and requirements for specialized positions. Frequently employers can find employees who possess security clearance and who understand the needs of the military customer. Retirees and veterans are also taught how to fully access their military benefits, which helps relieve local governmental services.

Local Community Engagement

Navy and Marine Corps impact their communities by actively engaging in volunteer work and forming long-term relationships with local schools, youth athletic programs and charitable organizations. The Navy Region Southwest Fleet, Family and Child Program employs approximately 630 staff comprised of both government and contract personnel to provide services through the Fleet and Family Support Centers, Child Development Centers and Youth Centers throughout San Diego.

Partnerships in the areas of emergency response and transportation issues have mutually beneficial outcomes, including a more efficient use of resources and taxpayer provided funding. In support of local civilian law enforcement, the San Diego Sheriff's Department uses firing ranges and a canine training facility at MCAS Miramar.

Military installations have hosted numerous events over the years including the Camp Pendleton Mud Runs, Coronado Classic Speed Festival, Fleet Week San Diego, Coronado Bay Bridge Run/Walk, Superfrog

Triathlon, Marine Corps Recruit Depot's Boot Camp Challenge, MCAS Miramar Air Show and the Rock and Roll Marathon. These events have a positive economic impact and enrich community life. The USS Midway Naval Museum provides historical learning opportunity for the public.



Marine Corps color guards, static vehicle displays, and aircraft flyovers frequently support San Diego Padres and Chargers games and Veterans' Day parades. Sailors and Marines often serve as guest speakers and volunteers in the community.

SSC Pacific has had success through a concerted effort to develop stronger ties with the Mayor's Office, local city and county government, the local first responder community, local businesses and industry consortiums, local civic and community groups and nontraditional partners. This ongoing effort is creating synergies, partnerships, and shared common goals for the San Diego region.

Naval Base Coronado continues a long legacy of partnering with the community in support of neighborhood projects, social events, elementary and high school student programs, transportation projects, environmental programs, emergency response teams, community service projects, volunteer support programs, and base-wide special events. These types of cooperative programs and events include conducting professional training for both Navy and Coronado Police and Fire Department personnel; collaborating on interagency Emergency and Disaster Response plans, programs and resources; hosting food bank collections; conducting American Red Cross blood drives; providing Navy Color Guard for off-base events; assisting with sports, mentoring, and literacy programs at the local elementary and high schools; participating in beach clean-up events; conducting Junior Reserve Officer Training Corps (JROTC) programs, Special Olympics, Silver Strand Youth Camp, and Scouting programs; and transporting meals for Meals-on-Wheels. A School Liaison Officer also serves in local Coronado schools to promote communication, cooperation and collaboration with military families.

Naval Base Point Loma encompasses the Point Loma Wastewater Treatment Plant, the U.S. National Park Service at the Cabrillo National Monument, and the Veterans Administration's Fort Rosecrans National Cemetery. NBPL supports these entities with road access, fire management support, and military police for nighttime security. NBPL hosts the annual Cabrillo Festival celebrating the 1542 landing of Juan de Cabrillo and the annual Battle of San Diego Bay Commemoration. NBPL also has four Cooperative Research Agreements with universities, the National Park Service, the San Diego Natural History Museum, and volunteer groups conducting natural, cultural, and geological research on the installation. NBPL's School Liaison Officer facilitates volunteer efforts by Sailors for fundraising and clean-ups at local community

schools. NBPL shares its softball field with Point Loma Nazarene University Women's Softball Team for practice.

Naval Base San Diego engages with city leaders in San Diego's Barrio Logan and National City communities to ensure concerns are addressed. NBSD has 'adopted' the Kate Sessions Elementary School where military volunteers tutor students and assist with school events. NBSD holds two Main Street Clean-ups annually and has assisted the San Diego Port Tenants Association (SDPTA) in Operation Clean Sweep on San Diego Bay for the past 14 years. Through these events, more than 1,100 military, DOD civilians and city residents have cleaned the bay and beaches of San Diego, collecting over 50 tons of trash.

Marine Corps Recruit Depot San Diego Marines serve in the Partnership-in-Education program with Taft Middle School, Holmes Elementary and Lindberg-Schweitzer Elementary, and volunteer as youth mentors at Spring Valley Middle School.

Educational Outreach

Over 53 San Diego Based Navy commands have active Adopt-a-School partnerships with area schools. Service members volunteer at the schools. Volunteer efforts include self-help beautification projects, event support, tutoring, mentoring, traffic control, and sharing expertise. Service members are providing hundreds of staff hours and free labor to support the local schools.



SPAWAR is dedicated to helping nurture the next generation of science, technology, engineering, and mathematics (STEM) professionals. Between 2009 and 2010, K-12 outreach events at SSC Pacific have grown from 60 to 144. Outreach events last fiscal year included more than 400 hours in the classroom, 100 hours at universities, parks, fairs and science festivals, and 1,000 hours of mentorship to middle and high school students, particularly through coaching robotics teams. SSC Pacific also co-sponsored a local qualifying robotics competition that supported 22 San Diego County elementary schools. This event drew 40 SSC Pacific volunteers and nearly 700 people from around the community.

SPAWAR is also actively involved with San Diego universities. SSC Pacific provides part-time jobs for about 50 local university students at any given time, of which about 30 percent are eventually hired for full-time employment. Recently, SSC Pacific began a pilot program for community college students whereby students

receive three-year scholarships with the opportunity to receive employment at the center after the completion of a four-year degree.

SPAWAR also recognizes the importance of students interacting with scientists and engineers understanding what types of job opportunities are available to them within the STEM fields. SSC Pacific has initiated three high school summer internship programs that serve about 30 students. SSC Pacific also has a robust summer internship program for undergraduate and graduate students (between 30-40 total), as well as a summer faculty program of which many participants are affiliated with local universities.

MCI West has partnered with San Diego State University in providing undergraduate and graduate level internships for students in public affairs, human resources, government affairs, and information technology. The partnership at SDSU also extends to programs like Troops to College and Troops to Engineers, programs that promote discharging service members to enroll at SDSU in engineering programs and pairing them with local industry upon graduation.

MCB Camp Pendleton and the Oceanside Unified School District have been awarded the Partnership of Excellence Award by the Military Child Education Coalition, a nation-wide organization dedicated to recognizing outstanding partnerships between schools and military installations. Camp Pendleton is the only military installation in California on which public schools reside and is the home of the Marine Corps' first school liaison program.

Marines of MCAS Miramar participate in the San Diego City Schools Partnership in Education program. The partnerships promote student achievements through shared time and resources. The Marines and Sailors support the program by sharing their technical and leadership skills with the students.



Local students matriculating for an Associate's degree or higher in Early Child Development (or related field) have been recruited to fill 139 student placements and 36 critical staff vacancies in the Navy Region Southwest Child and Youth Program. These professional positions provide practicum learning experiences, certification assistance and salaries for local students and graduates.

The Navy Region Southwest Fleet and Family Support Centers have facilitated the enrollment of military spouses to attend San Diego institutions of higher learning. The Career Advancement Account program helps military spouses obtain training or education leading to degrees, certification or licensure and ultimately employment in the San Diego area. This investment in education supports community institutions, makes

military families more self-sufficient and builds the skills of the workforce to meet the needs of local businesses.

Efforts expended by the Joint Task Force Financial Health Southwest and Navy Region Southwest Fleet and Family Support Center Personal Financial Management Counselors have resulted in fewer Sailors and military families going further into debt by avoiding paying abnormally high interest, short-term loans. This has enabled thousands of military families to exercise more efficient ways of managing their finances. Based on the records of the Personal Financial Management Program military families are defaulting on loans and payments at a lower percentage than the general population. One explanation for this discrepancy is that military members and families who have been caught up in the housing crisis have been able to find solutions to managing their payments rather than simply walking away from the loan.

Navy Region Southwest Fleet, Family and Child Programs are helping support the growth of the next generation of principled, responsible citizens via successful programs that include Kool Fun in the Sun, Safe Parks, Naval Sea Cadet Corps Partnership, youth program 4-H Clubs and Big Brothers and Sisters (BIGS).

Emergency Response

Navy and Marine Corps installations have assets and expertise that can support local agencies in protecting city resources when threatened by natural disasters or emergencies. The military stands ready to respond to wildfires, with evacuee site management experience and twelve DoD firefighting teams.



San Diego Federal Metro Fire & Emergency Services (FEDFIRE) is the second largest fire department in San Diego County and currently has working mutual aid agreements with several local and State entities' and frequently provides assistance for various types of firefighting and emergency medical incidents. The department is also involved in the annual "Burn Run" in support of the Burn Institute in San Diego. Wild land firefighting assistance and support has also been provided through the mutual aid agreements. Additionally, FEDFIRE provides training assistance to local fire departments on a regular basis.

Marine Corps Installations West, the 3rd Marine Aircraft Wing, California Department of Forestry and Fire Protection (CALFIRE), U.S. Navy Third Fleet, and other regional, state and federal agencies participate in an annual wild land firefighting exercise held each spring at Marine Corps Air Station Miramar and Marine Corps Base Camp Pendleton. This exercise enables the participants to exercise command and control of

helicopters rigged for firefighting, and culminates in practical use of the helicopters to put out a simulated fire at Camp Pendleton. The annual exercise is an element of the Operating Plan developed jointly by the Marine Corps, CALFIRE, and the U.S. Forest Service, Pacific Southwest Region following the 2007 Southern California wildfires.

For ocean and harbor emergency responses, Naval Base San Diego (NBSD) has an oil spill response team available 24/7. As a precaution, the Navy deploys booms around all its ships in port to contain any inadvertent oil spills.

NBSD-based naval units have played a major role in the Global War on Terrorism (GWOT) and the Navy's efforts to relieve suffering and to build partnerships through disaster relief and humanitarian outreach deployments. All of the base's large amphibious ships and the hospital ship USNS Mercy (T-AH 19) have taken part in disaster relief missions in Southeast and Southwest Asia, including tsunami relief operations in 2004, earthquake operations in 2004, cyclone relief operations in 2007, and Pacific Partnership in 2008.

Private and Public Projects

In 1996, Congress established the Military Housing Privatization Initiative (MHPI) as a tool to improve the quality of life for its service members and their families by improving housing.¹⁵ MHPI was designed to attract private sector financing, expertise and innovation to provide necessary housing faster and more efficiently than traditional military construction processes. In San Diego, three successful PPV partnerships currently maintain and operate approximately 24,000 family housing units for Sailors and Marines. In 2003, Congress authorized a pilot program for the Navy for unaccompanied military personnel housing privatization, and Naval Base San Diego was chosen for the first pilot.

With the completion of the \$332 million Pacific Beacon, built by Clark Realty Capital, the Navy's partner in this public private venture, 1,882 Sailors now have the opportunity to live in this state of the art complex. Pacific Beacon is a prime example of "Smart Growth" and was the largest non-transportation construction project in the county at the time construction started. Beyond the significant direct impacts construction of this facility had on the local economy over the last three years, the indirect impacts are no less significant.

MCB Camp Pendleton and MCAS Miramar together host 6,592 public-private venture houses through Lincoln Military Housing. The project is similar to Pacific Beacon, but for Marines and Sailors with families. The venture provides commercial management for the properties while allowing service members to live close to their work.

¹⁵ Military Housing Privatization Initiative, part of the 1996 National Defense Authorization Act, as amended.

In addition to the morale and welfare benefits derived from the improved facilities, the expansion of military housing provides additional benefits to the San Diego community at large. The partnerships rely on local workforce labor, contractors, suppliers, vendors, and service providers to effectively execute the development and operations of the PPV housing projects, thus maintaining those revenues within the local economy. Smart planning is also incorporated into new projects. Locating the new Pacific Beacon barracks (which house military personnel) closer to the base where they are assigned will reduce traffic congestion and lessen the burden on San Diego's roadways. Many are walking, car pooling or taking the trolley to work which further reduces the number of automobiles on our local streets. The public-private venture housing initiative has been beneficial for San Diego and local military service members.

NBSD works with San Diego's Working Waterfront Group to educate local business and community leaders on the operational and strategic importance of the waterfront. The base is also working with the San Diego Association of Governments, Cal Trans, the Port of San Diego, and the City of San Diego to improve traffic and freeway access through a \$200M Freeway Access Project. The Port District and Caltrans plan to improve roads and construct an overpass connecting the Tenth Avenue Marine Terminal and National City Marine Terminal via Harbor Drive to I-15 at 32nd Street. This project will use sections of NBSD property to improve circulation and traffic flow on Harbor Drive, enhancing San Diego Unified Port District's flow of goods movement, and reducing truck and traffic impacts on the local community. Currently, NBSD is working with Caltrans on the requirements and the Environmental Document/Design, due to be completed by 2011 for construction to start 2013. A bridge connecting the two sides of NBSD is being planned as part of this project to improve base traffic circulation and reduce non-base surface street congestion. NBSD has worked with SANDAG to grant easements to the cities of San Diego and National City in order to connect the Bayshore Bikeway. To avoid dangerous intersections and railroad tracks, NBSD's fence line will be moved back 30 yards for improved safety.

Summary

The military presence in the San Diego region clearly has a substantial socioeconomic impact on the cities, the county and its citizens that is impossible to quantify using economic metrics alone. Three themes consistently demonstrate how the military's qualitative impacts address the broader challenges our region faces in regards to environmental stewardship, labor force strengthening and local community engagement. The quantitative and qualitative impacts the military provides are equally important and key to San Diego's continued prosperity.

Section III: Navy and Marine Corps Installations

Military commands can be grouped into two broad categories — installation commands and tenant commands. No hierarchy or subordination should be subscribed to these designations, both are military commands. The installation commands are assigned responsibility for the care and management of land, buildings, and structures. The tenant commands are usually a tenant on a military installation and, are charged with an operational mission. These categories are flexible and there are exceptions.

Installation Commands: Naval Base Coronado, Naval Base Point Loma, Naval Base San Diego, Marine Corps Base Camp Pendleton, Marine Corps Air Station Camp Pendleton, Marine Corps Air Station Miramar, and Marine Corps Recruit Depot San Diego are geographic entities (“bases”) and Naval or Marine Corps commands. In addition to their operational assignments, the officer placed in charge of these commands serves as the landlord for these bases. He/she is charged with maintenance responsibility of the buildings and structures, assignment of space to tenants, all environmental considerations, and what is generally termed “base operating support.”

Tenant Commands: Examples of tenant commands include Naval Air Forces, Naval Surface Forces, Third Fleet, Naval Facilities Engineering Command, Space and Naval Warfare Systems Command and SPAWAR Systems Center Pacific, Training Support Center San Diego, Naval Medical Center San Diego and Navy Special Warfare Command. They are relieved of the burdens associated with maintaining infrastructure (buildings, roads, structures, etc) allowing their commanders to focus energies on operational concerns.

Over the last decade both the Navy and Marine Corps have consolidated and regionalized base operating support under Commander, Navy Region Southwest (CNRSW) and Marine Corps Installations (MCI) West. The guiding principle behind regionalization has a place in this discussion of economic impact. The Department of the Navy applies a simple litmus test to determine what functions should be regionalized. *“No command should do for themselves what a base can do more efficiently. No base should do for themselves what a Region can do more efficiently, and no Region should do for themselves what the surrounding community can do more efficiently.”*

This principle helps explain why San Diego, as a regional center, has received an increasing role among the military installations and why contract dollars from the military into the San Diego economy has increased as the installations have shed activities to the private sector. It makes good business sense to engage and partner with the community.

Navy regionalization and realignments have raised San Diego’s profile within the military and brought increasing DoD expenditures to the region.

Navy Region Southwest

San Diego is home to the headquarters of the CNRSW, the largest concentration of naval facilities and personnel in the world. In response to a need for increased efficiency and to capture economies

Navy in San Diego County	
Active Duty Military	51,907
Civilian Employees	18,994

Source: U.S. Navy

of scale, the Navy reorganized the various commands of Naval Base San Diego and the Eleventh Naval District into CNRSW. This allowed for more efficient allocation of resources and sharing of resources across commands. CNRSW was able to eliminate redundancies in support without sacrificing quality of service, increase the amount of resources available for the programs and the Pacific Fleet, and save taxpayer dollars. Some examples of regionalized services are medical, security, administrative and government vehicle motor pools. CNRSW's relationship with the various tenant commands operating on or from regional installations is a landlord-tenant relationship, with the primary focus of CNRSW and regional installations being to support the tenant commands with the infrastructure and services necessary to efficiently and effectively train and execute their missions. Naval Medical Center San Diego is a regional installation with a different command structure, therefore it does not report to CNRSW.

The three CNRSW installations in the San Diego area are:

- Naval Base Coronado
- Naval Base Point Loma
- Naval Base San Diego

The other installations are:

- Naval Weapons Station Seal Beach
- Naval Base Ventura County
- Naval Air Facility El Centro
- Naval Air Weapons Station China Lake
- Naval Air Station Lemoore
- Naval Air Station Fallon
- Naval Postgraduate School / Naval Support Detachment, Monterey

Environmental Sustainability

In July 2007, Commander, Navy Region Southwest, issued the Navy Region Southwest Sustainability Program Goals. These goals were designed to address essential environmental concerns, and to make resource allocation more efficient. The program advocates the need to think systematically about environmental impacts and overall efficiency. In addition to its leadership in capturing efficiencies, initiatives to protect the natural environment, and inputs of billions of dollars in salary and retirement (not vulnerable to economic

cycles) into the region, CNRSW provides other significant qualitative benefits for San Diego. Management of these and other national environmental sustainability goals is accomplished through establishment of objectives and targets in each Navy installation’s Environmental Management System (EMS).

Historical evidence and research has shown that economic capital and investment must be combined with solid institutions for an economic transition to new levels of economic activity, such as from an industrial to a service economy. More economic activity alone is not enough. The institutions for economic growth and transition include respect for the rule of law, access to quality health care, and education targeting cutting edge technological skills and innovation. Thus, the CNRSW commitment to technical training, higher education for its members, and instilling values that influence the local culture all contribute to the maturing of fundamental institutions. This immeasurable effect may be the military’s greatest contribution to the San Diego economy.

Naval Base Coronado

The mission of Naval Base Coronado (NBC) is to arm, repair, provision, service and support the U.S. Pacific Fleet and other operating forces. NBC provides airfields, ports, training ranges and support

Naval Base Coronado	
Active Duty Military	21,237
Civilian Employees	4,765

Source: US Navy

facilities that provide critical operational and training functions for the entire Navy. To accomplish this mission, NBC operates a consortium of eight installations encompassing 57,000 acres. Installations located on Coronado Island include Naval Air Station North Island, Naval Amphibious Base Coronado and Silver Strand Training Complex. Also located near Coronado is the Navy Outlying Landing Field Imperial Beach. Other outlying locations supported by NBC in the San Diego and Los Angeles counties include Mountain Warfare Training Center Camp Michael Monsoor, Camp Morena, Remote Training Site Warner Springs, and Navy Auxiliary Landing Field San Clemente Island.

As home to eight major air, surface, and special warfare commands, two aircraft carriers, 16 squadrons, and more than 140 other military units and commands, NBC serves as a central support center for critical naval operating forces. The diverse and expansive number of operational and training resources provide naval operating forces the support needed to achieve military readiness and contribute to national security.

Future Plans

The changing dynamics and force structure at Naval Base Coronado is representative of a greater change taking place in the United States Armed Forces. Accordingly, the Navy is changing gears after focusing for more than 40 years on fighting major sea battles in the European Theater. The Navy of the 21st century is focusing on threats to national security emanating from East Asia, Southwest Asia, and the Middle East. To accommodate this change, additional naval forces will shift to installations in the Pacific that are strategically

located and have the ability to provide the logistical support required to effectively protect the area of operations.

Several years of strategic planning assessed the requirements and determined the progressive actions needed to accommodate the increased demands of the



assignment of an additional aircraft carrier. Scheduled construction and repair projects included pier, building, and support facility improvement projects. These improvement projects, combined with the current capacity in existing facilities, will allow NBC the ability to effectively meet the requirements of both home-ported and visiting ships.

Naval Base Point Loma

Point Loma is the home to Naval Base Point Loma (NBPL) and her tenant commands, Cabrillo National Park, Veterans Administration’s Fort Rosecrans National Cemetery, and the Point Loma Wastewater

Naval Base Point Loma	
Active Duty Military	4,633
Civilian Employees	8,303

Source: US Navy

Treatment Plant. Together in partnership they help preserve the habitat and cultural resources of this historical location which includes three endangered species, two prehistoric aboriginal sites, Spanish, WWI and WWII military forts, bunkers, and two National Register eligible historic districts.

Spread beyond Point Loma and throughout the city of San Diego, Naval Base Point Loma maintains several locations, comprising 1,803 acres of land, to include Old Town Complex, Taylor Street Complex, Naval Mine Antisubmarine Warfare Complex, Point Loma Topside Complex, Commander Third Fleet Complex, Point Loma Main Base Complex, Mount Soledad, Fleet Intelligence



Training Center Complex, Balboa Complex, and the Naval Consolidated Brig Miramar. With over 71 tenant commands primarily focused on research and development, Naval Base Point Loma (NBPL) is the technical hub of naval activity, hosting some of the nation’s premier research centers for communications and weapons technology including C4ISR at SPAWAR Systems Center Pacific. NBPL also hosts Commander Third Fleet, Commander Naval Mine and Antisubmarine Warfare, Commander Space and Naval Warfare Systems Command, Joint Program Executive Office, Joint Tactical Radio Program Systems, Naval Health Research Center, Submarine Squadron Eleven, Mine Countermeasure Squadrons One and Two, the US Navy Marine Mammal Program, and the West Region Defense Acquisition University. Additionally, NBPL is the primary home of fast attack submarines on the West Coast, home porting seven of the Squadron Eleven’s SSN

submarines as well as their entire shore support requirements of logistics, maintenance, and ordnance handling. NBPL also provides the largest Fuel Supply Center and the only Magnetic Silencing Field in the Pacific supporting the requirements of the surface Navy as well.

Most recently, NBPL has homeported two Military Sealift Command ships (the USNS Sioux and the USNS Navajo) as well as welcomed the Naval Audit Service, Mine Warfare Command, and Mine Warfare Training Center. Additionally, NBPL has realized the 98,000-square-foot expansion of the Naval Consolidated Brig at Miramar which provides for a net gain of 200 additional prisoners.

Future Plans

Within the year, NBPL will have constructed a 25,866-square-foot Child Development Center within the PPV residential community of Liberty Station. The center will care for 218 children from 6 weeks to 5 years of age and employ 60 people.

Naval Base San Diego

As the Navy’s premier Pacific Fleet surface force installation, Naval Base San Diego (NBSD) provides comprehensive fleet support for 57 ships and 149 tenant commands, utilizing the services or products of more than 1,800 contractors. Naval Base San Diego is comprised of the main Naval Base on the San Diego Bay, as well as the Broadway Complex, which serves as the headquarters for CNRSW and the Admiral Baker Golf Course and Recreation Center, which serves the recreational needs of Sailors, family members and retirees throughout the region. The Base also oversees 16 housing areas, including the large Murphy Canyon housing complex that provides over 4,900 homes for Navy families and supports the Naval Medical Center San Diego complex, which serves as the home for the Balboa Naval Hospital and Navy Medicine West.

Naval Base San Diego	
Active Duty Military	26,037
Civilian Employees	3,786

Source: US Navy

During the last three years, Naval Base San Diego has served as an ambassador for the Navy and nation, hosting successful port visits with ships from China, Peru, Spain, Japan, Indonesia, Norway, Chile, Canada, England, and Australia.



Since its establishment in 1922, the base has undergone four name changes, but its mission has remained the same — to deliver the highest standard of support and quality of life services to the fleet, fighter, and family. Its vision is to continually pursue excellence and be the best in all that they do. Working as one team with one

mission, they will be responsive to the needs of the fleet, fighter, and family and efficiently deliver top-quality capabilities.

Future Plans

In response to the 2006 Quadrennial Defense Review shifting naval forces to the Pacific area of operations, Naval Base San Diego will have a net gain of seven ships and 8,201 personnel and dependants by 2013. The base also serves as the homeport for the Navy’s first Littoral Combat Ship, Freedom (LCS 1). A total of 14 LCS platforms are anticipated by 2017. Through new commissionings and changes of homeports, other warships coming to NBSD include USS Dewey (DDG 105), USS Myer (DDG 108), USS Harpers Ferry (LSD 49), USS Lawrence (DDG 110), USS Spruance (DDG 111), USS Anchorage (LPD 23), USS Essex (LHD 2), and USS San Diego (LPD 22), and USS Somerset (LPD 25).

Marine Corps Installations West

Marine Corps Installations West is comprised of seven Marine Corps bases and stations in the southwestern United States, three of which are in the San Diego area. Marine Corps

Marine Corps in San Diego County	
Active Duty Military - Marines	57,060
Civilian Employees	4,549

Source: US Marine Corps

Recruit Depot San Diego is a separate command not under the cognizance of MCI West. Marine Corps Installations West provides the base and range infrastructure that enable the operational forces to develop and sustain operational readiness.

The three MCI West installations in the San Diego area are:

- Marine Corps Base Camp Pendleton
- Marine Corps Air Station Miramar
- Marine Corps Air Station Camp Pendleton

The other installations are:

- Marine Corps Air Station Yuma, AZ
- Marine Corps Logistics Base Barstow, CA
- Mountain Warfare Training Center Bridgeport, CA
- Marine Corps Air Ground Combat Center Twentynine Palms, CA

San Diego is the hub of U.S. Marine Corps training on the West Coast. Each of the MCI West bases is a vital link in this chain, providing unique training opportunities in preparation for joint warfighting. MCI West maintains a close working relationship with Commander, Navy Region Southwest to coordinate training and activities in the San Diego region. For example, the U.S. Navy runs San Clemente Island, and Navy and Marine Corps units both utilize it for training.

Environmental Stewardship

MCI West has pioneered several environmental initiatives to protect and preserve the natural environment. There are seventeen endangered species on MCI West bases in the San Diego region, some of which have little natural habitat left other than the open areas provided by the bases. MCI West has taken the lead in the development of alternative sources of energy such as solar, wind



turbines, and biodiesel. MCB Camp Pendleton is expanding its use of photovoltaic solar arrays to generate electricity, has the first hydrogen refueling station in California that is located on a military base, and has the only commercial nuclear power plant in the entire country that is located on a DoD installation. MCAS Miramar has received several Federal awards for their innovative energy and water conservation programs, and is planning a landfill-to-gas project to generate electricity from methane gas produced by the San Diego landfill.

Upcoming Changes

Over the next few years, new equipment will be arriving throughout the region. Once the National Environmental Policy Act analysis is completed and the final sites approved, the region will see the introduction of the F-35 Joint Strike Fighter. The MV-22 Osprey replacement for the CH-46E Sea Knight helicopter will be based at MCAS Miramar and MCAS Camp Pendleton. These cutting edge warfighting platforms require sophisticated logistics, which will result in the importing of greater technological development to stimulate and support San Diego’s economic growth.

MCI West works with communities to maintain a high quality of life for military service members and their families, ensuring that housing, education and employment opportunities meet their needs.

MCI West implements policies, develops regional strategies and plans, prioritizes resources, and provides services, direction and oversight through command of assigned U.S. Marine Corps installations to support the operating forces, tenant commands, and activities.

Marine Corps Base Camp Pendleton

Since its purchase in 1942, MCB Camp Pendleton has occupied 125,000 acres of largely undeveloped land, with more than 17 miles of coastline. Located in northwestern San Diego County, it is the Marine Corps’ expeditionary amphibious training base and its only west coast amphibious assault training center. Camp Pendleton is home to more than 10 operational tenant commands to include I Marine Expeditionary Force (I MEF), 1st Marine Division, and 1st Marine Logistics

Marine Corps Camp Pendleton	
Active Duty Military - Marines	37,220
Active Duty Military - Navy	4,415
Civilian Employees	2,279

Source: US Marine Corps

Group, as well as numerous training and administrative commands, MCB Camp Pendleton provides a valuable training environment for Marines because it spans a variety of terrain from sea level to an elevation of 3,000 feet. This variety of terrain enables the Marine Corps to conduct combined air and ground training which is essential to preparing and meeting the requirements of diverse missions. The proximity to a variety of military units, including air elements and naval forces, allows for frequent and sustained training of this nature. The mild weather of the region provides an ideal environment for training for amphibious, ground and joint operations.

In addition to the more than 41,000 active duty service members that report to units within MCB Camp Pendleton daily, Camp Pendleton employs more than 3,700 civilian employees at various operational, training, Navy, and administrative commands aboard the base. Daily visitors include construction and service contractors; product vendors and delivery personnel; military family members who live in off-base residences; military retirees and their family member; as well as other base guests and visitors. It is estimated that on a given day, Camp Pendleton will have anywhere from 10,000-30,000 additional persons in these various categories aboard the base.

Construction and Upgrades

MCB Camp Pendleton is undergoing one of the largest new construction programs at any DOD installation. Currently, more than \$1.7 billion in active construction projects are underway. Ground will be broken late 2010 for a new 512,000-square-foot Naval Hospital. Located near the main gate and commissary, the hospital will serve more than 150,000 Marines, family members and retirees and allow for growth in the beneficiary population. In addition to the new hospital, the military construction program consists of a wide range of facility types and infrastructure improvements that include roads, utilities, renewable energy, operations and training ranges, administrative, maintenance, warehousing, galley, retail, and troop housing. There are currently 39 new Bachelor Enlisted Quarters nearing completion, as well as up to 924 new family housing units aboard the base. All new construction at all DOD installations including MCB Camp Pendleton will meet the Leader in Energy and Environmental Design (LEED) standard of LEED Certified Silver or higher.



MCB Camp Pendleton continues to make numerous training enhancements a top priority. Completion of phase II of the Infantry Immersion Trainer is anticipated to be 2010 at a cost of \$30 million, and provides the operating forces a small-unit training range that consists of urban structures furnished and decorated to replicate specific geographic locations. The state-of-the-art Improvised Explosive Device (IED) Training

Lanes are also anticipated to be complete in 2010 at a cost of \$9 million, and will help Marines identify and neutralize IEDs. The enhancements to the Combat Convoy Simulator, Tactical Video Capture System, Live-Fire Convoy Course, Combined Arms Raid Facility, Close Air Support urban target sites, combat towns, industrial urban training site, as well as numerous smaller urban training sites are also excellent examples of superior training systems that Camp Pendleton currently operates to support today’s fight while preparing for tomorrow’s future.

Land Use

Marine Corps Base Camp Pendleton is first and foremost a training base that supports the combat readiness of the operating forces and the mission of other tenant commands by providing training opportunities, facilities, services, and support responsive to the needs of Marines, Sailors, and their families. Camp Pendleton has 95 live fire ranges, 38 training areas, five training beaches, three sea space areas, nine impact areas, nine urban training facilities, and four separate blocks of airspace. MCB Camp Pendleton also provides one of the last stretches of undeveloped land on the Southern California coastline. A lease for 2,000 acres belonging to MCB Camp Pendleton, leased to the State of California since 1970, will expire in 2021. Currently under the National Environmental Policy Act review process, an environmental assessment is set for release to restore a former agricultural area located at the northern end of the base to a training area that will house several new urban training facilities.

MCB Camp Pendleton is expanding and upgrading for current and future worldwide commitments while preserving the natural environment.

Marine Corps Air Station Camp Pendleton

MCAS Camp Pendleton is a major helicopter base for the 3rd Marine Air Wing (MAW), based at MCAS Miramar. MCAS Camp Pendleton houses 11 active squadrons under Marine Aircraft Group (MAG) 39.

Marine Corps Air Station Camp Pendleton	
Active Duty Military - Marines	4,465
Civilian Employees	105

Source: US Marine Corps

The Air Station hosts the only training squadrons for both CH-46E and H-1 helicopters. Within its 458 acres, MCAS Camp Pendleton conducts training, testing, and maintenance as well as environmental and facility maintenance functions. Squadrons at MCAS Camp Pendleton benefit from its proximity to ground troops and training ranges within both MCB Camp Pendleton and MCAS Miramar and in partnership with other services.



New Aircraft

Over the next few years, MCAS Camp Pendleton will see the introduction of the UH-1Y and the AH-1Z, the upgraded versions of the UH-1N Huey and the AH-1W Super Cobra currently in use. In addition, MCAS Camp Pendleton will receive the MV-22 Osprey replacement for the CH-46E Sea Knight. Fleet Introduction Teams will maintain a long-term presence at MCAS Camp Pendleton to ease the transition to these new aircraft, thus bolstering San Diego’s service industry.

Planned Improvements

With the transitioning of aircraft and their crews and the construction of a new hangar there will be a temporary increase to nearly 6,000 people working on MCAS Camp Pendleton within the next five years. In addition, taxiway improvements, repair and expansion of hangars and buildings, expansion of the Combat Aircraft and Loading Area, and construction of aviation training and avionics communications facilities are scheduled to occur within the next few years. Aviation technical training will increase from 600 to 900 students over the next five years.

MCAS Camp Pendleton plans a 20% increase in personnel and a 50% increase in students undertaking technical training over the next four years.

Marine Corps Air Station Miramar

MCAS Miramar is home to the 3rd Marine Aircraft Wing, including MAG 11’s fixed wing F/A-18 Hornet and KC-130J Hercules squadrons, as well as MAG 16’s MV-22 Osprey, CH-46E Sea Knight and CH-53E Super Stallion helicopter

Marine Corps Air Station Miramar	
Active Duty Military - Marines	9,237
Active Duty Military - Navy	510
Civilian Employees	680

Source: US Marine Corps

squadrons. In addition, MCAS Miramar houses a variety of support commands, including Marine Wing Support Group 37, Marine Air Control Group 38, and the 3rd Marine Aircraft Wing Band. Elements of MAG 46 and the 4th Tank Battalion, both major reserve components, are also stationed at MCAS Miramar.

Training

Its central location near more than 10 U.S. Navy and Marine Corps installations makes MCAS Miramar a crossroads that provides flexibility for training on land and sea. East Miramar, encompassing 15,000 acres of hilly desert terrain, provides a location for five small arms ranges, a facility for nuclear, biological and chemical training, and an aircraft fire rescue training site as well as ground training in land navigation and convoy operations. Besides active duty Marine units in the San Diego area, U.S. Army, Army National Guard, Navy, Marine Reserve, and Reserve Officer Training Corps units all utilize MCAS Miramar’s



facilities and training areas. In support of local civilian law enforcement, the San Diego Sheriff's Department operates firing ranges and a canine training facility at MCAS Miramar.

Upcoming Changes

Up to eight squadrons of the MV-22 Osprey replacement for the CH-46E Sea Knight will be stationed at MCAS Miramar. In addition, MCAS Miramar will receive up to six squadrons, or 96 of the F-35B Joint Strike Fighters. Over \$167 million in construction is set to be awarded in FY 2011 with runway/taxiway expansion, aircraft hangar modifications, and sustainable/renewable energy projects.

Air Show and Tourism Impact

The annual MCAS Miramar Air Show draws up to 700,000 visitors to watch the spectacular aeronautic performances and to explore the static displays and vendor booths. The weekend event brings an estimated \$9.25 million to the San Diego region, resulting in a total economic impact of more than \$17.27 million. MCAS Miramar also provides tours to visiting groups and brings educators from west of the Mississippi River to San Diego area bases.

MCAS Miramar provides a strategic training location.

Marine Corps Recruit Depot San Diego

Over 20,000 recruits are transformed into Marines annually at Marine Corps Recruit Depot San Diego. During the 12-week course, recruits tackle physical challenges, learn martial arts skills, complete weapons qualification, undergo field training, and conquer the Crucible, a capstone event that requires recruits to work together as teams to complete the 54-hour event.

Marine Corps Recruit Depot San Diego	
Active Duty Military - Marines	5,571
Active Duty Military - Navy	146
Civilian Employees	394

Source: US Marine Corps

MCRD San Diego also serves as Headquarters for the Western Recruiting Region. The Drill Instructor School provides more than 500 hours of training during an 11-week course for future Drill Instructors, all of whom have volunteered for duty. MCRD houses the only Marine Corps Recruiters School, graduating more than 1,500 new recruiters each year who serve at recruiting stations throughout the United States.

Facility Renovations

MCRD San Diego is working to update and expand its facilities as the U.S. Marine Corps grows. An additional 5,000 recruits per year began entering recruit training at the Depot in 2007. To accommodate this increase, one additional standard barracks and one special training company barracks for injured recruits is being added. Additionally, current academic instruction classrooms are being updated and a new logistics

support building is being built to replace older, less energy-efficient buildings. Over the last two years, \$61 million has been spent on the construction of new facilities.

Tourism Industry Support

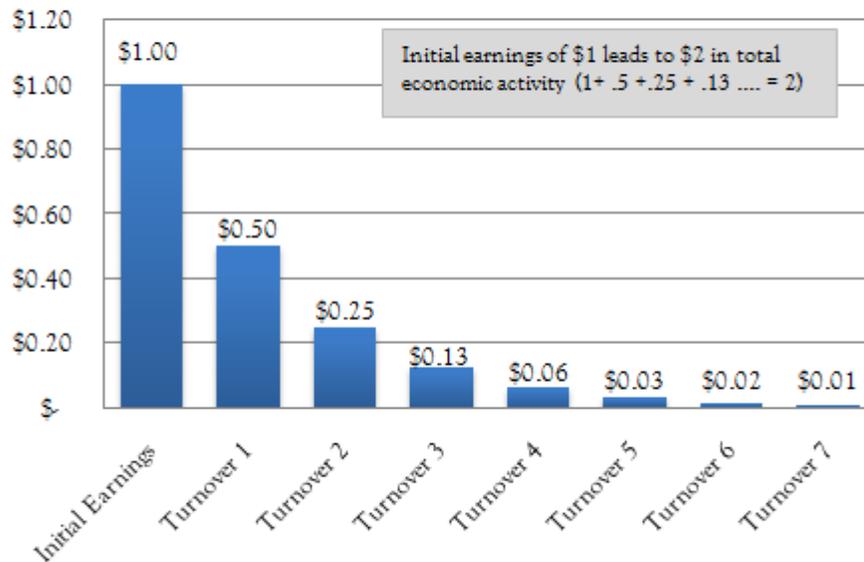
Over 90,000 friends and family members from throughout the western United States and the Pacific visit San Diego annually to see their Marines graduate from MCRD San Diego. In addition, MCRD San Diego hosts reunions of veterans' groups, attracting groups of visitors who stay in local hotels and explore the unique sights of San Diego. One of the three Marine Corps command museums is located at MCRD San Diego — a major attraction, it welcomes 128,000 visitors per year. Twenty-five buildings at the installation are listed on the National Register of Historic Places.

MCRD is expanding and updating facilities to train a growing Marine Corps force.

Appendix 1 – Explanation of Economic Multipliers

If one dollar is spent in a local economy, the total economic effect will be greater than that one dollar because it is multiplied many times over by the goods and services it purchases. In other words, economic activity in a region creates a “ripple effect” that generates further economic activity. To illustrate this concept, let us assume a simplified economy in which firms and individuals spend 50% of their revenues on purchasing goods and services from other local firms, while the remainder is spent outside of the local economic area. Under such a scenario, for every \$1 that a firm makes in revenues, it spends 50 cents on goods and services from within the local community. Of these 50 cents, 25 are then spent again on local goods and services. The firms that receive these 25 cents will then spend a little under 13 cents ($25 \times .5 = 12.5$). This process continues indefinitely, with the final result being that the initial \$1 spent creates approximately \$2 in local economic activity. As can be seen from this simple model, the economic output of spending (\$2) is greater than the initial input (\$1). This concept explains how the regional economic impact of the military extends beyond employing San Diego residents.

Example of Multiplicative Effects of Spending in Local Economy*



*Assumes simplified economy in which all firms and individuals spend 50% of earnings on local purchases

Appendix 2 – North American Industry Classification System (NAICS) Impact Breakdowns and Definitions

Table A-1. Total Regional Output Impact of Defense Spending by Sector, 2009

Sector	Procurement	GPC	Salaries	Retirement	Total
Agriculture, forestry, fishing, and hunting	\$ 42,566,427	\$ 362,025	\$ 38,644,866	\$ 10,024,415	\$ 91,597,732
Mining	\$ 7,634,519	\$ 33,280	\$ 1,189,073	\$ 308,444	\$ 9,165,316
Utilities	\$ 181,948,285	\$ 2,127,452	\$ 137,337,909	\$ 35,625,227	\$ 357,038,873
Construction	\$ 1,571,174,517	\$ 6,549,681	\$ 47,562,912	\$ 12,337,741	\$ 1,637,624,851
Manufacturing	\$ 6,477,255,078	\$ 7,623,025	\$ 541,028,126	\$ 140,341,803	\$ 7,166,248,033
Wholesale trade	\$ 733,046,106	\$ 6,766,015	\$ 281,810,255	\$ 73,101,115	\$ 1,094,723,491
Retail trade	\$ 876,202,339	\$ 7,114,216	\$ 870,995,829	\$ 225,934,881	\$ 1,980,247,266
Transportation and warehousing	\$ 412,414,410	\$ 34,279,619	\$ 131,392,545	\$ 34,083,009	\$ 612,169,584
Information	\$ 642,406,924	\$ 5,890,404	\$ 413,202,800	\$ 107,184,125	\$ 1,168,684,252
Finance and insurance	\$ 839,514,705	\$ 6,539,612	\$ 730,090,702	\$ 189,384,324	\$ 1,765,529,343
Real estate and rental and leasing	\$ 1,568,155,577	\$ 18,576,519	\$ 1,337,706,905	\$ 346,998,964	\$ 3,271,437,965
Professional, scientific, and technical services	\$ 4,593,680,797	\$ 17,479,334	\$ 325,805,948	\$ 84,513,526	\$ 5,021,479,605
Management of companies and enterprises	\$ 350,982,106	\$ 1,278,472	\$ 104,638,407	\$ 27,143,030	\$ 484,042,015
Administrative and waste management services	\$ 655,370,480	\$ 5,910,509	\$ 202,736,913	\$ 52,589,621	\$ 916,607,523
Educational services	\$ 192,595,678	\$ 2,590,487	\$ 165,875,656	\$ 43,027,872	\$ 404,089,693
Health care and social assistance	\$ 883,051,400	\$ 6,596,608	\$ 908,451,623	\$ 235,650,852	\$ 2,033,750,483
Arts, entertainment, and recreation	\$ 130,789,419	\$ 2,285,034	\$ 127,825,327	\$ 33,157,679	\$ 294,057,459
Accommodation and food services	\$ 578,156,759	\$ 4,749,636	\$ 462,549,321	\$ 119,984,531	\$ 1,165,440,247
Other services	\$ 482,605,987	\$ 17,704,130	\$ 395,366,708	\$ 102,557,472	\$ 998,234,297
Total	\$ 21,219,551,513	\$ 154,456,060	\$ 7,224,211,825	\$ 1,873,948,629	\$ 30,472,168,026

Table 2. Employment Impact of Military Spending by Sector*, 2009

Sector	Procurement	GPC	Salaries	Retirement	Total
Agriculture, forestry, fishing, and hunting	519	4	447	116	1,086
Mining	26	0	5	1	32
Utilities	269	3	203	53	528
Construction	12,377	52	373	97	12,898
Manufacturing	24,237	30	1,958	508	26,733
Wholesale trade	3,716	34	1,428	370	5,548
Retail trade	11,600	94	11,532	2,991	26,217
Transportation and warehousing	3,827	404	1,230	319	5,781
Information	2,716	26	1,523	395	4,659
Finance and insurance	3,064	24	2,663	691	6,442
Real estate and rental and leasing	3,543	55	2,458	638	6,694
Professional, scientific, and technical services	32,679	162	2,467	640	35,948
Management of companies and enterprises	2,080	8	622	161	2,871
Administrative and waste management services	9,511	92	3,040	789	13,432
Educational services	3,053	40	2,664	691	6,448
Health care and social assistance	9,397	72	9,670	2,508	21,647
Arts, entertainment, and recreation	2,271	38	2,245	582	5,137
Accommodation and food services	12,336	99	9,784	2,538	24,757
Other services	5,281	206	4,461	1,157	11,104
Total	142,501	1,445	58,772	15,245	217,963

*Does not include direct military employment

Table 3. Regional Earnings Impact on Defense Spending by Sector*, 2009

Sector	Procurement	GPC	Salaries	Retirement	Total
Agriculture, forestry, fishing, and hunting	\$ 11,243,722	\$ 95,295	\$ 9,720,072	\$ 2,521,371	\$ 23,580,460
Mining	\$ 1,790,657	\$ 7,228	\$ 648,005	\$ 168,091	\$ 2,613,981
Utilities	\$ 33,005,399	\$ 390,211	\$ 24,624,182	\$ 6,387,472	\$ 64,407,264
Construction	\$ 604,921,198	\$ 2,521,963	\$ 18,144,134	\$ 4,706,558	\$ 630,293,854
Manufacturing	\$ 1,752,901,400	\$ 1,648,376	\$ 104,976,774	\$ 27,230,802	\$ 1,886,757,353
Wholesale trade	\$ 246,535,873	\$ 2,278,328	\$ 94,608,698	\$ 24,541,340	\$ 367,964,239
Retail trade	\$ 314,017,433	\$ 2,550,178	\$ 312,338,304	\$ 81,020,041	\$ 709,925,956
Transportation and warehousing	\$ 176,327,271	\$ 16,580,558	\$ 55,080,406	\$ 14,287,767	\$ 262,276,002
Information	\$ 192,475,678	\$ 1,812,963	\$ 110,160,813	\$ 28,575,533	\$ 333,024,987
Finance and insurance	\$ 231,792,245	\$ 1,804,189	\$ 200,881,482	\$ 52,108,325	\$ 486,586,241
Real estate and rental and leasing	\$ 112,580,512	\$ 1,578,197	\$ 70,632,521	\$ 18,321,959	\$ 203,113,190
Professional, scientific, and technical services	\$ 2,256,687,713	\$ 9,141,456	\$ 167,833,238	\$ 43,535,665	\$ 2,477,198,072
Management of companies and enterprises	\$ 185,622,730	\$ 676,406	\$ 55,728,411	\$ 14,455,858	\$ 256,483,405
Administrative and waste management services	\$ 293,081,449	\$ 2,627,417	\$ 90,720,669	\$ 23,532,792	\$ 409,962,327
Educational services	\$ 88,403,917	\$ 1,131,636	\$ 80,352,593	\$ 20,843,330	\$ 190,731,476
Health care and social assistance	\$ 459,146,639	\$ 3,454,962	\$ 474,987,504	\$ 123,210,975	\$ 1,060,800,080
Arts, entertainment, and recreation	\$ 57,071,492	\$ 989,419	\$ 55,728,411	\$ 14,455,858	\$ 128,245,179
Accommodation and food services	\$ 237,323,975	\$ 1,944,442	\$ 189,217,396	\$ 49,082,680	\$ 477,568,494
Other services	\$ 170,182,435	\$ 6,752,675	\$ 135,432,999	\$ 35,131,097	\$ 347,499,206
Total	\$ 7,425,111,738	\$ 57,985,899	\$ 2,251,816,613	\$ 584,117,514	\$ 10,319,031,765

*Does not include direct salaries paid by military

NAICS Sector List

The impact that the military has on the local economy can be broken down into more specific economic sectors. This study identifies 20 broad sectors that the military affects. The sectors are taken from the NAICS and are meant to be representative of the economy as a whole. NAICS is an industry classification system that groups establishments into 1,170 industries based on their primary economic activity. These 1,170 industries are grouped into broader categories, with the 20 sectors listed as the most general. NAICS replaced the old Standard Industrial Classification (SIC), and was developed jointly by the United States, Canada, and Mexico to provide comparability in statistics about business activity across North America. The following paragraphs provide short descriptions of the 20 industry sectors included in this study.

Agriculture, Forestry, Fishing and Hunting (NAICS #11)

Industries in the agriculture, forestry, fishing, and hunting NAICS sector include establishments primarily engaged in growing crops, raising animals, harvesting timber, harvesting fish and other animals from a farm, ranch, or their natural habitats. These establishments are often described as farms, ranches, dairies, greenhouses, nurseries, orchards, or hatcheries. The sector includes two basic activities: crop and animal production (farms) and forestry, fishing, and related activities.

Mining (NAICS #21):

The mining sector under NAICS comprises establishments that extract naturally occurring mineral solids, such as coal and ores; liquid minerals, such as crude petroleum; and gases, such as natural gas. The term “mining” is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and flotation), and other preparation customarily performed at the mine site, or as a part of mining activity.

Utilities (NAICS #22)

The utilities sector comprises establishments engaged in the provision of the following utility services: electric power, natural gas, steam supply, water supply, and sewage removal.

Construction (NAICS #23)

The construction sector comprises establishments primarily engaged in the construction of buildings and other structures, heavy construction (except buildings), additions, alterations, reconstruction, installation, and maintenance and repairs. Establishments engaged in demolition or wrecking of buildings and other structures, clearing of building sites, and sale of materials from demolished structures are also included. This sector also includes those establishments engaged in blasting, test drilling, landfill, leveling, earthmoving, excavating, land drainage, and other land preparation.

Manufacturing (NAICS #31-33)

The manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. Establishments in the manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment.

Wholesale Trade (NAICS #42)

The wholesale trade sector comprises establishments engaged in wholesaling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The merchandise described in this sector includes the outputs of agriculture, mining, manufacturing, and certain information industries, such as publishing.

Retail Trade (NAICS #44-45)

The retail trade sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The retailing process is the final step in the distribution of merchandise; retailers are, therefore, organized to sell merchandise in small quantities to the general public.

Transportation and Warehousing (NAICS #48-49)

The transportation and warehousing sector includes industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation. Establishments in these industries use transportation equipment or transportation related facilities as a productive asset. The type of equipment depends on the mode of transportation. The modes of transportation are air, rail, water, road, and pipeline.

Information (NAICS #51)

The main components of the information sector are the publishing industries, including software publishing, and both traditional publishing and publishing exclusively on the Internet; the motion picture and sound recording industries; the broadcasting industries, including traditional broadcasting and those broadcasting exclusively over the Internet; the telecommunications industries; the industries known as Internet service providers and Web search portals; data processing industries; and the information services industries.

Finance and Insurance (NAICS #52)

The finance and insurance sector comprises establishments primarily engaged in financial transactions (transactions involving the creation, liquidation, or change in ownership of financial assets) and/or in facilitating financial transactions. Three principal types of activities are identified:

1. Raising funds by taking deposits and/or issuing securities and, in the process, incurring liabilities. Establishments engaged in this activity use raised funds to acquire financial assets by making loans and/or purchasing securities. Putting themselves at risk, they channel funds from lenders to borrowers and transform or repackage the funds with respect to maturity, scale, and risk. This activity is known as financial intermediation.
2. Pooling of risk by underwriting insurance and annuities. Establishments engaged in this activity collect fees, insurance premiums, or annuity considerations; build up reserves; invest those reserves; and make contractual payments. Fees are based on the expected incidence of the insured risk and the expected return on investment.
3. Providing specialized services facilitating or supporting financial intermediation, insurance, and employee benefit programs.

Real Estate and Rental and Leasing (NAICS #53)

The real estate and rental and leasing sector comprises establishments primarily engaged in renting, leasing, or otherwise allowing the use of tangible or intangible assets, and establishments providing related services. The major portion of this sector comprises establishments that rent, lease, or otherwise allow the use of their

own assets by others. The assets may be tangible, as is the case of real estate and equipment, or intangible, as is the case with patents and trademarks.

Professional, Scientific, and Technical Services (NAICS #54)

Activities performed include legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; computer services; consulting services; research services; advertising services; photographic services; translation and interpretation services; veterinary services; and other professional, scientific, and technical services.

Management of Companies and Enterprises (NAICS #55)

The management of companies and enterprises sector comprises: (1) establishments that hold the securities of (or other equity interests in) companies and enterprises for the purpose of owning a controlling interest or influencing management decisions, or (2) establishments (except government establishments) that administer, oversee, and manage establishments of the company or enterprise and that normally undertake the strategic or organizational planning and decision making role of the company or enterprise. Establishments that administer, oversee, and manage may hold the securities of the company or enterprise.

Administrative and Waste Management Services (NAICS #56)

The administrative and support and waste management and remediation services sector comprises establishments performing routine support activities for the day-to-day operations of other organizations. These essential activities are often undertaken in-house by establishments in many sectors of the economy. The establishments in this sector specialize in one or more of these support activities and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: office administration, hiring and placing of personnel, document preparation and similar clerical services, solicitation, collection, security and surveillance services, cleaning, and waste disposal services.

Educational Services (NAICS #61)

The educational services sector comprises establishments that provide instruction and training in a wide variety of subjects. This instruction and training is provided by specialized establishments, such as schools, colleges, universities, and training centers. These establishments may be privately owned and operated for profit or not for profit, or they may be publicly owned and operated. They may also offer food and accommodation services to their students.

Health Care and Social Assistance (NAICS #62)

The health care and social assistance sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes

difficult to distinguish between the boundaries of these two activities. The industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance.

Arts, Entertainment, and Recreation (NAICS #71)

The arts, entertainment, and recreation sector includes a wide range of establishments that operate facilities or provide services to meet varied cultural, entertainment, and recreational interests of their patrons. This sector comprises: (1) establishments that are involved in producing, promoting, or participating in live performances, events, or exhibits intended for public viewing; (2) establishments that preserve and exhibit objects and sites of historical, cultural, or educational interest; and (3) establishments that operate facilities or provide services that enable patrons to participate in recreational activities or pursue amusement, hobby, and leisure time interests.

Accommodation and Food Services (NAICS #72)

The accommodation and food services sector comprises establishments providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption. The sector includes both accommodation and food services establishments because the two activities are often combined at the same establishment.

Other Services (NAICS #81)

The other services sector comprises establishments engaged in providing services not specifically provided for elsewhere in the classification system. Establishments in this sector are primarily engaged in activities such as equipment and machinery repairing, promoting or administering religious activities, grant making, advocacy, and providing dry-cleaning and laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services, and dating services.

Appendix 3 – Frequently Asked Questions

Q1: *What is SDMAC?*

A 1: San Diego Military Advisory Council (SDMAC) is a nonprofit mutual benefit corporation supporting, promoting, and representing the common business interests of the military, its quality of life, and the defense industry community in San Diego. SDMAC’s homepage can be found at <http://www.sdmac.org/>

Q2: *What is Export Access?*

A2: Export Access is a student-run global market research group based at the Graduate School of International Relations and Pacific Studies (IR/PS) at the University of California, San Diego. For more information please visit the group’s website at: <http://irps.ucsd.edu/current-students/student-groups/export-access/>

Q3: *What are the boundaries of the San Diego region used in this study?*

A3: The area of this study is San Diego County which includes zip codes 919xx, 920xx, and 921xx which encompasses cities to the east of San Diego, including Alpine, Campo, Jacumba, and Jamul; San Ysidro, Imperial Beach, and Chula Vista to the south; and Oceanside, San Marcos, Escondido to the north of San Diego, as well as all other cities in San Diego County. Use of these zip codes provided “clear-cut” boundaries for the study.

Q4: *The employment multiplier effect and total seem quite large. Is it accurate?*

A4: Yes. The National Bureau of Economic Analysis (BEA), which designed the Regional Input-Output Modeling System (RIMS II), was contacted specifically regarding the methodology used to calculate these figures. The BEA confirmed the correct methodology was used to calculate these figures.

Q5: *What procurement data was analyzed?*

A5: Department of Defense procurement data from the Federal Procurement Data System (FPDS) database was used. The dataset was sorted by place of performance by zip codes in San Diego County. Procurement amounts were based on “obligations” (awarded, issued, etc., in FY2009). The actual payments may have been made at a later month or over a series of months as delivery of the products occurs. Assuming a relatively steady state of year-over-year procurement, it is assumed that the yearly obligations are representative of the yearly funds entering the local economy.

Q6: *What is meant by “obligations”?*

A6: An obligation refers to a specified amount of money that will require outlay or expenditure in the future based on the contract.

Q7: *Does procurement data also include costs incurred for contractor services?*

A7: Yes. All contracts, including, service contracts are captured in the procurement data.

Q8: *The future projection uses annual historical growth rates to project from FY09 to FY11 and a 3.5% growth rate to project from FY10 to FY11. Is this realistic?*

A8: Annual historical growth rates were chosen to project from FY09 to FY11 because growth during this period is believed to be in-line with growth rates over the past five years. A 3.5% growth rate was used to project from FY10 to FY11 as a conservative estimate due to uncertainty with DoD budgets.

Q9: *Why did direct employment in the region decrease from 149,911 in the 2005 Economic Impact to 136,664 in the current (2009) Economic Impact Report? Did the number of individuals employed by the military decrease that substantially in four years?*

A9: The 149,911 direct employment in the previous report included active duty Navy and Marines, Department of Navy civilians, employees paid with non-appropriated funds (NAF), and a variety of contractors, some of which could be comparable to government civilian employees. For this report it was determined the model would estimate impacts most accurately if the NAF and contractors were not included as direct employees. Said another way, the economic model includes individuals like NAF employees and contractors in the induced impacts it projects and, therefore, they are most accurately counted in the modeling vice counted as direct employees. The current total of 136,664 includes Navy and Marines active duty, Department of Navy civilians, and employees paid with appropriated funds (APF).

Q10: *Why are civilians paid with non-appropriated funds and contractors not included in Sections II and III?*

A10: Because civilians paid with non-appropriated funds and contractors are not included in Section I, they were excluded from Sections II and III for consistency.

Q11: *Are the Veterans and Retirees from all DoD agencies?*

A11: Yes. The Veterans and Retirees include all Department of Defense agencies.

Q12: *Are the numbers estimates or actual data?*

A12: All procurement figures and personnel counts are actual data. Salary data comes from the 2007 Consolidated Federal Funds Report and was calculated by multiplying the original figure by the 3.5% increase in wages from FY2007 to FY2008, and then by the 3.9% increase in wages from FY2008 to FY2009.

Q13: *Is contractor pay included in the total employment dollars?*

A13: No, dollars paid for contractors are included in the procurement dollars.

Q14: *Do the employment dollars include benefits and fringe?*

A14: No, gross annual pay was used for both military and civilian personnel.

Q15: *Who is included in retirees?*

A15: Military retirees only.

Q16: *Why are the indirect and induced economic impacts associated with salaries paid so much lower than those associated with procurement?*

A16: Because of the dampening effect that taxes and savings have on personal income. Salaries paid to individuals are subject to much higher tax rates than procurement orders. Individuals also save a portion of their disposable income instead of spending it all. As such, the impact associated with salaries is much lower than the impact associated with procurement.

Q17: *Why are DECA employees included in the report while NEX employees are not?*

A17: Unlike DECA, Navy Exchange Service Command (NEX) facilities do not receive any funding from the government and must be operated on a fee for-service/break-even basis.

Q18: *What is the source of employment data?*

A18: There is no consolidated, single source for military and civilian employment. As such, a variety of sources were used in this report. It is possible that due to variances in the database, specific numbers could be debated; however, the figures are believed to be as accurate as possible.

Q19: *Why are thirty marines stationed at the Naval Medical Center? Aren't hospitals under the jurisdiction of the Navy?*

A19: The thirty marines act as liaisons for medical coordination between the Navy and Marine Corps.

Q20: *What are the differences between an indirect impact and an induced impact?*

A20: Indirect impacts are created by the DoD's purchase of inputs (inputs to the industries providing the direct impacts). For example, when the DoD makes purchases from suppliers in San Diego, those suppliers use a portion of the revenues on purchasing goods and services from other local businesses. The resulting economic activity (of businesses) is an indirect impact. Induced impacts, on the other hand, are associated with purchases made by all employees. As the DoD purchases goods and services from local suppliers, revenues associated with those purchases are used to pay employees. The economic activity that results from this spending by employees is an induced impact.

Q21: *Why did GPC spending increase from \$39 million in the 2010 report to \$92 million in this report?*

A:21: GPC spending increased from \$39 million in the 2010 report to \$93 million in this report due to improvements in data procurement. Previous reports were only able to include GPC spending where the vendor city could be identified. Many purchases made with GPC cards are done at small vendors. A majority of these small vendors are identified only by their phone number. This report was able to include GPC spending at these smaller vendors by referencing if the vendors area code resides in San Diego County.

Q22: *How often is this report updated?*

A22: It will be updated next year and possibly yearly thereafter.

Q23: *Why are Sections II and III useful?*

A23: Sections II and III highlight the non-financial contributions that the military provides to the region. The military takes great pride in the contributions it makes to the region in the areas of environmental stewardship, labor force strengthening and community relations, and the work is rarely quantifiable.