



Professional Knowledge Book

Class of 2022

**AN INTRODUCTION TO THE
U.S. NAVY AND MARINE CORPS**



ALPHA

CO

UNITED STATES NAVAL ACADEMY

Honor.... Courage.... Commitment....

PROFESSIONAL DEVELOPMENT

Class of 2022,

The Navy Warfare pins and Marine Eagle, Globe, and Anchor on the cover of this Professional Knowledge Book (Pro-Book) represent the service assignments for the Class of 2019.

Regardless of which one you are assigned in the fall of 2021, there is a core professional knowledge that you are required to attain prior to receiving a commission as a trained Navy or Marine Corps Officer from the U.S. Naval Academy. The Midshipmen Training Program (MTP) is a primary means of accomplishing that requirement.

The MTP consists of six basic components:

1. **Midshipmen Qualification Standards (MQS)** – books that are divided by class year and contain core learning objectives (LO). Yours is in the back of this Pro-Book.
2. **References** – used to acquire the knowledge necessary to complete the MQS. They include this Pro-Book, websites listed in each MQS, and files posted at:
<https://www.usna.edu/Training/Professional-Knowledge-References.php#fndtn-panel13CReferences>.
3. **Instruction Periods** – used for “come-arounds” and other training opportunities during which you will show that you have mastered the LOs.
4. **4/C Pro-Quizzes/Exam** – quizzes administered weekly to assess comprehension of the applicable LOs, and a Pro-Exam administered at the end of the fall semester as a mid-point evaluation for Plebe Year.
5. **Professional Competency Boards (PCB)** – oral boards administered to 4/C midshipmen in the spring to objectively assess comprehension of all LOs for the year.
6. **Professional Competency Assessments (PCA)** – multiple-choice exams administered to 3/C and 2/C midshipmen to objectively assess comprehension of LOs.

The MTP is managed by the Training Department. It is part of a training continuum that includes the Career Information Program (CIP) managed by the Professional Development (PRODEV) Division, and Core Courses taught by PRODEV and the Leadership Education and Development (LEAD) Division. This continuum is intended to:

- Prepare you for each summer’s training events
- Enable you to make informed choices regarding your preferences for service assignment
- Prepare you to be a junior officer

As you move forward during this year, take pride in your growing knowledge and understanding of the Naval Service. Take advantage of this opportunity and it will contribute to your success here at the academy, and more importantly in the Fleet.

CDR T. F. Checca
Training Officer
United States Naval Academy

4/C PROFESSIONAL KNOWLEDGE TRAINING SCHEDULE

Week	Training Dates	Professional Topic	Pages
1	20Aug – 24Aug	Midshipman Regulations COMDTMIDNINST 5400.6 (series)	1
2	27Aug – 31Aug	Financial Literacy	1 – 7
3	*04Sep – 07Sep	Military Courtesies, Customs, and Ceremonies & USNA Notable Graduates	8 – 19
4	10Sep – 14Sep	Mission and Organization of the Navy	20 – 26
5	17Sep – 21Sep	Operational Mission Area, Capabilities, and the Current Maritime Strategy	27 – 30
		<i>ACADEMIC RESERVE PERIOD</i>	
6	01Oct – 05Oct	Surface Warfare	31 – 40
7	*9Oct – 12Oct	Submarine Warfare	41 – 52
8	15Oct – 19Oct	Naval Air Warfare	53 – 59
9	22Oct – 26Oct	Naval Air Warfare Platforms	60 – 68
		<i>ACADEMIC RESERVE PERIOD</i>	
REVIEW WEEKS			
	15 Nov	MID-YEAR Pro-Exam	
10	07Jan – 11Jan	USMC Mission, Enduring Principles, and Organization	69 – 76
11	14Jan – 18Jan	USMC History and Traditions	77 – 85
12	*22Jan – 25Jan	USMC Weapons and Platforms	86 – 99
13	28Jan – 01Feb	Naval Special Warfare	100 – 106
14	04Feb – 08Feb	Explosive Ordnance Disposal (EOD)	107 – 111
		<i>ACADEMIC RESERVE PERIOD</i>	
15	*19Feb – 22Feb	Restricted Line, Staff Corps, Limited Duty, and Chief Warrant Officers	112 – 115
16	25Feb – 01Mar	Information Warfare Community (IWC)	116 – 122
17	04Mar – 07Mar	U.S. Navy Enlisted Personnel	123 – 128
<i>SPRING BREAK</i>			
18	18Mar – 22Mar	Current Global Challenges	129 – 140
	25Mar – 29Mar	REVIEW WEEK	
<i>ACADEMIC RESERVE PERIOD</i>			
	08Apr – 19Apr	PROFESSIONAL COMPETENCY BOARDS	

Notes:

1. MQS will be distributed during the Fall Reform.
2. Respective MQS Learning Objectives (located in the back of this book) must be signed off in full prior to a plebe taking a quiz, exam, or board.
3. The Brigade Training Staff shall develop questions for all Pro-Quizzes, the Pro-Exam, and the Professional Competency Boards using the MQS Learning Objectives. The 4/C Training Officer shall provide guidance and review all quiz and exam questions.
4. When evaluating a plebe on Professional Knowledge during a come-around, the focus should be a plebe's preparedness for Pro-Quizzes, the Pro-Exam, and PCBs. A plebe should arrive at the come-around already knowing the required information.
5. Come-arounds shall be conducted daily during the week using designated Instruction Periods listed in the Battle Rhythm contained in the Midshipmen Regulations (MIDREGS). They may only be scheduled outside of these periods if a scheduling conflict arises for an upper class midshipmen or the plebe.
6. Pro-Quizzes and the Pro-Exam shall be completed on Fridays between 1900 and 2000 in accordance with the MIDREGS Battle Rhythm. **Plebes on an approved Movement Order (MO) or Excusal during this time shall complete the quiz or exam between 1900 and 2000 on the Sunday that immediately follows.**

*Dates with an asterisk in the chart above denote holiday-shortened weeks.

PRO-QUIZ AND EXAM QUESTION TYPES AND GRADING CRITERIA

QUESTION TYPE	GRADING CRITERIA
<u>MULTIPLE CHOICE</u>	CORRECT per the key – Full credit INCORRECT – No credit
<u>TRUE OR FALSE</u>	CORRECT per the key – Full credit INCORRECT – No credit
<u>MATCHING</u>	CORRECT per the key – Full credit Partial credit awarded to each correctly matched item in the list.
<u>FILL IN THE BLANK</u>	CORRECT per the key – Full credit INCORRECT – No credit
<u>LIST</u>	Each answer in the list should be correct per the key (i.e., verbatim). Credit awarded for each correct item in the list.
<u>LIST AND DESCRIBE</u>	Each answer in the list should be correct per the key (i.e., verbatim). Credit awarded for each correct item in the list. Incorrect, incomplete, or no description results in no credit for that item.
<u>STATE VERBATIM</u>	CORRECT per the key – Full credit INCORRECT – No credit
<u>STATE BRIEFLY</u>	CORRECT per they key – Full credit (does not need to be verbatim) Grader should assign credit based on the midshipman’s demonstrated understanding.

Notes:

1. The Pro-Quizzes and Pro-Exam are written by the Brigade Training Staff and reviewed by the 4/C Training Officer.
2. Each Pro-Quiz shall consist of no more than 20 questions.
3. The Pro-Exam shall consist of 30 questions.
4. Passing is 70%.
5. There are no-retakes for Pro-Quizzes.

WEEK 1: MIDSHIPMAN REGULATIONS

Midshipman Regulations (COMDTMIDNINST 5400.6 (series)) are supplementary to U.S. Navy Regulations, 1990. Members of the Brigade and all personnel subordinate to the Commandant of Midshipmen shall comply with the substance, spirit, and intent of these directives at all times. Nothing in these regulations should be construed as taking priority over sound judgment or doing the right thing. Situations may arise where good judgment will be the only regulation, and midshipmen are expected to conduct themselves per Navy core values in these situations. These regulations apply at all times. Midshipmen are required to comply with the requirements set forth in this instruction during the summer training periods as well as during the academic year.

This chapter is included to test your knowledge, understanding, and application of Midshipmen Regulations. You are responsible to know and comply with all the material included in Midshipmen Regulations and thus not limited to the following areas identified for evaluation.

Initials _____

<https://www.usna.edu/Commandant/Directives/Instructions/5000-5999/COMDTMIDNINST-5400.6U-MIDSHIPMEN-REGULATIONS-MANUAL.pdf>

WEEK 2: FINANCIAL LITERACY

Financial literacy provides the necessary knowledge in personal finance and the midshipmen pay system to make educated financial decisions. Over the next 4 years, you will earn approximately \$15,000 in net pay through the midshipmen pay system. Additionally, the Career Loan is offered at the end of your 3/C year, which can range up to \$36,000. Therefore, it is wise to make financial literacy one of your focuses to gain control and understand your finances.

As future leaders, financial literacy is not only essential for you to make smart financial decisions, but to guide those Sailors/Marines who may need financial guidance. Start now, and make financial literacy an important part of your life!

I. Understanding the Midshipmen Pay System

The midshipmen pay system is managed by the Disbursing Office in Bancroft Hall 4002. Congress established the midshipmen pay at **35% the base pay of an O-1 with fewer than two years of service**, and it is appropriated to fulfill military and academic obligations while attending USNA. The amount for the year 2018 is \$1,087.80 per month. After deductions such as Taxes, Social Security, Medicare, Service Member Group Life Insurance (SGLI), Held Pay, Personal Deductions, and the Advance for Clothing and Equipment (ACE) Loan, the net monthly pay is:

- \$125 for 4/C MIDN
- \$200 for 3/C MIDN
- \$300 for 2/C MIDN
- \$500 for 1/C MIDN

There are many factors associated with the midshipmen pay system. Not only do you need to understand how much you are being paid, but also how to read your Leave and Earnings Statement (LES). The following terminology will help you better understand this system:

- **MyPay (<https://mypay.dfas.mil>)**. An online pay account management system that was created and maintained by the **Defense Finance and Accounting Service (DFAS)**. It provides pay and tax information for military members, retirees, and numerous federal civilian employees. This is where you will be able to view your LES. You must login/change your password at least **once every 150 days** to avoid issues with your login. Make it a habit of viewing your LES once per month.
- **Leave and Earnings Statement (LES)**. The LES is a monthly pay stub and the statement showing your entitlements, deductions, leave information, and tax withholding information. You

may access your LES via the MyPay website. Your LES is available 1 week prior to Pay Day. ***It is your responsibility to monitor your pay, identify pay issues, and report findings to the Disbursing Office.***

- **Pay Day.** You are paid once per month at the beginning of each month for the ***previous month.*** For example, a 4/C midshipman will receive the pay of \$100 on 1 September for the month of August. This pay is considered “August pay” even though the payment is received in the month of September.
- **Held Pay.** Held Pay is an account managed by the Disbursing Office and DFAS that applies to all midshipmen. To ensure sufficient funds are available to meet future mandatory issue (i.e. gear, uniforms, books, etc.), not all pay is released. For example, if you make \$1,087.80 as a 4/C, and pay \$600 in deductions, you would have \$487.80 left. However, \$362.80 is deposited into your Held Pay account and \$125 into your direct deposit account. This process will continue from month to month, accumulating funds into your Held Pay account. If enough Held Pay accumulates, it will be released to you every February, July, and November. Please note that 4/C midshipmen are not able to accumulate Held Pay due to the amount of debt initially incurred. In order for Held Pay to be released to you, your account balance must be above the following minimums:
 - **4/C MIDN are not eligible for Held Pay release due to insufficient funds**
 - **\$1,500 for 3/C MIDN**
 - **\$1,350 for 2/C MIDN**
 - **\$1,000 for 1/C MIDN**

You can monitor your Held Pay balance on your LES. ***This balance is found under the “Summary” column, on the second to last line labeled as “Cr Fwd”.*** If the account is not above the minimums, Held Pay cannot be released in the months previously mentioned. If any Held Pay is released, the maximum amount is \$750 per pay period.

- **Advance for Clothing and Equipment (ACE) Loan.** The ACE loan is an interest-free advance pay of \$8,500 to provide funding for initial mandatory gear, uniforms, and equipment costs during Plebe Summer. Midshipmen are placed on an automatic payment plan to fully repay the ACE Loan by the Fall of their 1/C year.
- **Outside Funds.** Outside funding such as Scholarships or private funds may be applied (but are not required to be) applied to your pay account. Excluding room and board, the total costs for the ACE Loan, gear, uniforms, and textbooks are approximately \$17,500 for the entire four years. By default, the \$17,500 is budgeted to be paid out from your monthly pay. However, you are highly encouraged to apply outside funding as it allows your Held Pay account to grow more as less money is being deducted from \$1087.80. Therefore, you may apply up to \$17,500 in outside funds to your pay account. **You are entitled to apply and receive scholarships your entire four years at USNA.** If you receive scholarship money or private funds, contact the Disbursing Office to arrange the deposit. Authorized outside funds include personal checks, public or private scholarships, and college savings plans such as the state 529 plans.
- **Taxes.** Your pay is subject to Federal Income Tax Withholding (FITW), Federal Insurance Contribution Act withholding (FICA), and in most cases, State Income Tax Withholding (SITW). Federal and State income tax is withheld based on the following defaults:
 - Marital status: Single
 - Number of exemptions: 01
 - State of legal residence: As declared in Permit to Report; if not declared, MarylandAll midshipmen are required to file their taxes by 15 April of each year. To do so, midshipmen must obtain tax documents such as the W-2 (document information that is submitted to the IRS) by logging into MyPay. The Midshipmen Financial Advisor provides training and instructions on how to file your State and Federal Taxes.
- **Servicemember Group Life Insurance (SGLI).** SGLI is provided by the Veteran’s Association to all service members at a monthly rate of 6.5 cents per \$1,000 of coverage. All midshipmen are given the maximum coverage of \$400,000 as default coverage. Midshipmen can elect to reduce their coverage in increments of \$50,000. ***To change SGLI coverage amounts visit the Midshipmen Personnel Office in Bancroft Hall 4001.***

- **Naval Academy Business Services Division (NABSD).** NABSD is the retail arm of the Naval Academy that operates all retail services on the Yard, including the Midshipmen Store, Uniform Store, and Textbook Store. In addition, NABSD provides the interest-free credit card known as the “Midstore card”. You are able to use this card at the Midshipmen Store, Uniform Store, and Textbook Stores. Remember, *the more you charge on your Midstore card, the less Held Pay you will be entitled to.* Your assets will be used to pay off any of your liabilities.
- **Charitable Allotments.** Midshipmen are authorized to contribute to two charitable organizations through allotments directly from their pay, the Combined Federal Campaign (CFC) and Navy Marine Corps Relief Society (NMCRS). If desired, allotments are deducted from January through March for CFC and from April through June for NMCRS. Allotment values must be divisible by three, as they will be split between three months. For example, if you donate \$12.00 to CFC, you will see a CFC allotment of \$4.00 on each of your January, February, and March LES.
- **Travel Reimbursement.** Midshipmen are reimbursed for travel performed under official orders. This includes travel to the Naval Academy when inducted, travel to/from summer training, and other official travel. USNA’s Travel Office is located in Bancroft Hall, room 2016.
- **Commutated rations (COMRATS).** Midshipmen receive COMRATS at the daily ration rate (\$12.30 per day for 2018) when in an authorized status away from USNA, such as leave periods.

II. Personal Finance

In order to achieve financial goals and success, you must understand your own personal finance. Just as it is important to understand your pay, you must also learn how to manage it. Money management is achieved by having an understanding of topics such as financial tools, budgeting, and money habits. By gaining knowledge from these topics, you will be able to practice personal finance and become financially responsible.

Financial Tools

A ‘Financial Tool’ is a metaphor that can help you achieve your financial goals. Just like any other tool, it is important to learn how to use it. The following are the most common financial tools available through Banks (USAA, Navy Federal Credit Union, etc.), Brokerages (Vanguard, Fidelity, etc.), and other sources.

- **Checking account.** A transactional deposit account held at a financial institution that allows for withdrawals and deposits. Money held in a checking account is liquid and can be withdrawn using checks, ATM’s, debit cards, and other methods. This is your ‘everyday use account’ that is linked to your Debit account.
- **Savings account.** A deposit account held at a bank or other financial institution that provides principal security and a modest interest rate. It typically pays out better interest than a checking account. Most people set aside funds in these accounts as an emergency fund and for short-term goals like saving for holiday leave, summer leave, your class ring, or buying a car.
- **Money Market account.** An account that typically pays a higher interest than a savings account. Similar to the interest earned on checking and savings accounts, the interest earned on a money market account is taxable. *Individuals typically use money market accounts for short-term savings and emergency funds.*
- **Certificates of Deposit (CD).** CDs are funds borrowed by the bank from their customers. A CD entitles the customer to receive interest over a set term that generally ranges from one month to 5 years. The longer the terms of the CD is, the better the interest paid out will be. CDs generally pay better interest than savings accounts and money market accounts, but incur penalties for early withdrawals. CDs are primarily used for short-term financial goals ranging up to 5 years.
- **Bonds.** A debt investment in which an individual loans money to an entity (corporate or government) that borrows the funds for a defined period of time at a fixed interest rate. Bonds are used by corporations and governments to finance projects or to purchase assets. They are generally purchased by individuals looking to achieve better returns than those offered by bank-related services.
- **Mutual Funds.** An investment vehicle that is made up of a pool of funds contributed by many investors for the purpose of investing in securities such as stocks, bonds, money market instruments, and similar assets. Mutual funds are created by brokerages and financial institutions

and are operated by their fund managers. The fund managers oversee the fund's capital and attempt to produce gains and income for the investors. When investors contribute to mutual funds, they are in essence purchasing shares of a portfolio composed of different securities. Mutual Funds are a great way to create a diversified portfolio of investments as it considered less of a risk.

- **Exchange Traded Funds (ETFs)**. A security that tracks a specific market sector, a commodity, or a basket of assets. ETFs are exactly like Mutual Funds but are not actively managed by the fund managers. ETFs can be purchased through the stock exchanges (i.e. New York Stock Exchange) as they trade like regular stocks. In order for investors to purchase investments through exchanges, they must open a brokerage account via a Financial Institution.
- **Stocks**. A type of security that signifies ownership in a corporation. There are two main types of stock: common and preferred. Common stock usually entitles the owner to vote at shareholders' meetings and to receive dividends. Preferred stock generally does not have voting rights, but has a higher claim on assets and earnings than the common shares. Shares of stock can also be purchased through brokerage accounts.
- **Individual Retirement Accounts (IRA)**. IRAs are an investing tool used by individuals to save specifically for retirement. There are two types of IRAs: Traditional and Roth. Contributions to the Traditional IRA may be tax deducted each year, which lowers your taxable income, but withdrawals are taxed. Roth IRAs do not provide a tax deduction immediately, but withdrawals are tax free. *At your age, Roth IRAs typically return significantly more money!* Most IRAs can be obtained through Financial Institutions and/or Banks to begin your retirement planning.
- **Credit Cards**. A card issued by a Financial Institution giving the holder an option to borrow funds, usually at the point of sale. Credit cards charge monthly interest and are primarily used for short-term financing. Credit cards are a great tool for building your credit rating (discussed below) and earn points or rewards. Since credit cards can be useful financial tools, it is important to learn how not to 'abuse' them by piling debt. The best way to manage your credit cards is by only charging what you can afford to pay off that month, and paying the balance in full each month. The average college student carries a \$500 balance, do not be average!
- **Career Starter Loan**. An optional loan offered by Navy Federal and USAA at the end your 3/C year. Depending on which bank you choose, it may range up to \$36,000. The purpose of the Career Loan is to "jump-start" your Naval or USMC career, as there are significant costs when you first graduate and report. There are many midshipmen who graduate without any money left and therefore start their careers with debt. You must seek financial guidance to better plan and manage the Career Loan so that is not the case. For more information on the Career Loan, please visit: <https://intranet.usna.edu/FinancialAdvisor/Guides/starterloan.php>

Interest

Interest is expressed as *the charge for the privilege of borrowing or lending money, typically expressed as an Annual Percentage Rate (APR)*. If you are borrowing from a credit card, you need to understand how much interest you are paying. Likewise, if you are lending, understand how much interest you are making. ***The higher the interest, the more money you pay or make.*** **There are two types of Interests:**

- **Compound Interest**. Compound interest is charged on the amount borrowed or lent plus the interest it has accrued. Therefore, compound interest can be thought of as 'interest on interest/amount', and will make your debt or investment grow at a faster rate than simple interest would. For example, Annual Percentage Yield (APY)
- **Simple Interest**. Simple interest does not compound, it is only charged on the amount borrowed or lent. For example, Annual Percentage Rate (APR)

When obtaining debt through the usage of credit cards or loan, most financial institutions use compound interest in order to make more money off you. However, there are financial predators such as 'Payday Loans.' Avoid them at all costs due to their outrageous terms/conditions and high interest rates of up to 400%. It is best to stay away from Payday loans at all times!

Money Habits

The definition of a habit is *an acquired behavior pattern regularly followed until it has become almost involuntary*. Therefore, when it comes to finances, you can develop either Good Money Habits or Bad Money Habits. Carrying debt on a credit card, for example, is a Bad Money Habit where you are ‘abusing’ the financial tool by not paying it back. As a student, it is much easier to steer towards the Bad Money Habits. The reason is that you may get complacent when you do not have a significant money worries like paying a mortgage or having dependents (Spouse, children, etc.). In addition, by having a limited income, if you do not track your money habits carefully, it is easy to waste money. Below you will find some of the most common money habits you should work to acquire or avoid:

- **Good Money Habits (Acquire)**
 - **Pay yourself first.** A good ‘Rule of Thumb’ is to save at least **10% of your monthly income**. Setting up a monthly automatic transfer on the first of every month to your savings account can be the easiest way to “set it and forget it.” Following this concept, you will not be spending money first and saving what is left over or nothing at all.
 - **Budgeting.** A budget is an estimation of the revenue and expenses over a specified future period. It allows you to analyze your spending and realize where you are overspending on one or multiple expenses (cell phone, shopping, food, entertainment, etc.). Remember, overspending on unnecessary personal expenses will keep you from saving money. One of the easiest ways to budget as a midshipman is to do so on a weekly basis. For example, if you make \$100 per month and choose to save \$20 each month, you can break up the \$80 of spending money into \$20 per week. If you happen to spend less than \$20 in a week, you can carry the difference over the next week, or better yet save it! You can find a midshipman budget spread sheet on the Financial Advisor website: <http://intranet.usna.edu/FinancialAdvisor/Guides/budgeting.php>
 - **Live below your means.** Do not spend more than you make. Ensure that your spending does not exceed your budget to avoid borrowing money. This habit will help you avoid a pile of debt that may take years to pay back.
 - **Pay with cash.** Paying with cash provides a physical connection between the exchange of money and goods/services. The habit is especially effective when you are trying to avoid debt. In addition, paying with cash helps you budget better as you can physically see your money disappear from your wallet, opposed to swiping your debit/credit cards.
 - **Save for retirement now.** One of the best financial decisions you can make at a young age is save for your retirement. For example, MIDN X starts saving \$50 per month at age 18, while MIDN Y starts \$50 per month at age 28. Both midshipmen invested in the same Mutual Fund with an annual return of 7%. If both withdrawal their funds at age 60, MIDN X would have a total of \$142,765 while MIDN Y would only have \$68,227. In order for MIDN Y to have the same amount as MIDN X at age 60, his/her starting contribution would have to be \$104 per month instead of \$50. Remember, the sooner the better as you want compounding interest to do the work for you.
- **Bad Money Habits (Avoid):**
 - **Living paycheck to paycheck.** An individual who devotes their entire month’s pay to expenses without saving any of it. Most individuals who live ‘paycheck to paycheck’ typically do not have any savings or budget, and tend to live above their means.
 - **Maxed out Credit Cards.** When a credit card balance amount has reached the line of credit available. To avoid reaching the limit, you must budget the amount each month that can be charged, and do not exceed it. Pay off the full credit card balance every month. This way you avoid paying interest each month and carrying outstanding debt. Carrying debt from month to month, specifically **30% or more of your credit card limit**, counts against you on your Credit Report/Score.
 - **Not revising your Credit Report/Scores.** Being unaware of your Credit Report/Score should be avoided at all times. If a predator steals your identity and takes out a loan on your behalf, you may never know unless you check your Credit Reports. Make it a habit to check this information at least three times per year.
 - **Paying the minimum payment on Credit Cards.** Credit cards will often allow you to pay a “minimum payment” on credit balances. This often gives credit card holders a false sense of security. Credit cards typically have very high interest rates, sometimes upwards

of 20%. If you only pay the minimum each month, interest will add up over time and can snowball into an unmanageable level of debt. If you have an outstanding balance, create a reasonable payoff plan and include it in your monthly budget.

Credit Reports

Your Credit Report is a detailed report of your credit history prepared by a credit bureau and used by a lender to determine your creditworthiness. Your Credit Report is composed of credit history such as credit card, loans, previous or current home addresses, number of late payments, Bankruptcy, accounts on default, etc. Here are important facts you need to understand about Credit Reports:

- **How to obtain it.** You can either pay for the Credit Report through well-trusted websites like www.myfico.com or receive a free Credit Report through www.annualcreditreport.com (it only includes the report, but does not show you a score).
- **Three different Credit Agencies.** The three different credit agencies are Experian, Equifax, and Transunion. They should all correlate with each other in terms of information/history on your Credit Report. However, it is your job to ensure they all have the same information, as **you are your only auditor** when it comes to your Credit Report.
- **Credit Score.** A three-digit number (ranges from 300-850) that tells creditors how likely you are to pay back the money you want to borrow. Here is a breakdown how creditors view you based on your Credit Score range:
 - **<630: Bad credit**
 - **630-689: Fair credit**
 - **690-719: Good credit**
 - **720-850: Excellent**

Remember, *the lower your credit score, the riskier you appear to lenders.* Hence, a lower credit score will qualify you for a higher interest, meaning you will be charged more to borrow money, or not qualify you at all. Credit scores are also used more and more by potential employers, landlords, utility companies and others. *The U.S. Navy may use your Credit Score and Report to determine the type of Security Clearance you may obtain.* Remember, if your credit score looks bad, you look bad.

- **Fraud on your Credit Report.** If you notice suspicious information that does not pertain to you, contact one of the credit reporting agencies immediately:
 - Equifax: www.equifax.com, 1-888-766-0008
 - Experian: www.experian.com, 1-888-397-3742
 - TransUnion: www.transunion.com, 1-800-680-7289

Once you contact them, explain with details the situation, and ask that a “**fraud alert**” be placed in your file. If after the investigation they determine that you were a victim of fraud, the information will be disputed on your Credit Report.

Servicemembers Civil Relief Act (SCRA)

The SCRA is an Act passed by Congress in 1940 to protect the rights of servicemembers. The primary purpose of the SCRA is to ease legal and financial burdens on military personnel and their families. The SCRA can protect servicemembers from evictions, leases, default judgments, outrageous interest rates, and much more. For example, under the SCRA *you can reduce or cap interest rates on any credit card-or other loans you acquired before you entered the military to 6% per year* for the period you remain on active duty. A Judge Advocate General’s (JAG) can assist any military personnel with legal issues or advice pertaining to the SCRA.

III. USNA Financial Points of Contact

Should you have any financial questions/concerns please reach out to LT Andrew Hughes. He is the Midshipmen Financial Advisor, located in Bancroft Hall C209. His mission is to provide financial literacy and information to the Brigade of Midshipmen. The midshipmen pay system is just as important in order for you to understand your source of income while attending USNA. Should you ever experience pay issues/concerns please contact LT Daniel Monteith. He is the Disbursing Officer, located in Bancroft Hall 4002, and manages the midshipmen pay system.

For Midshipmen Pay related questions (Section I), contact:

Midshipmen Disbursing Officer
LT Daniel Monteith, SC, USN
410-293-3307
monteith@usna.edu
Bancroft Hall 4002

For Financial Advice on Personal Finance (Section II), contact:

Midshipmen Financial Advisor
LT Andrew Hughes, SC, USN
410-293-7023
ahughes@usna.edu
Bancroft Hall C209
Make an appointment: <https://intranet.usna.edu/FinAdv>

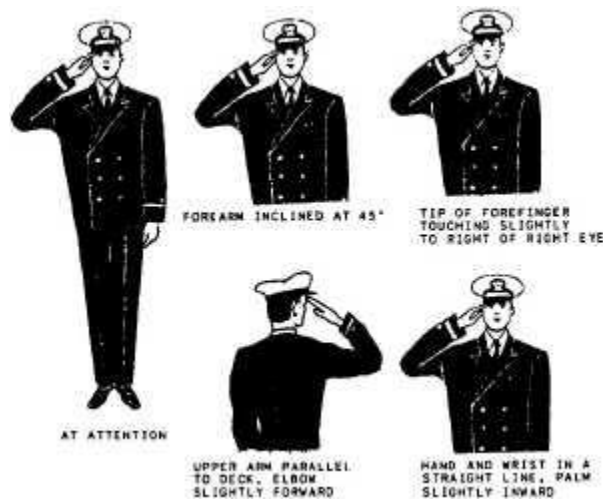
WEEK 3: MILITARY COURTESIES, CUSTOMS, AND CEREMONIES & USNA NOTABLE GRADUATES

I. Courtesies, Customs, and Ceremonies

Fleet Admiral Chester Nimitz, one of the key figures in the U.S. Navy's victory at sea in the Pacific during World War II, once said, "A naval ceremony should follow the long established rules for its execution carefully and exactly. Such attention to detail honors those who, long before us, established the ritual, and all those who, past, present, and future, take part in that ceremony."

There is no question that life in the naval service is a unique experience. Once you have been to sea, flown on naval air missions, or taken part in the many different things that Sailors and Marines around the world are doing every hour of every day, you will know from first-hand experience how different a job in the naval service can be from what your counterparts in civilian life are doing. It is only fitting, therefore, that we celebrate our uniqueness through special ceremonies and demonstrate our differences through special customs that remind us of our very different heritage.

II. Saluting



The Salute

- Salutes are customarily given with the right hand, but there are exceptions. If your right arm is injured in such a way as to prevent you from saluting, or if you are using your right hand for some military purpose, such as a Sailor holding and blowing a boatswain's pipe, then it is considered appropriate for you to salute with your left hand.
- Sailors and Marines must be covered if they are going to salute. Soldiers and Airman may salute uncovered. Be aware that these differences in custom among the services should be modified if the circumstances warrant. Consider, for example, if you were in an office with several soldiers and none of you are covered. An Army officer enters, and the soldiers jump to their feet, come to attention, and salute. Your naval custom would not include the salute, since you are uncovered, but not to salute would seem disrespectful under the circumstances. This follows the old (and customary) saying, "When in Rome, do as the Romans do".
- If you encounter a senior officer who is not covered, and you are covered, you would still render a salute, even if the senior cannot return the salute.

How to Salute

- Salute from a position of attention if you are standing still.
- If you are walking, salute from an erect position.

- Your upper arm should be parallel to the deck or ground, forearm inclined at a 45-degree angle, hand and wrist straight, palm slightly inward, thumb and fingers extended and joined, with the tip of the forefinger touching the lower edge of your cap, slightly to the right of the eye.
- Face the person saluted, or if you are walking, turn your head and eyes toward the person. If possible, look directly into the eyes of those you salute.
- Allow time for the person being saluted to see and return the salute; if both of you are walking, a distance of about six steps is about right.
- **Hold the salute until the officer has returned or acknowledged it**, and then bring your hand smartly to your side.
- In most cases, a salute is accompanied by a verbal greeting. For example, when you meet an officer you know, you should accompany your salute with “Good morning, Lieutenant Jones”. If you do not know the officer’s name, “Good morning ma’am”, or “Good morning sir” is appropriate.
- If on a double, slow to a walk when saluting.
- If you are carrying something in both hands and cannot render the hand salute, look at the officer as though you were saluting and render a verbal greeting as described above.
- If using a cell phone, pause, drop the phone to your side, stand at attention, and render the salute.

Whom to Salute

- Salute senior officers of all U.S. services and all allied foreign services. Officers in the U.S. Merchant Marine and Public Health Service wear uniforms that closely resemble Navy uniforms, and they too rate a salute. As do all foreign military officers at USNA.
- Salute senior officers who are close enough to be recognized whether they are wearing a uniform or civilian clothes.
- Personnel wearing the Medal of Honor are saluted no matter what their rate or rank.
- Salute the person standing an Officer of the Deck (OOD) watch no matter what their rank or rate. The same applies to anyone taking a division/detail muster.
- Salute senior officers even if they are uncovered or their hands are occupied. Your salute will be acknowledged by a verbal greeting.
- If you are walking with or standing by a senior officer, do so on his/her left side. If the occasion for a salute arises, salute when the officer salutes, not before. This is the case whether he/she is saluting a junior or a senior officer.
- If you are standing in a group and a senior officer approaches, the first to see the senior should call “Attention”, and all face the officer and salute.
- If you are overtaking a senior officer and it becomes necessary to pass, you should do so to the left, salute when abreast of the officer, and ask, “By your leave, sir/ma’am?” The officer should reply “Very well”, and return the salute.
- If you are at a crowded gathering or in a congested area, you normally salute only when addressing or being addressed by senior officers.
- Because you are in uniform, young children or military retirees may salute you. Return the salute.
- When in doubt, salute. If you salute someone who does not rate a salute, you may cause yourself some slight embarrassment by appearing less informed than you should be. However, if you fail to salute someone who does rate one, you appear to be unmilitary, discourteous, and a shirker. No one ever got into trouble for saluting when it was not expected.

When not to Salute

- In formation. The person in charge will salute for you or, in some cases, will give the order for you and others in the formation to salute. You are relieved of any responsibility to salute on your own when in formation.
- When engaged in work and saluting would interfere with what you are doing. If you are part of a work detail, the person in charge of the detail will salute for the entire group.
- When carrying something with both hands and saluting would require you to put all or part of your load down. A verbal greeting is still appropriate in this case.

- In public places where saluting is obviously inappropriate (such as on a bus or while standing in line at a theater). A verbal greeting is appropriate.
- At mess. If you are addressed by an officer while eating, you should stop eating and sit at attention until the officer has departed. Courtesy dictates that the officer will keep the interruption brief.
- In combat or simulated combat conditions.

III. The Address

Officers

- Officers are always addressed and referred to by their title or rank, such as admiral, captain, or commander.
- By tradition, the commanding officer of any ship or station, no matter what his/her rank, is addressed and referred to as “Captain”.
- An officer in the medical or dental corps is addressed and referred to by rank or as “Doctor”.
- A chaplain may be called “Chaplain” no matter what the rank.

Enlisted Personnel

- A chief petty officer is addressed as “Chief Petty Officer Smith”, or more informally as “Chief Smith” or “Chief” if you do not know his or her name.
- Master and senior chief petty officers are customarily addressed and referred to as “Master Chief Smith,” “Senior Chief Smith,” “Master Chief,” or “Senior Chief” if you do not know their names.
- Other petty officers are addressed and referred to by their specific rates. For example, you would address GM2 Johnson as “Gunner’s Mate Second Class Johnson”, “Petty Officer Second Class Johnson”, or “Petty Officer Johnson”.
- Nonrated personnel – those in paygrades E-1 through E-3 – are introduced as “Seaman Wells” or “Fireman Apprentice Johnson” and referred to in the same manner or by their last names only in informal situations.
- Enlisted Marines are addressed using their full rank such as “Staff Sergeant Smith” or “Master Sergeant Jones” – their rank is never shortened to just “Sergeant Smith” if they are an E-6 or above.

IV. Colors

Showing respect to the American flag is probably not new to you. In school, or perhaps in a scout troop, you may have recited the pledge of allegiance. You have probably been to a sporting event where the national anthem was played and everyone in the stadium stood as a mark of respect. The American flag is, in truth, a piece of colored cloth, but what it represents causes us to want to show respect for it. The American flag is a symbol of the democracy we hold so dear, and the men and women who have died protecting that democracy.

The first official salute of the American flag by a foreign government took place 14 February 1778 when a Navy ship, the sloop-of-war *Ranger* under the command of Captain John Paul Jones, exchanged salutes with the French ship *Robuste*, in Quiberon Bay on the Atlantic coast of France.

Many customs and ceremonies are associated with the national ensign. The ceremonies of hoisting (raising) it at 0800 in the morning and lowering it at sunset are called morning colors and evening colors, respectively. These ceremonies take place every day on every Navy and Marine Corps shore station in the world. Ships at sea do not observe either of these formal ceremonies, but ships in port – whether moored to a pier or anchored offshore – do observe both. Aboard ships, the ceremonies have an added factor in that a flag known as the union jack is also hoisted and taken down at the same time as the national ensign. The union jack is always hoisted on a pole called a “jackstaff” at the bow (front end) of the ship, while the national ensign is always hoisted onto a pole called a “flagstaff” at the stern (back end) of the ship.

Morning Colors

- “First call to colors” is sounded precisely at 0755. Most often, this is a special bugle call. An alternative is for the Officer of the Deck (OOD) to pass the word “first call to colors” over the general announcing system (1MC). On ships, a special yellow and green pennant called the PREP (or “preparative”) pennant will be hoisted to the yardarm.
- “Attention” is sounded precisely at 0800. While the colors (flags) are being briskly hoisted, the national anthem is played, “To the colors” is played by bugle, or there is silence. On ships, the PREP pennant will be hauled to the dip (lowered to the halfway point) and remain there until the ceremony is completed.
- During colors, everyone within sight or hearing renders honors. If you are outside, stop doing what it is you are doing when “Attention” is sounded, face the colors or the direction from which you heard “Attention”, salute when the national anthem or “To the colors” starts, and drop the salute when it stops. If there is no national anthem or “To the colors” (e.g., silence), salute at “Attention” and hold it until you hear “Carry on.” If you are in ranks, follow the orders of the person in charge of the formation. If you are not in uniform, stand at attention. If you are driving a vehicle, stop and sit at attention.
- Once “Carry on” has been signaled, resume what you were doing before the color ceremony.

Evening Colors

- Evening colors occurs at sunset in the Navy. The exact time of sunset changes (ranging anywhere from 1700 to 2100) depending on your latitude and the time of year but will be published each day in the Plan of Day (POD) of your ship or station.
- Five minutes before sunset, “First call to colors” is sounded just as in the morning and, if you are aboard a ship, the PREP pennant will again be raised to the yardarm.
- At sunset, the colors ceremony begins when “Attention” is sounded on a bugle or when a whistle is blown. PREP is hauled to the dip just as in the morning and the procedures for standing at attention and saluting are the same as in the morning.
- While the national ensign is being lowered, the bugler (or a recording) will play “Retreat” (instead of “To the Colors,” as is played in the morning). Another difference in the two ceremonies is that as morning colors the national ensign is hauled up smartly (quickly), while at evening colors it is hauled down slowly and ceremoniously.
- “Carry on” will signal the end of the ceremony just as in the morning.
- Salutes are rendered in the same manner as for Morning Colors.

Half-Masting the National Ensign

- If the ensign is flying when the word is received that the ensign is to be half-masted, it should be immediately lowered.
- If the ensign is not already flying (for example, word is received during the night), morning colors will be held as normal except that after the ensign is hoisted smartly all the way to the peak (top of the mast or flagstaff), it is then lowered to the half-mast position. In other words, it is not appropriate to merely hoist the colors directly to half-mast; the ensign must first be two-blocked (hoisted as far as it will go), then lowered to half-mast.
- The reverse is true in the evening. Before the national ensign can be brought down for the evening, it must first be hoisted to the peak and then lowered all the way down.
- Aboard ship in port, anytime the national ensign is lowered to half-mast, so is the union jack.

Shifting Colors

- Another custom, far less formal than morning or evening colors, yet unique to the sea services, is what we call shifting colors.
- As already discussed, the national ensign is flown from the flagstaff at the stern and the union jack is flown from the jackstaff at the bow when a Navy ship is in port. However, when a ship gets underway (no longer moored to a pier or anchored), the national ensign is flown from the gaff (a short angled pole that is higher up and toward the middle of the ship).
- When the last line is brought on board, or the anchor is lifted clear of the bottom of the harbor (aweigh), a long whistle blast is blown over the ship’s 1MC by the Boatswain’s Mate of the Watch

- (BMOW) and the national ensign and union jack are taken down from the flagstaff and the jackstaff respectively. This is all done smartly while a different ensign is raised briskly to the gaff.
- When a ship returns from sea, the exact opposite procedure takes place as the first mooring line is passed to the pier or the anchor touches bottom.

Underway

- Ships at sea do not observe morning or evening colors, but they do fly an ensign at the gaff from sunrise to sunset.

V. Shipboard Customs

Ships have been plying the waters of the world for many centuries and this long history has resulted in many unique customs. By observing these special customs, you will be forming a special link with Sailors from the past and keeping alive traditions that, in some cases, are thousands of years old.

The Bridge

- When a ship is underway, the area known as the bridge serves as the control point for the vessel. A team of Sailors will always be on watch serving the ship's special needs. The Officer of the Deck (OOD) heads that team and, serving as the Captain's direct representative, is responsible for the safe navigation of the vessel and for carrying out the ship's routine.
- There is a formality associated with the bridge, and many ships require all non-watch personnel to request permission from the OOD to enter the bridge, accompanying their request with a salute. This is more than a mere tradition as it allows the OOD to control access to the bridge, ensuring the watch team is not inhibited by having too many people in the way.
- Another custom that serves a useful purpose is the calling out "Captain is on the bridge" by the first person to see the Commanding Officer enter the bridge area. This alerts the OOD and other watchstanders to the Captain's presence, which is important since it is the OOD's responsibility to report significant happenings to the Captain and since the Captain's authority supersedes that of the OOD when he or she is on the bridge.

The Quarterdeck

- The quarterdeck in many ways replaces the bridge as the control point of the ship when the ship is not underway. It has both functional and ceremonial purposes and, just like the bridge, is manned by a watch team. The OOD shifts his/her watch from the bridge to the quarterdeck once the ship enters port, and remains there until the ship gets underway again.
- The location of the quarterdeck will vary according to the type of ship. It serves as the point of entry and exiting for the ship. Frequently it is marked off by appropriate lines, deck markings, decorative cartridge cases, or fancy work (nautical decorations made from pieces of line). The quarterdeck is always kept particularly clean and shipshape.
- Watchstanding on the quarterdeck must be in the uniform of the day and present a smart and military appearance at all times. Personnel not on watch should avoid the quarterdeck unless their work requires them to be in that area.
- Larger vessels, such as aircraft carriers, may have two or more entry/exit points, but only one is designated as the quarterdeck.

Boarding and Departing the Ship

- The OOD or the Junior Officer of the Deck (JOOD) will meet all persons leaving or boarding the ship. There are specific procedures to be followed by Navy personnel when boarding or departing.
- Because of security considerations, you will nearly always be expected to show your ID card to the OOD (or his/her representative) whenever you board a naval vessel, whether you are a member of the crew or not.
- If the ship is alongside a pier, you will use a 'brow' (a walkway that bridges the gap between the pier and the ship) to come aboard. If the ship is anchored out in the water, you will ride in a boat to reach the ship, and to get from the water up to the ship's main deck you will use an

‘accommodation ladder’ (a kind of stairwell that has been rigged over the side of the ship). The opening in the ship’s rail where you actually board the ship (whether you are using a brow or accommodation ladder) is called the ‘gangway.’

- At the gangway, you should turn and face aft (where the national is flying from the flagstaff), come to attention, and smartly salute if the ensign is flying (after 0800 and before sunset). On some larger ships, you will not be able to actually see the national ensign but you should salute anyway.
- After you have saluted the national ensign, turn and face the OOD (or their representative), salute, and say, “I request permission to come aboard, ma’am (or sir).” The OOD will return your salute and say, “Very well”, or “Permission granted”, and you should proceed. (*Note:* These salutes take place no matter what the ranks or rates of the individuals involved. If the OOD is a chief petty officer and the boarding individual is a commander, the latter will still salute the CPO, who, as OOD, represents the Captain.)
- If you are not in uniform, you should not salute but still face aft at attention to honor the national ensign and then, still at attention, face the OOD and request permission to come aboard.
- If you are not a member of the crew of the ship you are boarding, you should state the reason for your visit when requesting permission to come aboard.
- The procedure for leaving a ship is much the same as boarding, except that the steps are reversed. Step up to the vicinity of the gangway, salute the OOD, and say, “I request permission to go ashore, sir (or ma’am)”. When the OOD says, “Very well”, or “Permission granted”, and returns your salute, drop your salute and step to the gangway. If the ensign is flying, face aft, salute smartly, and leave.

Officers’ and CPO Country

- The area on board the ship where officers eat (the wardroom) and sleep (staterooms), as well as the halls (passageways) surrounding these areas, is known as ‘officers’ country.’ Correspondingly, the area where chief petty officers eat and sleep is known as ‘CPO country.’
- You should avoid these areas unless you are on official business. If your duties require you to enter any of these spaces, you should knock before entering and remove your cover. Watchstanders wearing a duty belt or sidearm remain covered, unless a meal is in progress.
- The enlisted mess deck is treated with the same courtesy as the wardroom or chief’s mess.

Ship’s Bells

- For many centuries, Sailors did not have the luxury of a personal timepiece. If watches were to be relieved on time, some means of telling the time had to be devised. A system that used a half-hour sandglass and the ship’s bell was created and used for hundreds of years.
- At the beginning of the watch, the sandglass was turned over to start it running. As soon as it ran out, the watchstanders knew the first half-hour had passed, so they rang the ship’s bell once and immediately turned the sandglass over to start the second half-hour. Everyone on board the ship could hear the bell being rung so they could keep track of the time. When the sand ran out the second time, the watchstanders rang the ship’s bell twice. They continue this until eight bells had been rung (representing the passage of four hours or one complete watch). The watch was then relieved, and the new watch team started the whole cycle over by ringing one bell once the first half-hour had passed, and so on.
- This bell-ringing tradition has been continued on board many Navy ships even though most Sailors always have a clock, watch, computer, or handheld device in sight. Here at USNA, this tradition has been continued with bells sounding from Mahan Hall. One bell signals the start of First Period with additional bells continuing throughout the day in half-hour intervals as previously described.

VI. USNA Notable Graduates

The United States Naval Academy is an institution dedicated to producing officers of the highest caliber for the nation. We have been proud to help shape the lives of countless outstanding individuals. Below are

just a few of the many USNA graduates who have emerged as leaders in both the military and civilian world.



Chester W. Nimitz
Class of 1905
Fleet Admiral/Chief of Naval Operations

Profile

Born in Fredericksburg, Texas, Nimitz graduated from the U.S. Naval Academy in 1905. He spent almost two decades in submarines, service punctuated by instruction in diesel engines, study at the Naval War College, and tours as executive officer of an oiler and a battleship. Nimitz then commanded heavy cruiser USS Augusta, flagship of the U.S. Pacific Fleet.

In 1939, he was assigned as Chief of the Bureau of Navigation.

Following the Japanese attack on Pearl Harbor on 7 December 1941, the Navy named Nimitz Commander in Chief, U.S. Pacific Fleet, and soon afterward Commander in Chief, Pacific Ocean Areas. In recognition of his superior leadership of naval forces during the victorious three-year Pacific campaign, in December 1944 Congress promoted him to fleet admiral.

As Chief of Naval Operations at the dawn of the Cold War, Nimitz directed the forward deployment of naval forces to the Mediterranean and the Far East, worked to adapt the naval services to the joint requirements of the National Security Act of 1947, and promoted adoption of jet aircraft and other advanced technologies. In recognition of his accomplishments, the Navy named USS Nimitz (CVN-68), the first ship in a new class of nuclear-powered aircraft carriers, in his honor.



Alan B. Shepard, Jr.
Class of 1945
NASA Astronaut/1st American in space

Profile

Alan B. Shepard was born November 18, 1923, in East Derry, New Hampshire and died on July 21, 1998. He attended primary and secondary schools in East Derry and Derry, New Hampshire; received a Bachelor of Science degree from the United States Naval Academy in 1944, an Honorary Master of Arts degree from Dartmouth College in 1962, and Honorary Doctorate of Science from Miami University (Oxford, Ohio) in 1971, and an Honorary Doctorate of Humanities from Franklin Pierce College in 1972. Graduated Naval Test Pilot School in

1951; Naval War College, Newport, Rhode Island in 1957.

He was awarded the congressional Medal of Honor (Space), two NASA Distinguished Service Medals, the NASA Exceptional Service Medal, the Navy Astronaut Wings, the Navy Distinguished Service Medal, and the Navy Distinguished Flying Cross. He was a recipient of the Langley Medal (highest award of the Smithsonian Institution) on May 5, 1964, the Lambert Trophy, the Kinchloe Trophy, the Cabot Award, the Collier Trophy, the City of New York Gold Medal (1971), and the achievement Award for 1971. Shepard was appointed by the President in July 1971 as a delegate to the 26th United Nations General Assembly and served through the entire assembly that lasted from September to December 1971.

Rear Admiral Shepard was one of the Mercury astronauts named by NASA in April 1959, and he holds the distinction of being the first American to journey into space. On May 5, 1961, in the Freedom 7 spacecraft, he was launched by a Redstone vehicle on a ballistic trajectory suborbital flight--a flight that carried him to an altitude of 116 statute miles and to a landing point 302 statute miles down the Atlantic Missile Range.



James Earl “Jimmy” Carter
Class of 1947
 39th President of the United States

Profile

James Earl (Jimmy) Carter, Jr., who in 1976 became the fifth consecutive President with prior Navy service, was born in Plains, Georgia on 1 October 1924. Graduating from Plains High School in 1941, he attended Georgia Southwestern College in Americus, Georgia. After a year there, Carter transferred to Georgia Institute of Technology to study mathematics for a year in order to qualify for the U.S. Naval Academy. In 1943, Carter received an appointment to the academy and became a member of the Class of 1947. After completing the accelerated wartime program, he graduated on 5 June 1946 with distinction and obtained his commission as ensign. After serving in positions such as radar officer, CIC officer, Training and Education Officer, he attended the U.S. Navy Submarine School, Submarine Base, New London, Connecticut from 14 June to 17 December 1948. Carter was honorably discharged on 9 October 1953 at Headquarters, Third Naval District in New York City. On 7 December 1961, he transferred to the retired reserve with the rank of Lieutenant at his own request.

In 1962 he won election to the Georgia Senate, became Georgia's 76th governor on January 12, 1971 and, on December 12, 1974, he announced his candidacy for president of the United States. He won his party's nomination on the first ballot at the 1976 Democratic National Convention, and was elected president on November 2, 1976. Jimmy Carter served as president from January 20, 1977 to January 20, 1981. In 1982, he became University Distinguished Professor at Emory University in Atlanta, Georgia. On December 10, 2002, the Norwegian Nobel Committee awarded the Nobel Peace Prize for 2002 to Mr. Carter “for his decades of untiring effort to find peaceful solutions to international conflicts, to advance democracy and human rights, and to promote economic and social development”. In 2010, he published his 25th book, *White House Diary*.



James B. Stockdale
Class of 1947
 Prisoner of War/Awarded the Congressional Medal of Honor

Profile

Admiral Stockdale was born on December 23, 1923 in Abingdon, Illinois. After graduating from the Naval Academy in 1946, he attended flight training in Pensacola, FL and in 1954 was accepted to the Navy Test Pilot School where he served as an instructor for a brief time. Stockdale's flying career took him west, and in 1962, he earned a Master's Degree in International Relations from Stanford University.

On September 9, 1965 while returning from a mission, his A-4 Skyhawk was hit by anti-aircraft fire. Stockdale ejected, breaking a bone in his back and badly dislocating his knee. Stockdale wound up in Hoa Lo Prison, the infamous “Hanoi Hilton”, where he spent the next seven years. Despite being kept in solitary confinement for four years, in leg irons for two years, physically tortured more than 15 times, denied medical care and malnourished, Stockdale organized a system of communication and developed a cohesive set of rules governing prisoner behavior.

The spring of 1969, he was told that he was to be taken ‘downtown’ and paraded in front of foreign journalists. Stockdale slashed his scalp with a razor and beat himself in the face with a wooden stool knowing that his captors would not display a prisoner who was disfigured. Later, after discovering that some prisoners had died during torture, he slashed his wrists to demonstrate to his captors that he preferred death to submission. This act so convinced the Vietnamese of his determination to die rather than to cooperate that the Communists ceased the torture of American prisoners and gradually improved their treatment of POWs. He was released from prison in 1973. He was awarded the Congressional Medal of

Honor by President Gerald Ford in 1976. He was one of the most highly decorated officers in the history of the Navy, wearing twenty-six personal combat decorations, including two Distinguished Flying Crosses, three Distinguished Service Medals, two Purple Hearts, and four Silver Star medals in addition to the Medal of Honor. He was the only three star Admiral in the history of the Navy to wear both aviator wings and the Medal of Honor.

After serving as the President of the Naval War College, Stockdale retired from the Navy in 1978. He published a number of books and articles and was awarded eleven honorary doctoral degrees. In 1992 he agreed to the request from H. Ross Perot to stand in as the vice presidential candidate of the Reform Party. Upon his retirement in 1979, the Secretary of the Navy established the Vice Admiral Stockdale Award for the Inspirational Leadership presented annually in both the Pacific and Atlantic fleet. Admiral Stockdale was a member of the Navy's Carrier Hall of Fame and The National Aviation Hall of Fame, and he was an Honorary Fellow in the Society of Experimental Test Pilots.



H. Ross Perot

Class of 1953

Entrepreneur/Presidential Candidate

Profile

H. Ross Perot was born in 1930 in Texarkana, Texas. In 1957, he went to work for IBM as a salesman. He then founded Electronic Data Systems (EDS) in 1962, which he sold to General Motors in 1984.

In 1979, he funded an operation during the Iran hostage crisis that resulted in the rescue of two of EDS employees.

Concerned over the budget crisis, he ran for president as an independent with Vice Adm. James B. Stockdale in 1992. They won a fifth of the popular vote and finished third in the election. Following his

defeat, he formed the Reform Party and ran as their presidential candidate in 1996, where he also came in third.



John McCain

Class of 1958

Prisoner of War/United States Senator

Profile

John Sidney McCain, III was born in Panama Canal Zone, August 29, 1936. He attended school in Alexandria, Va., and graduated from the United States Naval Academy in 1958. In 1973, he graduated from the National War College, Washington, D.C.

He was a Pilot in the United States Navy from 1958 until 1981. From 1967 to 1973, he was a prisoner of war in Vietnam. He received numerous awards, including the Silver Star, Legion of Merit, Purple Heart, and Distinguished Flying Cross.

He was elected as a Republican in 1982 to the Ninety-eighth Congress (Arizona), reelected to the Ninety-ninth Congress in 1984, and served from January 3, 1983, to January 3, 1987. He was elected to the United States Senate in 1986, reelected in 1992, 1998, 2004, 2010, and 2016. He is currently the Chair of the Senate Armed Services Committee. He pursued the Republican presidential nomination for 2000, and ran (unsuccessfully) for President of the United State as the Republican nominee in 2008.



Roger Staubach

Class of 1965

Heisman Trophy Winner/Professional Football Player

Profile

As a midshipman, Roger Staubach was named recipient of college football's top honor, The Heisman Trophy. Colorblind, Staubach graduated from the Naval Academy in 1965 and was the Academy's first direct commission Supply Corps officer. He went on to serve four years of active duty service in the Navy, volunteering for one year of overseas duty in Vietnam. Staubach played 11 years of professional football with the Dallas Cowboys and led the Cowboys to two Super Bowl victories. He was elected into the Hall of Fame in 1985, his first year of eligibility.

Outside of sports, in 1977 Staubach founded the Staubach Company; a commercial real estate firm that later merged with Jones Lang LaSalle Incorporated in 2008. He was CEO of Staubach Company for a number of years and following the merger became Executive Chairman, Americas.

Roger Staubach was on the Board of Directors of the United Way of America and the Board of Advisors of the Children's Scholarship Fund. He played an active part in the American Cancer Society Annual Children's Luncheon, and other civic, charitable, and professional organizations. Honors bestowed on Roger include Office & Industrial Properties 1998 Executive of the Year, Commercial Property News Corporate Services Executive of the year in both 1999 & 2000, and was the NCAA 2000 'Teddy' Roosevelt Award Winner.



Wendy Lawrence

Class of 1981

Astronaut

Profile

Wendy Lawrence was born July 2, 1959, in Jacksonville, Florida. She graduated from Fort Hunt High School, Alexandria, Virginia, in 1977 and received a Bachelor of Science degree in ocean engineering from U.S. Naval Academy in 1981. She also received a Master of Science degree in ocean engineering from Massachusetts Institute of Technology (MIT) and the Woods Hole Oceanographic Institution (WHOI) in 1988.

She was awarded the Defense Superior Service Medal, the Defense Meritorious Service Medal, the NASA Space Flight Medal, the Navy

Commendation Medal, and the Navy Achievement Medal. She was a recipient of the National Navy League's Captain Winifred Collins Award for inspirational leadership (1986).

Lawrence has more than 1,500 hours flight time in six different types of helicopters and has made more than 800 shipboard landings. While stationed at Helicopter Combat Support Squadron SIX (HC-6), she was one of the first two female Helicopter Pilots to make a long deployment to the Indian Ocean as part of a carrier battle group. In October 1990, Lawrence reported to the U.S. Naval Academy where she served as a physics instructor and the novice women's crew coach.

Selected by NASA in March 1992, Lawrence reported to the Johnson Space Center in August 1992. She completed one year of training and is qualified for flight assignment as a mission specialist. A veteran of four space flights, Lawrence has logged over 1,225 hours in space. Lawrence retired from NASA in June 2006.



Michelle Howard

Class of 1982

First female four-star in the U.S. Navy

Profile

Admiral Howard graduated from the United States Naval Academy in 1982 and from the Army's Command and General Staff College in 1998, with a Masters in Military Arts and Sciences.

Admiral Howard served on several ships to include USS Lexington (AVT 16) where she received the secretary of the Navy/Navy League Captain Winifred Collins award in May 1987. This award is given to one woman officer a year for outstanding leadership.

She took command of USS Rushmore (LSD 47) on March 12, 1999, becoming the first African American woman to command a ship in the U.S. Navy. She has been in several sea and shore assignments such as the first woman to serve as the Vice Chief of Naval Operations. Admiral Howard retired in December 2017.



David Robinson

Class of 1987

Professional Basketball Player

Profile

Recruited by Annapolis to play for the Academy's basketball team, David Robinson went from being a 6' 4" freshman who averaged just 7.6 points per game to a dominating 7' 1" College Player of the Year as a senior.

Selected by the San Antonio Spurs with the number one pick in the 1987 National Basketball Association (NBA) draft, the man known as 'The Admiral' put off his rookie season until the 1989-90 season due to his commitments to the Navy. This decision clearly had no adverse effect upon him, as he would go on to be named 'Rookie of the Year.'

He was the first male basketball player to play on three U.S. basketball teams in the Olympic Games. In 2009, he was inducted into the NBA Hall of Fame along with Michael Jordan and John Stockton.

In 1991, he visited the 5th grade class at Gates Elementary School in Texas. He challenged the 94 students of the class to finish high school, promising each of them a \$2,000 scholarship if they did so. In 1998 when 50 of those students graduated, he presented each of them with an \$8,000 scholarship. In 1997, he donated \$5 million dollars to found the Carver Academy, which he continued to donate to in the following years. Due to his commitment to the community, the NBA renamed their Community Assist Award to be the David Robinson Plaque in 2003.



Erik Kristensen

Class of 1995

SEAL

Profile

Erik Kristensen graduated with honors from the U.S. Naval Academy in 1995. He served first as a Surface Warfare Officer onboard USS Chandler (DDG-996) and as an Officer in Charge (OIC) of a Rigid Hull Inflatable Boat (RHIB) Detachment at Naval Special Warfare Boat Unit TWELVE (SBU-12).

Kristensen subsequently taught at the Naval Academy and attended graduate school prior to transferring to Basic Underwater Demolition/SEAL

(BUD/S). His first assignment as a SEAL was OIC of a Platoon at SEAL Team EIGHT.

In March 2005, LCDR Kristensen deployed to Afghanistan as a Task Unit Commander for SEAL Team TEN to support the Global War on Terrorism. On June 28, 2005, he led a daring mission to rescue a four-man SEAL reconnaissance squad engaged in a fierce firefight with overwhelming Taliban forces in rugged 10,000-foot mountains. Kristensen, seven other SEALs, and eight Army 'Nightstalkers' died when their MH-47D Chinook helicopter was shot down by a rocket-propelled grenade.

Eleven SEALs died that day. It was the biggest single loss of life for Naval Special Warfare since World War II. These SEALs embodied the Navy's Core Values of Honor, Courage, and Commitment, and took care of their teammates to the last. Erik Kristensen and those who perished with him are remembered with the greatest respect and gratitude by his fellow SEALs, the Naval Academy, the Navy, and our nation.



Major General Charles Bolden

Class of 1968

NASA Astronaut

Profile

After graduating from the Naval Academy, Charles Bolden accepted a commission in the U.S. Marine Corps. As a naval aviator, he flew more than 100 sorties into North and South Vietnam, Laos, and Cambodia, in the A-6A Intruder. Following his return to the United States, Bolden graduated from the U.S. Naval Test Pilot School at Patuxent River, Maryland.

Major General Bolden became an astronaut in 1981. He has served on four space flights including STS-31, during which the crew deployed the Hubble Space Telescope, and has logged over 680 hours in space.

Bolden left NASA in 1994 and returned to active duty in the U.S. Marine Corps to become Deputy Commandant of Midshipmen at the U.S. Naval Academy. Major General Charles F. Bolden, Jr., then served as the Deputy Commander, U.S. Forces, Japan, Yokota Air Base, Japan. In 2003, he retired from the Marine Corps and in 2009 he became the administrator of NASA.

Sources:

1. The Bluejacket's Manual
2. <http://www.usna.edu/admissions/Notables/>
3. <http://www.navyseals.com/nsw/erik-s-kristensen/>

WEEK 4: MISSION AND ORGANIZATION OF THE NAVY

I. Mission

The mission of the Navy is to maintain, train, and equip combat-ready naval forces capable of winning wars, deterring aggression, and maintaining freedom of the seas.

II. Ethos

We are the United States Navy, our Nation's sea power – ready guardians of peace, victorious in war.

We are professional Sailors and civilians – a diverse and agile force exemplifying the highest standards of service to our Nation, at home and abroad, at sea and ashore.

Integrity is the foundation of our conduct; respect for others is fundamental to our character; decisive leadership is crucial to our success.

We are a team, disciplined and well prepared, committed to mission accomplishment. We do not waver in our dedication and accountability to our Shipmates and families.

We are patriots, forged by the Navy's core values of Honor, Courage, and Commitment. In times of war and peace, our actions reflect our proud heritage and tradition.

We defend our Nation and prevail in the face of adversity with strength, determination, and dignity.

We are the United States Navy.

III. The Chief of Naval Operation's Vision

The Chief of Naval Operations (CNO), Admiral John Richardson, has provided his guidance for the Navy with the publication of "A Design for Maintaining Maritime Superiority". This document outlines his vision for the Navy. The mission statement is:

The United States Navy will be ready to conduct prompt and sustained combat incident to operations at sea. Our Navy will protect America from attack and preserve America's strategic influence in key regions of the world. U.S. naval forces and operations – from the sea floor to space, from deep water to the littorals, and in the information domain – will deter aggression and enable peaceful resolution of crises on terms of acceptable to the United States and our allies and partners. If deterrence fails, the Navy will conduct decisive combat operations to defeat any enemy.

Core Attributes

Integrity. Our behaviors as individuals and as an organization align with our values as a profession. We *actively* strengthen each other's resolve to act consistently with our values. As individuals, as teams, and as a Navy, our conduct must always be upright and honorable in both public and when nobody is looking.

Accountability. We are a mission-focused force. We achieve and maintain high standards. Our actions support our strategy. We clearly define the problem we are trying to solve and the proposed outcomes. In execution, we honestly assess our progress and adjust as required – we are our own toughest critic.

Initiative. On their own, everybody strives to be the best they can be – we give 100% when on the job. Our leaders take ownership and act to the limit of their authorities. We foster a questioning attitude and look at new ideas with an open mind. Our junior teammate may have the best idea; we must be open to capturing that idea.

Toughness. We can take a hit and keep going, tapping all sources of strength and resilience: rigorous training for operations and combat, the fighting spirit of our people, and the steadfast support of our families. WE DON'T GIVE UP THE SHIP!

IV. National Military Structure

POTUS

The President of the United States serves as the Commander in Chief (CINC) of all U.S. military forces. The President is responsible to the citizens of the United States for maintaining a military that performs our nation's security needs.

SecDef

The Secretary of Defense is the principal defense policy adviser to the President and is responsible for the formulation and execution of general defense policy. Subordinate to the Secretary of Defense are the individual service secretaries, including the Secretary of the Navy.

JCS

The Joint Chiefs of Staff advise the CINC. There are seven four-star officers on the Joint Chiefs of Staff:

- | | |
|-----------------------------------------------|--------------------------|
| 1. Chairman of the Joint Chiefs of Staff | Gen Joseph Dunford, USMC |
| 2. Vice-Chairman of the Joint Chiefs of Staff | Gen Paul Selva, USAF |
| 3. Commandant of the Marine Corps | Gen Robert Neller, USMC |
| 4. Chief of Naval Operations | ADM John Richardson, USN |
| 5. Chief of Staff of the Army | Gen Mark Milley, USA |
| 6. Chief of Staff of the Air Force | Gen David Goldfein, USAF |
| 7. Chief of the National Guard Bureau | Gen Joseph Lengyel, ARNG |

The Chairman is the principal military adviser to the President, Secretary of Defense, and the National Security Council (NSC); however, all JCS members are military advisers by law. Since the National Security Act of 1947, the Joint Chiefs of Staff have served as planners and advisers, although they have no executive authority to command combatant forces.

NSC

The National Security Act of 1947 was the first definitive legislative statement "to provide for the effective strategic direction of the armed forces and for their operation under unified control and for their integration into an efficient team of land, naval, and air forces." The act went on to say that it was the responsibility of the Joint Chiefs of Staff to "establish unified commands in strategic areas when such unified commands are in the interest of national security," and the President would establish unified and specified combatant commands to perform military missions.

Thus, one outcome was the establishment of the National Security Council to consider national security issues that require Presidential decision. The National Security Council is chaired by the President. Its regular attendees (both statutory and non-statutory) are:

1. The Vice President
2. The Secretary of State
3. The Secretary of the Treasury
4. The Secretary of Defense
5. The Assistant to the President for National Security Affairs

The Chairman of the Joint Chiefs of Staff (CJCS) is the statutory military advisor to the Council and the Director of National Intelligence is the intelligence advisor.

V. Department of the Navy Leadership

SECNAV

The Secretary of the Navy has authority over both the Navy and Marine Corps. He is responsible for conducting all the affairs of the Department of the Navy, including recruiting, organizing, supplying, equipping, training, mobilizing, and demobilizing. The Secretary also oversees the construction, outfitting, and repair of naval ships, equipment, and facilities.

CNO

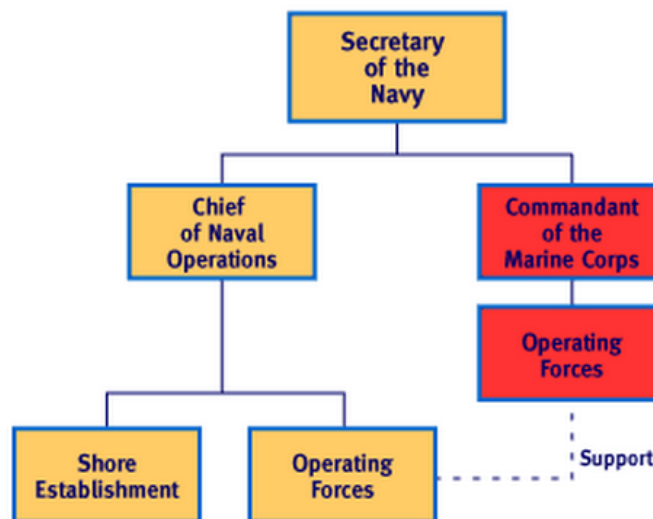
The Chief of Naval Operations (CNO) is the senior military officer in the Navy. The CNO is a four-star admiral and is responsible to the Secretary of the Navy for the command, utilization of resources and operating efficiency of the operating forces of the Navy and of the Navy shore activities assigned by the Secretary. The CNO is responsible for manning, training, and equipping the naval force.

A member of the Joint Chiefs of Staff, the CNO is the principal naval advisor to the President and to the Secretary of the Navy on the conduct of war, and is the principal advisor and naval executive to the Secretary on the conduct of naval activities by the Department of the Navy. Assistants are the Vice Chief of Naval Operations (VCNO), the Deputy Chiefs of Naval Operations (DCNOs) and a number of other ranking officers. These officers and their staffs are collectively known as the Office of the Chief of Naval Operations (OpNav).

CMC

The Commandant of the Marine Corps (CMC) is the senior military officer in the Marine Corps. The Commandant is a four-star general and is responsible to the Secretary of the Navy for the command, utilization of resources, and operating efficiency of the operating forces of the Marine Corps.

A member of the Joint Chiefs of Staff, the CMC is the principal Marine advisor to the President and to the Secretary of the Navy on the conduct of war, and is the principal advisor and Marine executive to the Secretary on the conduct of USMC activities.



VI. Chains of Command

The President and the Secretary of Defense (SecDef) exercise authority, direction, and control of the Armed Forces through two distinct chains of Command and Control (C2). One branch runs from the President, through SecDef to the Component Commanders (CCDRs) for missions and forces assigned to their commands – operational chain of command. For purposes other than the operational direction of the CCDRS, the chain of command runs from the President to SecDef to the Secretaries of the Military Departments and, as prescribed by the Secretaries, to the commanders of Military Service forces – administrative chain of command.

Operational Chain of Command

The operational chain of command is tasked with using the forces provided by all four services to carry out the orders of the National Command Authority (NCA). The NCA consists only of the POTUS and the SecDef or their duly deputized alternates or successors. The Navy operational chain of command is:

1. NCA (POTUS and SecDef)
2. Unified Combatant Commander (CCDR) – Operational commanders by geographic area of responsibility (AOR). (i.e., COMUSPACOM)
3. Subordinate Component Commander – Responsible to Unified Commanders for the employment of forces/capabilities in the respective AOR. (i.e., COMUSPACFLT)
4. Numbered Fleet Commander – Responsible for operational naval forces supporting the Component Commanders. (e.g., 3rd, 4th, 5th, 6th, 7th, 10th, and Fleet Forces Command which incorporated 2nd Fleet in 2011)
5. Task Force Commander – Subordinate to the Numbered Fleet Commander and responsible for the planning and execution of operations to achieve military objectives. (i.e., CTF-XX where the first digit would indicate the Numbered Fleet and the second digit would indicate the specific Task Force)
6. Task Group Commander – Subordinate to the Task Force Commander. A Carrier Strike Group (CSG) or Expeditionary Strike Group (ESG) Commander. (i.e., CTG-XX.X where the last digit would indicate the Task Group)
7. Task Unit Commander – Functional Warfare Commanders generally within the CSG/ESG. (i.e., CTU-XX.X.X where the last digit would indicate the Task Unit)
8. Task Element Commander – An individual platform or group of platforms (ships, aircraft, etc.) with a special purpose such as a Surface Action Group (SAG). (CTE-XX.X.X.X where the last digit would indicate the Task Element)

Administrative Chain of Command

The administrative chain of command is tasked with manning, training, and equipping forces and is responsible for personnel management, supply, services, maintenance, certification, and other matters not directly related to the operational chain of command. The Navy administrative chain of command is:

1. President of the United States
The Honorable Donald J. Trump
2. Secretary of Defense
The Honorable James Mattis
3. Secretary of the Navy
The Honorable Richard Spencer
4. Chief of Naval Operations
Admiral John Richardson
5. Fleet Commanders
 - a. U.S. Fleet Forces Command (dual hatted as the Commander U.S. Atlantic Fleet)
 - b. Commander U.S. Pacific Fleet
6. Type Commanders (TYCOM) – The TYCOM controls units during primary and intermediate training cycles before the units move under the control of a Fleet Commander. Establish policy, control funds, and perform all administrative functions in their respective warfare specialties in their geographic area.
 - a. Ships: Commander Naval Surface Forces Atlantic and Pacific (COMNAVSURFLANT and COMNAVSURFPAC)
 - b. Air: Commander Naval Air Forces Atlantic and Pacific (COMNAVAIRLANT and COMNAVAIRPAC). Aircraft carriers, aircraft squadrons, and air stations are under the administrative control of the appropriate Commander Naval Air Force.
 - c. Submarines: Commander Submarine Forces Atlantic and Pacific (COMSUBLANT and COMSUBPAC)
 - d. Navy Expeditionary Command (NECC)
 - e. Naval Network Warfare Command (NETWARCOM)
7. Group Commanders – Responsible to TYCOMs for administrative control of similar types of Fleet elements (e.g., carrier, cruiser-destroyer, fighter aircraft, etc.) in homeport areas.
8. Squadron Commanders – Responsible to Group Commanders for administrative control of a squadron of similar ship/submarine types.
9. Unit Commanders – Individual ship, submarine, or aviation squadron Commanding Officers responsible to squadron commanders for administrative control of their ship.

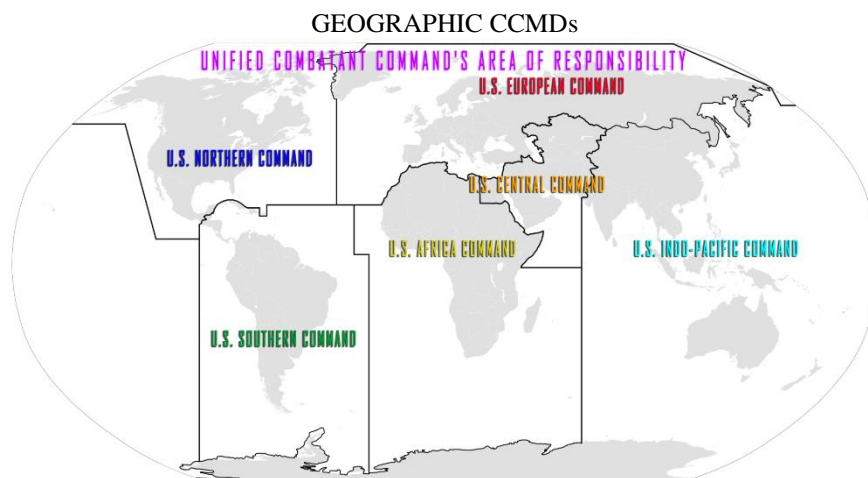
Command and Control

Command and control is the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission. Command and control ties together all the operational functions and tasks and applies to all levels of war and echelons of command across the range of military operations. C2 is the means by which an operational commander synchronizes and integrates force activities in order to achieve unity of command. Unity of effort over complex operations is made possible through decentralized execution of centralized, overarching plans. Unity of command is strengthened through consideration of the following:

- Clearly defined authorities and roles
- Logical, standardized information management practices
- Explicit and implicit communication
- Timely decision making
- Recognized coordination mechanisms
- Disciplined battle rhythm
- Responsive, dependable, and interoperable support systems
- Shared situational awareness
- Mutual trust

Command and control of naval forces reflects our operational environment, traditions, and culture. Despite the changes in today's environment, naval forces have retained unique characteristics in the capabilities we provide, as well as the way we function, compared to the other Services/components. Unlike Army and Air Force organizations, most naval forces do not undergo a lengthy period of transition from garrison to deployed and operational status. Naval forces are operational as soon as they *"take in all lines."* Being essentially self-deploying, naval forces are able to operate in support of strategic objectives without affecting another nation's sovereignty and do not necessarily require host-nation permission for their presence. As such, naval forces provide persistent military capabilities that are immediately available to the Component Commander. **Naval tactical commanders are expected to take initiative using the operational-level commander's guidance, which defines what needs to be done but not how to do it. Our C2 philosophy is derived from the characteristics and complexity of the maritime domain.** Even in an era of nearly instantaneous communications and increasingly complex relationships among the forces of other Services and nations, having the subordinate commander execute operations in accordance with a thorough understanding of the commander's intent is a key tenet of the naval forces' C2 philosophy. Our leaders are trained, educated, groomed, and held accountable for these exceptional authorities and responsibilities.

VII. Unified Combatant Commands



Unified Combatant Commands (CCMDs) are composed of forces from two or more services, have broad and continuing missions, and are normally organized on a geographical basis. There are currently ten unified commands; six are geographic (Geographic Combatant Commands – GCC) and four are functional. They are listed below along with the headquarters (HQ) locations.

Geographic:

1. U.S. European Command (USEUCOM) – Patch Barracks in Stuttgart, Germany
2. U.S. Indo-Pacific Command (USINDOPACOM) – Camp H. M. Smith in Honolulu, HI
3. U.S. Southern Command (USSOUTHCOM) – Miami, FL
4. U.S. Central Command (USCENTCOM) – MacDill AFB in Tampa, FL
5. U.S. Africa Command (USAFRICOM) – Kelley Barracks in Stuttgart, Germany
6. U.S. Northern Command (USNORTHCOM) – Peterson AFB in Colorado Springs, CO

Functional:

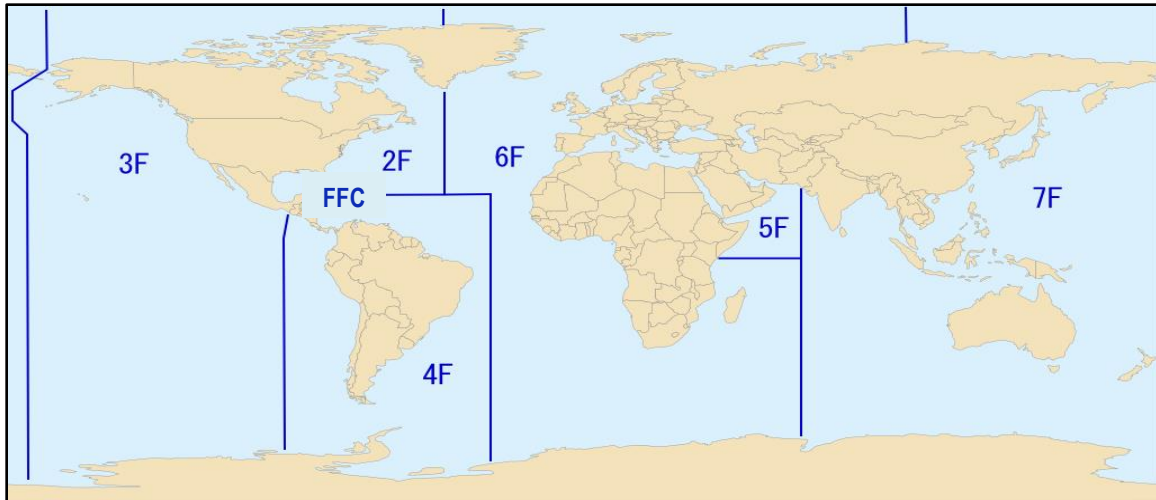
7. U.S. Special Operations Command (USSOCOM) – MacDill AFB in Tampa, FL
8. U.S. Transportation Command (USTRANSCOM) – Scott AFB in St. Clair County, IL
9. U.S. Strategic Command (USSTRATCOM) – Offutt AFB in Omaha, NE
10. U.S. Cyber Command (USCYBERCOM) – Fort Meade, MD

VIII. Numbered Fleets

As previously stated, Combatant Commanders (CCDRs) have subordinate Component Commanders responsible for employment of their forces in the respective AOR. Below the Component Commanders are Numbered Fleet Commanders. The graph below depicts alignment of those Fleet Commanders with their respective area of operation (AO), headquarter (HQ) location, and Combatant Command (CCMD).

<u>Fleet</u>	<u>Area of Operation</u>	<u>Headquarters</u>	<u>CCMD</u>
THIRD	Eastern and Central Pacific	San Diego, California	INDOPACCOM
FOURTH	Caribbean Ocean, surrounding waters of Central and South America	Mayport, Florida	SOUTHCOM
FIFTH	Middle East (Red Sea, Arabian Sea, Persian Gulf)	Manama, Bahrain	CENTCOM
SIXTH	Mediterranean Sea	Naples, Italy	EUCOM
SEVENTH	Western Pacific and Indian Ocean	Yokosuka, Japan	INDOPACCOM
TENTH	Cyber Warfare	Fort Meade, Maryland	STRATCOM
FFC	Eastern Atlantic	Norfolk, VA	NORTHCOM

In 2011, Second Fleet was disestablished and many of its assets and responsibilities were merged into USFF Command. In July of 2018, CNO Adm. John Richardson reestablished U.S. Second Fleet headquartered out of Norfolk, VA. Commander, Second Fleet, exercises operational and administrative authorities over assigned ships, aircraft, and landing forces on the East Coast and northern Atlantic Ocean, ultimately reporting to USFF.



Sources:

1. <http://www.navy.mil/index.asp>
2. Naval Doctrine Publication 1 (NDP-1)
3. Joint Doctrine Publication 1 (JP-1)
4. OPNAVINST 5400.45

WEEK 5: OPERATIONAL MISSION AREA, CAPABILITIES, AND THE CURRENT MARITIME STRATEGY

I. Operational Mission Areas

Navy ships, staffs, and reserve components are designed and/or organized to perform one or more mission areas. Mission areas define how the Navy executes naval warfare. Navy mission areas are continuously evolving as new weapons, sensors, and capabilities are introduced into the maritime domain. Listed below are the Navy's operational mission areas.

1. **AMPHIBIOUS WARFARE (AMW)**. Amphibious Warfare involves military operations launched from the sea by an amphibious force (AF), embarked in ships or craft with the primary purpose of introducing a landing force (LF) ashore to accomplish the assigned mission. An AF is an amphibious task force (ATF) and an LF together with other forces that are trained, organized, and equipped for amphibious operations.
2. **ANTISUBMARINE WARFARE (ASW)**. Operations conducted with the intention of denying the enemy the effective use of submarines.
3. **AIR WARFARE (AW)**. The detection, tracking, destruction, or neutralization of enemy air platforms and airborne weapons, whether launched by the enemy from air, surface, subsurface, or land platforms.
4. **BALLISTIC MISSILE DEFENSE (BMD)**. All active and passive measures designed to detect, identify, track, and defeat attacking ballistic missiles (and entities), in both strategic and theater tactical roles, during any portion of their flight trajectory (boost, post-boost, midcourse, or terminal) or to nullify or reduce the effectiveness of such attack.
5. **COMMAND, CONTROL, AND COMMUNICATIONS (CCC)**. Providing communications and related facilities for coordination and control of external forces, and control of own unit's capabilities.
6. **EXPEDITIONARY WARFARE (EXW)**. A military operation conducted by an armed force to accomplish a specific objective in a foreign country. Expeditionary Operations encompass the entire range of military operations, from foreign humanitarian assistance to forcible entry. The defining characteristic of expeditionary operations is the projection of force into a foreign setting. Includes Naval Special Warfare, Mine Warfare, Amphibious Warfare, Navy Expeditionary Combat, and Sea Basing.
7. **INFORMATION OPERATIONS (IO)**. The integrated employment of the core capabilities of electronic warfare, computer network operations, psychological operations, military deception, and operations security, in concert with specified supporting and related capabilities, to influence, disrupt, corrupt, or usurp adversarial human and automated decision making while protecting our own.
8. **INTELLIGENCE OPERATIONS (INT)**. The variety of intelligence and counterintelligence tasks that are carried out by various intelligence organizations and activities within the intelligence process. Intelligence operations include planning and direction, collection, processing and exploitation, analysis and production, dissemination and integration, and evaluation and feedback.
9. **MINE WARFARE (MIW)**. The strategic, operational, and tactical use of mines and mine countermeasures. Mine warfare is divided into two basic subdivisions: the laying of mines to degrade the enemy's capabilities to wage land, air, and maritime warfare and the countering of enemy-laid mines to permit friendly maneuver or use of selected land or sea areas.
10. **MOBILITY (MOB)**. A quality or capability of military forces that permits them to move from place to place while retaining the ability to fulfill their primary mission.
11. **STRIKE WARFARE (STW)**. Naval operations to destroy or neutralize enemy targets ashore, including attacks against strategic or tactical targets, such as manufacturing facilities and operating bases, from which the enemy is capable of conducting or supporting air, surface, or subsurface operations against friendly forces.
12. **SURFACE WARFARE (SUW)**. That portion of maritime warfare in which operations are conducted to destroy or neutralize enemy naval surface forces and merchant vessels.

II. Capabilities of the U.S. Navy

The Carrier Strike Group (CSG) and the Expeditionary Strike Group (ESG) are the two largest operational units within the U.S. Navy.

The CSG is a principal element of U.S. power projection capability. It is a flexible naval force that can operate in confined waters or in the open ocean, during day and night, and in all weather conditions. It continues to be centerpiece of our naval force. Although tailorable, a typical CSG consists of:

- One Aircraft Carrier (CVN)
- One Guided Missile Cruiser (CG)
- Two Guided Missile Destroyers (DDG)
- One Attack Submarine (SSN)
- One Combined Ammunition, Oiler, and Supply Ship
- One Carrier Air Wing (approximately 70 fixed and rotary wing aircraft)
 - F/A-18E/F Hornets and Super Hornets
 - EA-18G Growlers
 - F-35C Lightning II
 - E-2D Hawkeyes
 - C-2A Greyhounds
 - MH-60R “Romeo” Seahawks
 - MH-60S “Sierra” Knighthawks

Within the CSG, the principal role of the carrier and its air wing is to provide the primary offensive firepower while the other units provide defense and support. However, these roles are not exclusive. Other units in the CSG undertake offensive operations (i.e., launching cruise missiles), and the air wing contributes to its defense (i.e., combat air patrols and airborne anti-submarine missions). Thus, command and control of the CSG is exercised by mission (i.e. ASW, AW, etc.) through the Composite Warfare Commander (CWC) concept.

The ESG centers on the flexibility of amphibious ships, an embarked Marine Expeditionary Unit (MEU), and surface and submarine combatants. The total ESG provides operational freedom and expanded warfare capabilities on land and at sea. There are eight core capabilities provided by ESGs: power projection, maritime superiority (air, surface and subsurface), maritime special operations, amphibious operations, military operations other than war, enabling operations, supporting operations, and Joint Task Force (JTF) enabler. Although tailorable, a typical ESG consists of:

- One Amphibious Assault Ship (LHA or LHD)
- One Amphibious Transport Dock (LPD) Ship
- One Dock Landing Ship (LSD)
- One Marine Expeditionary Unit (MEU)
- AV-8B Harrier IIs
- MV-22 Ospreys (V/STOL)
- AH-1W Super Cobra helicopters
- UH-1 Huey helicopters
- MH-60S “Sierra” helicopters
- CH-53D Sea Stallion helicopters
- CH-46D Sea Knight helicopters
- KC-130J Super Hercules
- Surface combatants and submarines

An ESG combines an Amphibious Readiness Group (ARG) with the additional combat power of surface combatants and submarines. Amphibious landing ships transport troops, vehicles, and supplies wherever they are needed and provide great flexibility to commanders planning operations. However, amphibious ships are not designed for fighting hostile naval forces, especially highly maneuverable patrol craft found in coastal environments. In order to counter those threats and provide Naval Surface Fire Support (NSFS) in support of amphibious operations, the Navy transforms ARGs into ESGs by assigning dedicated surface and submarine combatants—cruisers, destroyers, and submarines—to support the amphibious ships.

Thus, an ESG is a scalable, adaptable force, capable of planning and executing rapid strike and combat operations while operating in a limited non-permissive (i.e., low threat) environment. ESGs combine a highly mobile group of platforms with a lean command and authority structure. This rapid response is enabled by the capability to rapidly coordinate, deploy, and move to locations where they are needed. In addition, ESGs are designed to be self-sustaining, as well as capable of autonomous action based on being comprised of a diverse set of capabilities. A wide range of missions can be supported, from amphibious assault to disaster relief, based on the composition of integrated Navy and Marine Corps forces.

II. Strategic Guidance

National Security Strategy (NSS)

- In December of 2017, President Trump's Administration released a new National Security Strategy outlining the necessary strategic direction to advance America's interests and respond to growing political, economic, and military competition. The Strategy identifies four vital national interests, known as the "four pillars":
 - **Protect the American People, the Homeland, and American way of life:** We will strengthen control of our borders and reform our immigration system. We will protect our critical infrastructure and go after malicious cyber actors. A layered missile defense system will defend our homeland against missile attacks. And we will pursue threats to their source, so that jihadist terrorists are stopped before they ever reach our borders.
 - **Promote American Prosperity:** We will rejuvenate the American economy for the benefit of American workers and companies. We will insist upon fair and reciprocal economic relationships to address trade imbalances. The United States must preserve our lead in research and technology and protect our economy from competitors who unfairly acquire our intellectual property. And we will embrace America's energy dominance because unleashing abundant energy resources stimulates our economy.
 - **Preserve Peace through Strength:** By rebuilding our military so that it remains preeminent, deters our adversaries, and if necessary, is able to fight and win. We will compete with all tools of national power to ensure that regions of the world are not dominated by one power. We will strengthen America's capabilities—including in space and cyberspace—and revitalize others that have been neglected. Allies and partners magnify our power. We expect them to shoulder a fair share of the burden of responsibilities to protect against common threats.
 - **Advance American Influence:** A world that supports American interests and reflects our values makes America more secure and prosperous. We will compete and lead in multilateral organizations so that American interests and principles are protected. America's commitment to liberty, democracy, and the rule of law serves as an inspiration for those living under tyranny. We can play a catalytic role in promoting private-sector-led economic growth helping aspiring partners become future trading and security partners. And we will remain a generous nation, even as we expect others to share responsibility.

National Defense Strategy (NDS)

- In January 2018, the Secretary of Defense, Secretary Mattis, published our National Defense Strategy. As the Deputy Secretary, Pat Shanahan, explains, "The NDS builds upon the President's National Security Strategy, and is the living framework that will drive DoD plans, organization, and activities." It is the Department of Defense's enduring mission to provide combat-credible military forces needed to deter war and protect the security of our nation. The central challenge to the US prosperity and security is the *reemergence of long-term, strategic competition* by what the NSS classifies as revisionist power. The SECDEF defines America's long term Strategic Approach which will require us to focus on our key values:
 - *Be strategically predictable but operationally unpredictable*
 - *Integrate with U.S. interagency*
 - *Counter coercion and subversion*
 - *Foster a competitive mindset.*

Secretary Mattis also defines how America will expand our competitive space by pursuing three distinct lines of effort:

- **Build a More Lethal Force**
- **Strengthen Alliances and Attract New Partners**
- **Reform the Department for Greater Performance and Affordability**

Navy Component of the NDS

The Navy Component of the NDS is a classified document that serves as an implementation plan to the NSS and NDS. Released in summer 2018, the Navy strategy is an extension of the NDS that focuses the Navy on competition and deterring great-power conflict. It sets priorities, policies, and actions for the Navy. This, along with the Design for Maintaining Maritime Superiority, replaces the previous tri-service strategy, *A Cooperative Strategy for the 21st Century: Forward, Engaged, Ready*.

A Design for Maintaining Maritime Superiority

A Design for Maintaining Maritime Superiority is an unclassified document which lays out the CNO's vision for building a lethal, talented, ready, and efficient naval force. At time of writing, the January 2016 Design is slated for a Summer 2018 revision, A Design for Maintaining Maritime Superiority // Version 2.0, that responds to changes in the competitive environment and dovetails with the Navy Component of the NDS. The Design lays out three forces which shape the competitive environment: 1) Traffic on the oceans, seas, and waterways, which is more stressed and congested than ever before; 2) The rise in the global information systems; and 3) the increasing rate of technological creation and adoption. China and Russia have been exploiting these forces to their advantage and expanding the competitive space.

The Design 2.0 establishes four lines of effort and four core attributes to respond to the competitive environment and guide behaviors and investments that shape the Navy now and into the future. These are:

- LOE Blue: STRENGTHEN NAVAL POWER AT AND FROM SEA
- LOE Green: ACHIEVE HIGH VELOCITY OUTCOMES
- LOE Gold: STRENGTHEN OUR NAVY TEAM FOR THE FUTURE
- LOE Purple: EXPAND AND STRENGTHEN OUR NETWORK OF PARTNERS

The Design identifies our Navy Core Attributes as :

- Integrity
- Accountability
- Initiative
- Toughness

Sources:

1. http://www.navy.mil/navydata/nav_legacy.asp?id=148
2. <http://www.navair.navy.mil/index.cfm>
3. Navy Fact File: <http://www.navy.mil/navydata/ships>
4. Warfare areas: <http://www.thelightningpress.com/assets/files/NOPS/NOPS-1.pdf>
5. Composite Warfare Doctrine: NWP 3-56
6. "Expeditionary Strike Group: Command Structure Design Support," Susan G. Hutchins, William G. Kemple, David L. Kleinman, and Susan P. Hocevar. Paper for the C4ISR/C2Track: Paper # 364, 10th International Command and Control Research & Technology Symposium. P.3-4.
7. http://www.navy.mil/cno/docs/cno_stg.pdf
8. 2017 National Security Strategy Report is available on the White House website at: <https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf>
9. Summary of the 2018 National Defense Strategy: <https://www.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>

WEEK 6: SURFACE WARFARE

I. Mission

To provide combat ready ships to the fleet; and to supply those ships and supporting commands with the leadership, manpower, equipment, training, and material needed to achieve operational excellence and conduct prompt, sustained combat operations at sea to ensure victory.

The surface fleet is able to conduct a myriad of operations in both peace and wartime environments:

1. Air Warfare (AAW)
2. Surface Warfare (SUW)
3. Undersea Warfare (USW)
4. Ballistic Missile Defense (BMD)
5. Strike Warfare (STW)
6. Maritime Interdiction Operations (MIO)
7. Naval Surface Fire Support (NSFS)
8. Electronic Warfare (EW)
9. Expeditionary Warfare (EXW)
10. Amphibious Warfare (AMW)
11. Mine Warfare (MIW)
12. Mobility (MOB)

II. Capabilities

With over 275 warships and more than 110 Military Sealift Command ships around the world, the Navy's surface fleet is a dynamic force enhanced by advancements in technology and strategy. Ship classes are no longer built around a single mission area; they are built to specialize in one warfare area but must be able to operate in several additional roles. Modern surface ships possess many unique capabilities listed below.

- **Stealth** – Ship classes such as the ARLEIGH BURKE and ZUMWALT class destroyers, SAN ANTONIO class amphibious transporters, and Littoral Combat Ship (LCS) employ an angled superstructure, radar absorbent and reflective material, and reduced emissions to significantly reduce the radar cross section of the ship, making it much more difficult to acquire.
- **Endurance** – Three primary sources of propulsion employed by the Navy are steam, gas turbine, and diesel. Range and speed vary based on platform; on average, a gas turbine ship has an endurance of 6000nm at 20 knots. These ranges are almost unlimited based on the Navy's ability to refuel at sea. Of note, Nuclear power is utilized to produce steam propulsion on Aircraft Carriers providing unlimited endurance.
- **Firepower** – Includes gun mounts, land attack cruise missiles, surface to air missiles, self-defense weapons, and surface-to-surface missiles.
- **Mobility** – Because over two thirds of the world's surface is ocean and eighty percent of the world's population lives within 100 nautical miles of the coast, naval forces are a potent deterrent to potential adversaries. Naval forces can arrive quickly and remain indefinitely in the waters around the world. This presence reminds potential adversaries of the U.S. military's capability and resolve to enforce international law.
- **Communication** – The surface fleet utilizes several means of communication in order to provide and employ classified and unclassified voice, messaging, data and video information from every available source in order to effectively execute the mission. The two primary means used to provide ships, submarines, aircraft, and ground forces necessary information for joint missions are data transmission, via HAWKLINK, LINK 11, and LINK 16, Cooperative Engagement Capability (CEC) and voice transmission, via Satellite COMMS, High Frequency, Ultra High Frequency, Very High Frequency, Super High Frequency, and Extremely High Frequency systems.

III. Surface Platforms



CVN-68 Nimitz Class Nuclear Powered Aircraft Carrier	
Visual Identification	Second largest ship in the U.S. Navy (more than 1000 feet long – 3 football fields) Small superstructure approximately 2/3s of the distance from bow to stern
Mission	With their embarked air wing, aircraft carriers are the centerpiece of America's naval forces. On any given day, aircraft carriers exercise the Navy's core capabilities of power projection, forward presence, humanitarian assistance, deterrence, sea control, and maritime security.
Weapons	Multiple NATO Sea Sparrow, Phalanx CIWS, and Rolling Airframe Missiles (RAM)
Aircraft	1 Carrier Air Wing (approximately 70 aircraft)
Crew Size	Ship's Company: 3,350/Air Wing: 2,480



CVN-78 Ford Class Nuclear Powered Aircraft Carrier	
Visual Identification	Largest Ship in the U.S. Navy and 25 feet longer than the Nimitz Class Carriers at 1106 ft. The Ford class is able to be easily distinguished from the Nimitz class due to the more aft placement of the superstructure.
Mission	With their embarked air wing, aircraft carriers are the centerpiece of America's naval forces. On any given day, aircraft carriers exercise the Navy's core capabilities of power projection, forward presence, humanitarian assistance, deterrence, sea control, and maritime security.
Weapons	Multiple Evolved NATO Sea Sparrow (ESSM), Phalanx CIWS, and Rolling Airframe Missiles (RAM), and small caliber weapons
Aircraft	1 Carrier Air Wing (approximately 90 aircraft)
Crew Size	Ship's Company: 2600 /Air Wing: 2,480



CG-47 TICONDEROGA Class Cruiser	
Visual Identification	Hurricane bow, split superstructure with two SPY array facing forward and two aft. Two masts, with the shorter forward and taller aft. Two sets of exhaust stacks, one aft of each mast. 5in/54cal gun forward and aft.
Mission	Modern U.S. Navy guided missile cruisers perform primarily in a Battle Force role. These ships are multi-mission Air Warfare (AW), Undersea Warfare (USW), Strike Warfare (STW), and Surface Warfare (SUW) surface combatants capable of supporting carrier strike groups and amphibious forces or operating independently and as commanders of Surface Action Groups (SAG). Some Aegis Cruisers have been outfitted with a Ballistic Missile Defense (BMD) capability.
Weapons	2 x 5in/54cal dual purpose guns (1 fwd, 1 aft) CG-51 and up, 2 x VLS (61 cells fwd, 61 cells aft) 2 x 20mm Phalanx CIWS (port and stbd) 2 x Surface Vessel Torpedo Tube launchers (3 tubes per launcher) 2 x quadruple Harpoon canisters
Aircraft	2 MH-60 Helicopters
Mission Specific Capabilities	SPY-1B Air Search Radar, Aegis combat system, Towed Array Sonar
Crew Size	30 officers/300 enlisted



DDG-51 ARLEIGH BURKE Class Guided Missile Destroyer	
Visual Identification	Open bow, single 5in/54 cal or 5in/62 cal dual-purpose gun fwd, split superstructure, four SPY array faces on superstructure, swept mast, two separate sets of stacks (1 fwd, 1 aft). Flight deck aft. DDG-79 and newer (Flight IIA) also have helo hangars.
Mission	DDG 51 warships provide multi-mission offensive and defensive capabilities. Destroyers can operate independently or as part of carrier strike groups, surface action groups, amphibious ready groups, and underway replenishment groups. Guided missile destroyers are multi-mission Air Warfare (AAW), Undersea Warfare (USW), and Surface Warfare (SUW) surface combatants. Some DDGs have been outfitted with a Ballistic Missile Defense (BMD) capability.
Weapons	1 x 5in/54 cal or 5in/62 cal dual purpose gun

	2 x VLS (29 cells fwd, 61 cells aft for DDG-78 and below, 32 cells fwd, 64 cells aft for DDG-79 and following) 2 x 20mm Phalanx CIWS (fwd and aft) 2 x Surface Vessel Torpedo Tube launchers (3 tubes per launcher) 2 x quadruple Harpoon canisters (DDG-78 and older) Evolved Sea Sparrow Missile (DDG-79 and newer)
Aircraft	2 MH-60 (Flight IIA)
Mission Specific Capabilities	SPY-1D Air Search Radar, Aegis combat system, Towed Array Sonar
Crew Size	Varies based on Modernization: 28 officers/254 enlisted



DDG 1000 ZUMWALT Class Destroyer Class Amphibious Transport Dock	
Visual Identification	A wave-piercing "Tumblehome" hull form.
Mission	The multi-mission DDG 1000 is tailored for sustained operations in the littorals and land attack, and will provide independent forward presence and deterrence, support special operations forces, and operate as an integral part of joint and combined expeditionary forces. Its multi-mission design and littoral capabilities make it a 100 percent globally deployable asset to the Fleet.
Weapons	80 x Advanced Vertical Launch (AVLS) cells for Tomahawk, ESSM, Standard Missile 2 x MK 46 Close In Guns (CIGS)
Aircraft	2 x MH-60R Or 1 x MH-60R and 3 Vertical Take-off Unmanned Aerial Vehicles (UAVs)
Crew	Approx: 160 (20 officers and 140 enlisted including air det.)



LCS LITTORAL COMBAT SHIP	
Visual Identification	Dual designed for max speed and shallow draft. FREEDOM class (odd numbers) – Mono-hull INDEPENDENCE class (even numbers)- Tri-hull
Mission	The LCS class consists of two variants, the FREEDOM variant and INDEPENDENCE variant - designed and built by two industry teams, respectively led by Lockheed Martin and General Dynamics. These seaframes can be outfitted with reconfigurable payloads, called Mission Packages, which can be changed out quickly. Mission packages are supported by special detachments that deploy manned and unmanned vehicles and sensors in support of mine, undersea and surface warfare missions.
Weapons	57mm Gun Rolling Airframe Missiles (RAM) Freedom variant/ SEARAM on Independence variant 2 x 20mm guns (Surface Mission Package Only)
Mission Specific Capabilities	Dependent on Mission Package
Crew Size	50-100 mission dependent



MCM-1 AVENGER Class Mine Counter Measure Ship	
Visual Identification	Small singledeck house, crowded decks, wooden hull.
Mission	Avenger class ships are designed as mine sweepers/hunter-killers capable of finding, classifying and destroying moored and bottom mines.
Weapons	.50 Caliber guns
Mission Specific Capabilities	Mine hunting specific systems
Crew Size	8 officers/75 enlisted



PC-1 Cyclone Class Patrol Coastal Ships	
Visual Identification	Stealthy design, short vessel with one open mast, a single 25mm gun on the bow, and one Rigid Hull Inflatable Boat (RHIB) platform in the rear.
Mission	The primary mission of these ships is coastal patrol and interdiction surveillance, an important aspect of littoral operations outlined in the Navy's maritime strategy. Ten of the 13 PCs are forward deployed to Manama, Bahrain in support of 5 th Fleet operational tasking.
Weapons	Two 25mm machine guns; five .50 caliber machine guns; two 40mm automatic grenade launchers; two M-240 machine guns; 1 Griffin missile launcher
Crew Size	4 officers/24 enlisted



MARK VI PATROL BOAT	
Visual Identification	84 ft patrol boat which is longer than previous classes of Navy patrol boats. Rear deck is capable of launching and recovering small boats, unmanned aerial vehicles (UAVs) and unmanned undersea vehicles (UUVs).
Mission	The primary mission of the Mark VI Patrol Boat is to provide capability to persistently patrol littoral areas beyond sheltered harbors and bays for the purpose of force protection of friendly and coalition forces and critical infrastructure. Mission to include Security Force Assistance (SFA), High Value Unit (HVV) shipping escort, Visit, Board, Search, and Seizure (VBSS) operations, and Theater Security Cooperation (TSC).
Weapons	2 x 25mm machine guns 4 x .50 caliber machine guns 1 x MK 44 Machine Gun System 6 x Long Range Acoustic Hailing Device
Crew Size	2 Crews, 5 personnel each, plus an 8 person VBSS team

IV. Amphibious Platforms



LSD-41 WHIDBEY ISLAND Class Dock Landing Ship	
Visual Identification	Solid block superstructure. Two deck mounted boat/aircraft cranes
Mission	These ships transport and launch amphibious craft and vehicles with Marines in amphibious assault operations. Their ability to ballast down and flood a well deck makes possible the loading at sea of amphibious warfare craft and their cargo. LSD 41 was designed specifically to operate Landing Craft Air Cushioned (LCAC). It has the largest capacity for these landing craft (four) of any U.S. Navy amphibious platform.
Lift capability	4 Landing Craft Air Cushion (LCACs), 3 LCU or 36 AAV.
Weapons	2 x 25mm machine guns 2 x 20mm CIWS mounts 2 x RAM launchers 6 x .50 caliber machine guns
Crew	22 officers/350 enlisted. Embarked Marines: 402 plus 102 surge.



LSD-49 Harpers Ferry Class Dock Landing Ship	
Visual Identification	Solid block superstructure. Single boat/cargo crane starboard side
Mission	These ships transport and launch amphibious craft and vehicles with Marines in amphibious assault operations. Their ability to ballast down and flood a well deck makes possible the loading at sea of amphibious warfare craft and their cargo. The Harpers Ferry class differs from the Whidbey island class by having a smaller well deck and larger cargo storage spaces. The Harpers Ferry class is often referred to as the Cargo Variant (CV) LSD class.
Lift capability	2 Landing Craft Air Cushion (LCACs), 1 LCU, or 15 AAV
Weapons	2 x 25mm machine guns 2 x 20mm CIWS mounts 2 x RAM launchers 6 x .50 caliber machine guns
Crew	22 officers/350 enlisted. Embarked Marines: 402 plus 102 surge.



LPD-17 SAN ANTONIO Class Amphibious Transport Dock	
Visual Identification	Two enclosed masts, single exhaust stack. Helo hangar on flight deck. Angled hull and superstructure to reduce radar cross-section (RCS).
Mission	LPDs are used to transport and land Marines, their equipment, and supplies by embarked air cushion (LCAC) or conventional landing craft, augmented by helicopters or vertical take-off and landing aircraft (MV-22). These ships support amphibious operations, special operations, or expeditionary warfare missions and can serve as secondary aviation platforms for amphibious ready groups. The SAN ANTONIO class offers many improvements over previous LPDs, including the ability to interface with other surface combatants via the Cooperative Engagement Capability (CEC), Link-11, and Link-16.
Lift capability	2 LCAC or 1 LCU; 18 AAVs in the well deck 2 CH-53E Sea Stallions or 2 MV-22 Ospreys or 6 UH-1N/Y Hueys or 6 AH-1W/Z Super
Weapons	2 x 30mm guns 2 x RAM launchers 10 x .50 caliber machine guns
Crew	28 officers/340 enlisted. Embarked Marines: 800



LHD-1 WASP, LHA-1 TARAWA, LHA-6 AMERICA	
Visual Identification	Flight deck along the main deck. Elevator port side. Superstructure amidships starboard side. Sterngate. Largest amphibious warship.
Missions	The largest of all amphibious warfare ships; resembles a small aircraft carrier; capable of Vertical/Short Take-Off and Landing (V/STOL), Short Take-Off Vertical Landing (STOVL), Vertical Take-Off and Landing (VTOL) tilt-rotor and Rotary Wing (RW) aircraft operations; contains a well deck to support use of Landing Craft, Air Cushion (LCAC) and other watercraft (with exception of the first two AMERICA Class ships, LHA 6 and LHA 7, which have no well deck).
Lift capability	WASP and TARAWA: Capable of carrying 3 Landing Craft Air Cushion (LCACs); 4 CH-53E Sea Stallions; 3 UH-1N/Y Hueys, 4 AH-1W/Z Super Cobras; MH-60S helicopters; 12 MV-22 Ospreys; 6 AV-8B Harriers or F-35B Lightning IIs. AMERICA: 4 CH-53E Sea Stallions, 8 AH-1W/Z Super Cobras, 4 MH-60S Knighthawks, 12 MV-22B Ospreys, and 10 AV-8B Harriers or F-35B Lightning IIs.
Crew	1,108 crew (104 officers) + 1,894 embarked troops



LANDING CRAFT, UTILITY, AND MECHANIZED – LCU & LCM	
Visual Identification	Long flat open top; near the appearance of a barge LCU: Control compartment on the starboard side LCM: Control compartment on the stern
Mission	Landing craft are capable of transporting cargo, tracked and/or wheeled vehicles, and troops from amphibious assault ships to beachheads or piers. LCUs have both bow and stern ramps for onload/offload, have the ability to operate at sea for up to 10 days, and are capable of carrying one M1 tank or 350-400 troops. LCMs have a bow ramp for onload/offload and are capable of carrying light vehicles and troops.
Lift capability	LCU: 125 tons LCM: 58-65 tons
Crew	LCU: 14 LCM: 5



LANDING CRAFT AIR CUSHION (LCAC)	
Visual Identification	Large black skirt. Two large propellers aft.
Mission	The LCAC is a high-speed, over the beach, amphibious landing craft. LCAC's air-cushion capability allows it to proceed inland to discharge cargo on dry, trafficable beaches, thus reducing buildups of troops, equipment, and other material in the surf zone. The landing craft is capable of carrying one M1 tank or four Light Armored Vehicles or three Amphibious Assault Vehicles. The LCAC is unrestricted by tides, beach gradients, and surf conditions, allowing it to access more than 70 percent of the world's beach areas. LCACs are carried by LHAs, LHDs, LPDs, and LSDs.
Lift capability	60-75 tons
Crew	5

V. Surface Warfare in the Spotlight

- In April 2009, four pirates in the Indian Ocean hijacked the cargo ship *Maersk Alabama*. The siege ended after a rescue effort by the USS BAINBRIDGE (DDG 96), which marks the U.S. Navy's first successful pirate seizure of a ship registered under the American flag since the early 19th century.
- While operating off the coast of Yemen, the USS MASON (DDG 87) warded off multiple cruise missile attacks showing strategic excellence which earned the crew the Battenberg Cup from Naval Surface Force Atlantic Commander.
- The USS PORTER (DDG 78) and USS ROSS (DDG 71) fired 59 Tomahawk Land Attack Missiles in a series of strikes on a Syrian airfield in April of 2017.

Following the 2017 hurricane season in the Caribbean and Gulf of Mexico – Hurricane Harvey, Irma, and Maria – U.S. Navy and Marine Corps mobilized a massive response of ships, helicopters, and personnel to provide humanitarian and disaster relief, notably the USS ABRAHAM LINCOLN (CVN 72), USS IWO JIMA (LHD 7), USS WASP (LHD 1), USS KEARSARGE (LHD 3), USS NEW YORK (LPD 21), USS OAK HILL (LSD 51), USS FARRAGUT (DDG 99), and USS SAN JACINTO (CG 56). The Kearsarge Amphibious Readiness Group delivered more than 3 million pounds of supplies to Puerto Rico.

- Junior SWOs on track to successfully complete their second division officer tours have the opportunity to screen for command-at-sea billets on the Mark VI Patrol boats.

Sources:

1. <http://www.navy.mil/navydata/fact.asp>

WEEK 7: SUBMARINE WARFARE

I. Mission

As stated in the Commander's Intent for the United States Submarine Force and Supporting Organizations, "The mission of the U.S. Submarine Force is to execute the mission of the U.S. Navy in and from the undersea domain. In addition to lending added capacity to Naval forces, the Submarine Force in particular is expected to leverage those special advantages that come with undersea concealment to permit operational, deterrent, and combat effects that the Navy and the Nation could not otherwise achieve. These effects may be delivered within the undersea domain or across domain boundaries; they may be delivered from submarines far-forward or in broad ocean areas; they may be the result of carefully coordinated operations with other forces or achieved by independent operations; and they may be accomplished in peacetime, a time of tension, or during conflict."⁽¹⁾

II. Ethos

The U.S. Submarine force has a long heritage of sacrifice and valor. It is a rare occurrence that there are survivors when a submarine is mortally wounded or undergoes a self-inflicted disaster. Every year on or around 11 April, the community comes together for the Submarine Birthday Ball to remember those who have lost their lives to the depths of the unforgiving ocean, and to recognize the year's achievements in the community. The Submarine Force has, and always will, pride itself on its procedural compliance, intellectual capacity, and training and certification programs. A submarine will operate on its own, autonomously with no external support; undetected and typically in hostile waters. The crew works as one team to accomplish missions vital to national security, and every member of the crew is vital to its proper functioning, and if need-be, survival and war-fighting ability.

III. Submarine Warfare Insignia

The modern-day submarine warfare insignia, commonly called "Dolphins" or "Fish" are worn by submarine qualified officers (gold) and enlisted sailors (silver). The design, adopted in March 1924, is a bow view of a submarine, proceeding on the surface, with bow planes rigged for diving, and dolphin fish flanking the bow and conning tower of a submarine.



SSBN Deterrence Patrol Pin

The SSBN Deterrent Patrol insignia is worn by officers and enlisted sailors of the submarine service who have completed strategic deterrent patrols on nuclear ballistic missile submarines. The design is of a silver Lafayette-Class submarine with superimposed Polaris missile and electron rings which signify the armament and nuclear-powered characteristics of the Fleet Ballistic Missile Deterrent Force. A scroll beneath the submarine holds up to six award stars, with one gold star authorized for each successful deterrent patrol, or a silver star for five successful deterrent patrols. At twenty (20) successful patrols, the SSBN pin is upgraded to a gold design.



Submarine Combat Patrol Pin

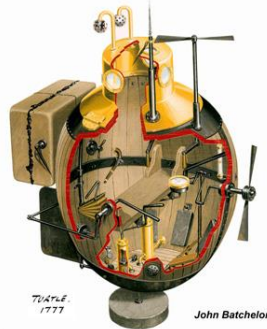
The Submarine Combat Patrol Insignia is a uniform breast pin worn by officers and enlisted who have completed combat patrols during declared wars, the last of which conducted during World War II. The pin shows the broadside of a Gato-Class diesel submarine. A scroll beneath the submarine holds service stars, one gold star for each successful patrol after the first or a silver star for five successful patrols.



IV. History

American Revolution

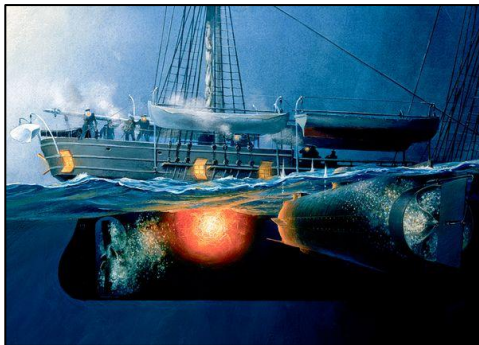
The first military submarine was the American-built *Turtle* (1775). Designed and built by the patriot David Bushnell, the hand-powered, egg-shaped device accommodated a single man. It is thought to be the first submarine capable of independent underwater operation, and the first to use a screw for propulsion. During the American Revolutionary War, *Turtle* attempted to sink a British warship, HMS *Eagle* (the flagship of British blockaders), moored in New York harbor. However, *Turtle's* attack failed.



David Bushnell's *Turtle*

Civil War

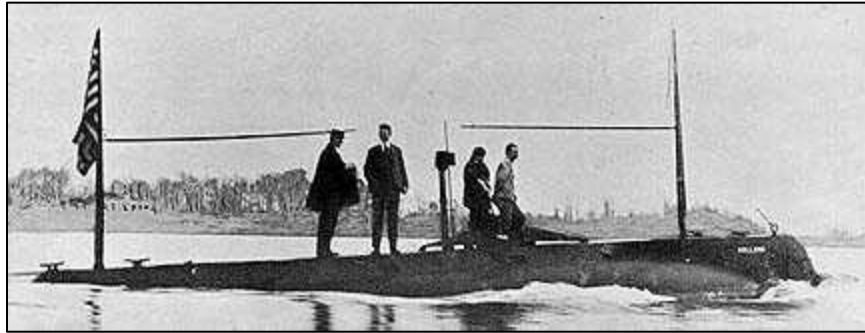
During the American Civil War, Confederate forces revived the submarine concept. On February 18, 1864, the Confederate States Submersible, the *H.L. Hunley*, performed the first successful military submarine mission when she sank the USS *Housatonic*, off Charleston Harbor. *Hunley* performed her submerged attack using a spar torpedo (an explosive charge mounted on a long pole sticking out of her bow). Though her attack was successful, *Hunley* sank following the engagement and her entire eight-man crew perished. Finally located in 1995, *Hunley* was raised in 2000 and is on display in North Charleston, South Carolina.



H.L. Hunley

Pre-World War Era

USS *Holland* (SS-1) was the United States Navy's first modern commissioned submarine. The boat was originally laid down in the shipyard in Elizabeth, New Jersey and launched in 1897. She was acquired by the USN on 11 April 1900 and commissioned six months later with Lieutenant H. H. Caldwell commanding. The Submarine Community celebrates 11 April as the birthday of the modern-day Submarine Force.



USS *Holland* (SS-1)

World War I

Submarines first made a significant military impact in World War I. German submarines (U-boats) were central to the German naval strategy. A torpedo fired from a German U-boat sank the ocean liner RMS *Lusitania* (May 7, 1915), which directly precipitated entry of the U.S. into WWI because American leaders would not tolerate the threat of unrestricted submarine warfare against civilian shipping traffic. The fleet of American diesel submarines was used primarily for coastal defense. However, after 1917, some American boats drew assignments to European waters. These boats conducted offensive, open-sea operations from the Azores and Bantry Bay in Ireland, supporting the Allied effort to maintain open sea-lanes along the European coast and in the approaches to the British Isles.

World War II

"...It is to the everlasting honor and glory of our submarine personnel that they never failed us in our days of peril."

~ Fleet Admiral Chester William Nimitz

World War II produced significant improvements in the design and operation of submarines worldwide. Sidestepping the requirements of the Treaty of Versailles, Germany built a large submarine fleet prior to the war. Their 'wolfpack' tactics proved devastating to Allied military and civilian ships in the European theater. The U.S. submarine fleet employed the *Gato*, *Balao*, and *Tench* Classes to operate in every naval theater and score the most complete victory of any force in any theater of the war. In spite of a hesitant beginning due to the attack on Pearl Harbor and difficulties with defective torpedoes, the submarine force destroyed 1,314 enemy ships for 5.3 million tons (including 8 aircraft carriers and more than 200 warships). Translated - 55% of all enemy ships sunk was by approximately 6% of the Naval force. Out of 16,000 submariners, the force lost 375 officers and 3,131 enlisted men in fifty-two submarines, the highest casualty rate of any U.S. service branch in WWII.



USS Wahoo (SS-238). LCDR Mush Morton and LT Dick O'Kane.

"Tenacity Dick, stay with the bastard till he's on the bottom."

~ Mush Morton to Dick O'Kane.

Lore among submariners is that while patrolling in the shallow waters of the Yellow Sea during its fourth war patrol, Commanding Officer Mush Morton dealt the XO, LT Dick O'Kane (USNA '11) a perfect 29, the highest possible score for combinations in a single cribbage deal. The crew felt that it was a lucky omen and *Wahoo* sank two Japanese freighters that night. Three days later, while patrolling off the Korean coast, Morton dealt a 28-point hand to O'Kane. They sank two freighters that day and another one the following day.

Cold War

The Cold War redefined the mission of submarines. Against the rising threat of nuclear war with the Soviet Union, several critical design improvements transformed the U.S. submarine fleet. These improvements included: (1) *The tear-dropped hull shape*. First developed for conventional diesel-electric submarines, the tear-dropped hull allowed much greater submerged operating speeds and higher propulsion efficiency. (2) *Nuclear powered propulsion*. Due in large part to the efforts of ADM Hyman Rickover (USNA '22), the 'Father of the Nuclear Navy,' the Naval Nuclear Power Program was born. On January 17, 1955, Commanding Officer Eugene Wilkinson spoke the famous words "underway on nuclear power" to launch the first nuclear powered submarine, USS *Nautilus* (SSN-571), on her maiden voyage. Within three years, *Nautilus* sailed to the North Pole and shattered virtually every submarine distance, speed, and endurance record. Nuclear power continues to afford U.S. submarines nearly unlimited operational endurance because they can remain submerged nearly indefinitely—limited only by their capacity to store food.



USS Nautilus (SSN-571). ADM Hyman G. Rickover.

During the 1960s, strategic planners divided the submarine force into two distinct components, ballistic missile (SSBN) submarines, and fast attack (SSN) submarines. For SSBNs, the United States and the Soviet Union both developed submarine launched nuclear weapons. These weapons began as surface-launched cruise missiles, but soon improved to underwater-launched ballistic missiles. American SSBNs continue to uphold the nuclear deterrence role, forming the most survivable element of the U.S.'s nuclear

triad (the other two elements being land-based ballistic missiles and airdropped nuclear ordinance). SSNs assumed the role of protecting SSBNs to ensure successful execution of the nuclear deterrence mission. Equally important, SSNs assumed the offensive role of detecting and monitoring any foreign ballistic missile submarines. Through the height of Cold War, brave SSN crews tracked, photographed (underwater), and collected acoustic data on Soviet submarines. The crews rewrote the playbook on submarine tactics and conducted highly specialized and sensitive missions for national security. Submarine development and operation during the Cold War formed the majority of the bedrock of the submarine force today.



USS *Maryland* (SSBN 738)

V. Platforms


Fast Attack Submarines (SSN)

Fast Attack submarines are designed to: (1) seek and destroy enemy submarines and surface ships; (2) conduct precision strikes with Tomahawk cruise missiles; (3) project power ashore by delivering and supporting Special Operation Forces; (4) carry out Intelligence, Surveillance, and Reconnaissance (ISR) missions; (5) support Carrier Strike Groups; and (6) engage in mine warfare. West Coast SSNs are home-ported in Pearl Harbor, HI, San Diego, CA, Bremerton, WA, and Guam while East Coast SSNs are home-ported in Groton, CT, and Norfolk, VA. There are three classes of SSNs now in service.

The advantages of a SSN over a conventionally (diesel-electric; SSK) powered submarine are (1) longer range, (2) significantly longer endurance since fuel is not a limiting factor, (3) higher speeds, and (4) capability of sustained submerged operations since it does not have to run a diesel engine at periscope depth or on the surface to recharge batteries. However, several countries have developed modern diesel submarines with air independent propulsion (AIP) that make recharging batteries with the diesel engine unnecessary, and thus extremely quiet.

Los Angeles Class (SSN 688 -- SSN 773)

The Los Angeles Class, also known as the 688 class after the hull number of lead vessel USS *Los Angeles* (SSN-688) commissioned in 1976, represents two generations and close to half a century of the Navy's attack submarine fleet. These vessels are being decommissioned at a rate of two per year, and are being replaced by the new Virginia Class SSNs.

SSN-688 and 688I <i>Los Angeles</i> class Attack Submarines	
	
Visual Identification	<p>Flight I and II have fairwater planes; Flight III have bow planes.</p> <p>Flight II and III have 12 Vertical Launch Tubes (VLS) in the bow.</p> <p>The sails of all Los Angeles Class submarines are unfaired at the leading edge.</p>


Mission	ASW/ASUW/Sea Denial/ISR/Strike/Offensive Mining
Weapons	MK 48 ADCAP Torpedoes – 4 Torpedo Tubes UGM-109 Tomahawk Cruise Missiles
Specific Capabilities	Can fire Tomahawks from (12) VLS tubes or torpedo tubes Outfitted with special mast to conduct ISR
Crew Size	14 officers/120 enlisted



Los Angeles Class Fast Attack Submarine [Left to Right – 688 (I/II), and 688I (III)]

Seawolf Class (SSN 21 -- SSN 23)

Commissioned on July 19, 1997, USS *Seawolf* (SSN 21) represents the first in a class of boats that are exceptionally quiet, fast, well-armed, and equipped with advanced sensors. The third ship of the class, USS *Jimmy Carter* (SSN 23), has a 100-foot hull extension called the “Multi-mission Platform”. This hull section provides for additional payload to accommodate advanced technology used to carry out classified research and development, and for enhanced war fighting capabilities.


SSN-21 Seawolf Class Attack Submarine	
	
Visual Identification	Broader beam than Los Angeles Class submarines and slightly shorter (Except USS Jimmy Carter (SSN-23). Seawolf Class submarines have sails that are faired into the hull at the leading edge and are fitted with bow planes.
Mission	ASW/ASUW/Sea Denial/ISR/Strike/Special Ops
Weapons	MK 48 ADCAP Torpedoes – 8 Torpedo Tubes UGM-109 Tomahawk Cruise Missiles (can hold 50 weapons in torpedo room)
Specific Capabilities	Can fire Tomahawks only from torpedo tubes.
Crew Size	14 officers/126 enlisted



Seawolf Class Fast Attack Submarine (USS *Seawolf* (SSN 21) & USS *Jimmy Carter* (SSN 23))

Virginia Class (SSN 774 -- SSN 821 and beyond)

The Navy is continuing to build the next-generation *Virginia*-Class SSN, with 14 of the planned 48 already in service. The USS *Virginia* (SSN 774) was commissioned on 23 October 2004. The *Virginia* Class platform has several innovations that significantly enhance their capabilities with an emphasis on littoral operations. These include: (1) a fly-by-wire ship control system that provides improved shallow-water ship handling; (2) enhanced special operation forces support systems; (3) a reconfigurable torpedo room, which can house either a combination of torpedoes and Tomahawk cruise missiles, or a large number of Special Operation Forces (SOF) and all their equipment for prolonged deployments; (4) a large lock-in/lock-out chamber for divers; (5) traditional periscopes have been supplanted by two Photonics Masts that house color, high-resolution black and white, and infrared digital cameras atop telescoping arms; and (6) through the extensive use of modular construction, open architecture, and commercial off-the-shelf components, the *Virginia* Class is designed to remain state-of-the-practice for its entire operational life through the rapid introduction of new systems and payloads.

SSN-774 <i>Virginia</i> Class Attack Submarine	
	
Visual Identification	Larger than <i>Los Angeles</i> Class, smaller than <i>Seawolf</i> Class. Tapered front of sail. All have bow planes.
Mission	USW/SUW/Sea Denial/ISR/Strike/Offensive Mining/Special Ops
Weapons	MK 48 ADCAP Torpedoes -- 4 Torpedo Tubes UGM-109 Tomahawk Cruise Missiles
Specific Capabilities	Can fire Tomahawks from VLS tubes, Virginia Payload Tubes (VPT), and/or torpedo tubes. Contains modules that can be replaced based on the specific mission requirements.
Crew Size	14 officers/120 enlisted




***Virginia* Class Fast Attack Submarine**

Ballistic Missile Submarines (SSBN)

Since the 1960s, strategic deterrence has been the SSBN's primary mission, providing the United States with its most survivable and enduring nuclear strike capability. There is only one type of SSBN in service, the *Ohio* Class submarine.

'Boomers,' as SSBNs are often called, serve as a virtually undetectable launch platform for intercontinental ballistic missiles. They are designed specifically for stealth and the precision delivery of nuclear warheads. *Ohio* Class SSBNs have the capability to carry up to 24 submarine-launched ballistic missiles (SLBMs), each having multiple independently targeted warheads. The exact number of missiles carried by each boat varies in a classified manner, at or below a maximum set by various strategic arms limitation treaties. As of 05 February 2018, the new Strategic Arms Treaty (START) is in effect making the SSBN force responsible for 70% of the United States strategic weapons inventory.

The Ohio Class is the largest type of submarine ever constructed for the U.S. Navy, and is second only to the Russian Typhoon Class in mass and size. West Coast Boomers are home-ported in Bangor, WA, and East Coast Boomers are home-ported in King's Bay, GA.

SSBN-726 <i>Ohio</i> Class Ballistic Missile Submarine	
	
Visual Identification	Fairwater planes otherwise known as sail planes Large “turtleback” hull design Deck stays dry while riding on the surface
Mission	Strategic Deterrence
Weapons	24 Trident II D5 SLBM Tubes MK 48 Torpedoes - 4 Torpedo Tubes
Mission Specific Capabilities	Carries up to 24 SLBMs
Crew Size	15 officers/140 enlisted




***Ohio* Class Ballistic Missile Submarine**

Guided Missile Submarines (SSGN)

The first four of the *Ohio* Class SSBNs were converted into guided missile submarines (SSGN). *Ohio* Class SSGNs provide the Navy with a combination of precision strike and Special Operation mission capability within a stealthy, clandestine platform. Armed with tactical Tomahawk Land Attack Missiles (TLAM) and equipped with superior communications capabilities, each SSGN is capable of directly supporting dozens of Special Operation Forces (SOF).

The SSGN conversion includes the installation of vertical launching systems (VLS) in a configuration dubbed ‘multiple all-up-round canister’ (MAC). On each SSGN, 22 of the 24 missile tubes hold seven Tomahawk cruise missiles, for a total capacity of 154 TLAMs. If the maximum number of TLAMs were loaded, one *Ohio* Class SSGN would carry an entire Carrier Strike Group’s equivalent of cruise missiles. The two remaining missile tubes act as lockout chambers to be used by Special Forces personnel. An SSGN can berth a team of 66 SOF personnel for up to 90 days. The MAC tubes can also be used to carry and launch Unmanned Aerial Vehicles (UAVs) or Unmanned Underwater Vehicles (UUVs), giving the ship remotely controlled ‘eyes & ears,’ allowing the ship to act as a forward-deployed command & control center. SSGNs can also carry the Dry Deck Shelter/SEAL Delivery Vehicle (DDS/SDV), in support of SOF.

Like SSBNs, SSGNs also use two crews, which alternate to increase the platform's operational tempo. West Coast SSGNs are home-ported in Bangor, WA. East Coast SSGNs are home-ported in King's Bay, GA.

SSGN-726 <i>Ohio</i> Class Guided Missile Submarine	
	
Visual Identification	Fairwater planes otherwise known as sail planes Large "turtleback" hull design Deck stays dry while riding on the surface
Mission	USW/SUW/Sea Denial/ISR/Strike/Offensive Mining/Special Ops
Weapons	MK 48 Torpedoes -- 4 Torpedo Tubes UGM-109 Tomahawk Cruise Missiles -- Maximum 154
Mission Specific Capabilities	Specialized to support SOF missions. Large Tomahawk Cruise Missile payload for precision strike.
Crew Size	15 officers/144 enlisted/66 SOF personnel

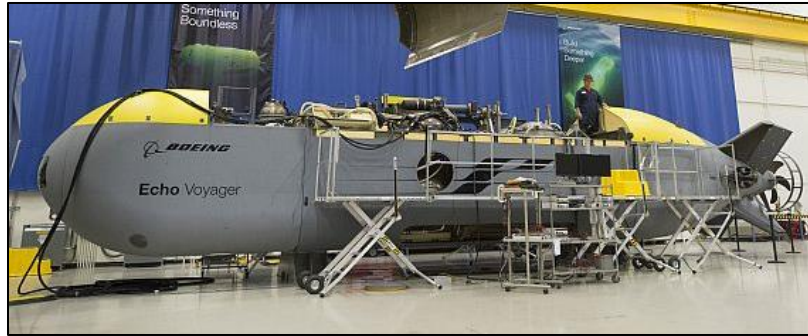


USS *Ohio* (SSGN 726) Guided Missile Submarine.

Future Projects

The *Columbia* Class submarine is being designed to replace the *Ohio* Class ballistic missile submarines, whose remaining boats will be decommissioned, one per year, beginning in 2027. The *Columbia* Class will take over the role of submarine presence in the United States' strategic nuclear force. In November 2012, the U.S. Naval Institute revealed, citing Naval Sea Systems Command, additional design information to include X-shaped stern control surfaces (hydroplanes), sail-mounted dive planes, and electric drive.

To address future undersea threats, the Navy recently formed UNMANNED UNDERWATER VEHICLE SQUADRON ONE (UUVRON 1) in Keyport, Washington. Unmanned underwater vehicles (UUVs) and other robotic systems, such as submarine-launched unmanned aerial vehicles (UAVs), will become increasingly important. UUVs range in size from small, torpedo tube-launched systems to large-diameter vehicles that can be pier-launched and operate in swarms with manned "mothership" submarines. Submarine-qualified junior officers will be vital to the future operational implementation and success of these diverse unmanned systems.



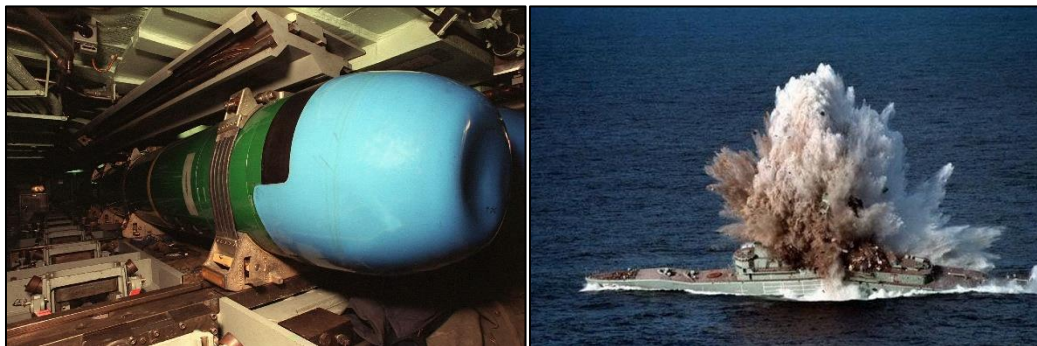
Large-Diameter Unmanned Underwater Vehicle (UUV)

VI. Combat Systems

Weapons

Mk-48 and Mk-48/ADCAP (ADvanced CAPability) Torpedoes

The Mk-48 is the principal heavyweight Anti-Submarine and Anti-Surface ship torpedo in the U.S. inventory. It is an acoustic-homing torpedo, having its own onboard SONAR to seek and destroy enemy contacts. The ADCAP modification includes improvements in speed and accuracy, sophisticated SONAR, all digital guidance and control systems, and increased range. A single Mk-48 is capable of sinking most of the world's warships. The torpedo is designed to detonate underneath a ship, creating a steam void below the ship that breaks the ship's keel. The lack of water under the keel first cracks the hull, and then the surge of upward gases from the steam void rapidly pushes through the crack further splitting the ship. Finally, as the void collapses, the hull slams back into its original configuration only to collapse in on itself. After detonation, most ships have mere moments until it is sunk.



Typically, Sonar Operators passively collect data that is fed into Fire Control. The Fire Control operators resolve a solution to the contact, and determine the intended track to fire the torpedo. The Mk-48 follows a pre-programmed search routine using an active seeker to search for the target, and can be controlled by a guidance wire from the submarine. The ADCAP is so capable that the target may not even be aware that a torpedo is incoming until terminal homing, which occurs shortly before the ADCAP detonates. Additionally, by that time, the launch submarine can maneuver outside counter-fire range and silently listening for the pending explosion and hull destruction.

Tomahawk Cruise Missile

The Tomahawk Land Attack Missile (TLAM) is an all-weather, long range, subsonic cruise missile used for land attack warfare. U.S. submarines can launch the Tomahawk cruise missile either from a standard 21" diameter torpedo tube, or from a Vertical Launch System (VLS, used by the Type II and III *Los Angeles* Class, *Virginia* Class, and SSGN submarines). The most common Tomahawk cruise missile is a conventional 1,000-lb, unitary warhead. However, some are configured to release combined effects bomblets (anti-airfield).

Submarine-Launched Ballistic Missile (SLBM)

Trident II (D5) missiles are deployed in *Ohio* Class SSBN submarines, each carrying up to 24 missiles. The Trident II (D5) is a three-stage, solid-propellant ballistic missile with a range of more than 4,000 nautical miles. Trident II is launched by the pressure of expanding gas within the launch tube, rising from the submarine in that pocket of air and is ejected out of the water. When the missile attains sufficient distance from the submarine, the first stage motor ignites and the boost stage begins. Each missile carries multiple nuclear warheads, housed in multiple independent re-entry vehicles (MIRVs), which launch from the missile and are independently targeted.



Tomahawk Cruise Missile Launch from SSGN



Trident Missile Launch from SSBN

Sensors

Sonar

Unless using a periscope, a submerged submarine has no optical window to the outside world. To locate contacts, to locate the ocean floor, and for targeting purposes, a submarine uses SONAR (SOUND Navigation and Ranging). SONAR is similar to RADAR, but it relies on acoustic signals rather than electromagnetic signals. SONAR can function in two modes: active (used less frequently) and passive (constantly employed). In active SONAR, the submarine emits a pulse of sound. The pulse travels through the water, reflects off an object, and returns to the submarine. Onboard computers interpret the reflected pulse to determine the bearing (direction) and range (distance) to a contact. Passive SONAR involves listening to sounds, like the noise generated by a merchant's engines, or the noise of another submarine's screw chopping through the water. SONAR can be used for navigational purposes as well. By identifying known features on the ocean floor, a submarine can keep track of its location.

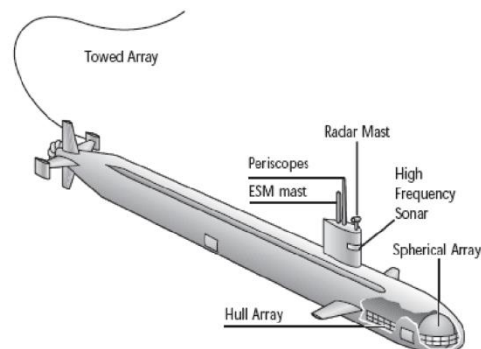
There are several sensors that integrate into the SONAR system:

Spherical Array

Hull Array

Towed Array

High Frequency Array



Periscopes and Photonics Masts

Since the dawn of submarining, periscopes have been used to see outside the submarine for safety and targeting other vessels while the submarine was at periscope depth. Periscope depth is the depth at which the periscope is exposed while the hull of the submarine remains below the water line. With the introduction of the Virginia Class platform and the conversion of four SSBNs to SSGNs, the submarine force has begun to transition from traditional periscopes to photonics masts. These instruments utilize cameras to transmit images or video to the submarine instead of using mirrors and lenses, like a periscope.

Photonics masts provide significant advantages in sensor flexibility, as well as in efficient use of the limited space in submarines. Current uses of periscopes and photonics masts include but are not limited to visual detection of other ships and aircraft, ranging, infrared and low-level light detection, communications, and electromagnetic spectrum monitoring.



Fire Control

This computer system takes raw data from various sources including multiple SONAR systems, periscopes, manual inputs by the operator, and even data from a torpedo after it has been fired (there is a thin wire that connects the torpedo to the ship after launch). The fusion of this information is managed by the control-room watch team, which builds the tactical picture and communicates with the submarine's weapons. Fire Control implements algorithms to help determine the most likely range, course, and speed of each contact from all of the raw inputs. Junior Officers are responsible for managing this contact picture.

When it becomes necessary to fire a torpedo, Fire Control is used to program the torpedo with the appropriate parameters for the target, to include different environmental parameters that can affect the performance of the torpedo. It tells the weapon where to look for the target and how to get there. At the time of fire, Fire Control sends the electrical signals to the torpedo tube to launch the weapon. After shooting, Fire Control continues to update the torpedo with refined targeting solutions via the torpedo's guidance wire. Fire Control is also used to plan cruise missile strikes and it downloads the flight plan and targeting information to Tomahawk cruise missiles prior to launch.

Sources:

1. Commander, Submarine Forces (SUBFOR): <http://www.public.navy.mil/subfor/hq/Pages/default.aspx>
2. CSS Hunley: <https://hunley.org/>
3. Photos: http://www.navy.mil/view_gallery.asp?category_id=17
4. Fire Control: <http://www.indepth.com/programs.html>

WEEK 8: NAVAL AIR WARFARE

I. History

During the twentieth century, few military organizations played a more crucial role than Naval Aviation. During maritime conflicts, aircraft carriers replaced battleships as the decisive weapon, projecting their powerful air wings over vast expanses of water, striking with surprise at enemy fleets and land bases, and then disappearing with equal swiftness. In times of peace, the carrier and its battle group provided American political leaders a flexible and potent way to respond to regional crises wherever and whenever American vital interests were threatened. “Where are the carriers?” has been the first question asked by American presidents at the start of every national security crisis since the end of World War II.

The Navy’s interest in airplanes as a naval weapon system dates back to 1898 when several naval officers became members of an inter-service board tasked to observe and investigate the military potential of the new flying machine. In 1908 and 1909, naval officer observers were present at the public demonstrations staged by the Wright brothers.

In 1910, LT Theodore G. Ellison became the first naval officer selected for flight training. Ellyson underwent instruction with Glenn Curtiss, the producer of the first practical hydroplane and early aircraft developer. It was a Curtiss Pilot by the name of Eugene Ely who made the first shipboard takeoff from the *USS Birmingham* in 1910. Ely would later become the first Pilot to successfully land an aircraft on the deck of a ship. Just one year later, having successfully completed training, LT Ellyson demonstrated the ability to launch a plane utilizing a newly devised compressed air catapult.

The first naval air station was located in Annapolis at Greenbury Point in 1911. The first aircraft carrier, *USS Langley*, was commissioned in 1922 by converting an old collier to a flat top ship.

Naval aircraft saw action in WWI, but it was not until WWII that naval aviation gained prominence. While naval aviation saw action in both European and Pacific theaters, it was the performance at the battle of Midway that solidified their position of importance. Having destroyed all four Japanese carriers, naval aviators turned the war in the Pacific from defensive to offensive. From that point onward, the center of the fleet became the aircraft carrier instead of the battleship.

Naval aviation has continued to grow in distinction and popularity over the past few decades. From operations in Desert Storm, Iraqi Freedom, Enduring Freedom, and Inherent Resolve to humanitarian assistance at home and abroad, naval aircraft and aircraft carriers have assumed prominent roles and responsibilities.

At the start of hostilities in Afghanistan, the aircraft carriers in the North Arabian Sea provided the only viable option for tactical air support. In the first two years of sustained combat operations for Operation ENDURING FREEDOM (OEF), 72% of strike sorties were flown by aircraft based on six different carriers. Hornets, Prowlers, and Hawkeyes provided close air support at distances of 600 to 750 nautical miles from their sea base. Indicative of the dynamic employment of carrier aircraft, 80% of targets engaged were assigned to aircrews after launch and 93% of munitions were satellite-aided or laser-guided. In a single deployment, Carrier Air Wing (CVW-8) attached to USS Theodore Roosevelt (CVN-71) flew 3,000 sorties supporting Troops-In-Contact (TIC) 500 times.

In 2003, six of twelve aircraft carriers were surged for Operation IRAQI FREEDOM, flying half of all fighter sorties in the U.S. Central Command Area of Responsibility (AOR). Carriers were on station in the Mediterranean Sea as well as the Persian Gulf. More than 700 Navy and Marine Corps aircraft provided critical combat capability with each carrier flight deck active on average 16 hours a day to generate 120-130 sorties during the first month of the war. In a single deployment, CVW-14 aboard the USS Abraham Lincoln (CVN-72) dropped 1.865 million pounds of ordnance.

Naval aviation continues to provide unique capabilities for humanitarian relief operations. CVW-2 assigned to USS Abraham Lincoln (CVN-72) arrived on-station off the coast of Indonesia just five days after the Dec. 26, 2004 tsunami devastated the region. The Abraham Lincoln Carrier Strike Group (ALSG) spearheaded the emergency relief effort known as Operation UNIFIED ASSISTANCE. By month's end, Navy helicopters had flown 1,527 missions, delivering 4.8 million pounds of supplies, and transporting 2,929 people. In 2011, when a 9.0 magnitude earthquake caused a tsunami to catastrophically damage the Fukushima nuclear reactor in Japan, the U.S. Navy swiftly responded with 24 ships and 140 naval aircraft to assist the Japanese Self Defense Force. Domestically, naval aircraft played a vital role conducting search and rescue and humanitarian operations during Hurricane Katrina in New Orleans in 2005 and Hurricane Harvey in Houston in 2017.

Likewise, sea-based aviation assets remain a valuable tool in complex contingencies such as the NATO operation in support of Libya's liberation in 2011 during Operations ODYSSEY DAWN and UNIFIED PROTECTOR. Air operations were led by EA-18G Growlers whose radar jamming pods, High-Speed Anti-Radiation Missiles, and APG-79 phased-array radar devastated the Qadhafi regime's air defense and communications networks, enabling AV-8B Harrier IIs of the 26th MEU to attack ground targets in Libya. Simultaneously, P-3C Orions attacked surface ships with AGM-65F Maverick missiles and an MV-22 conducted combat search and rescue to recover the aircrew of a downed USAF F-15E.

Most recently, naval aviation has been a key player in the fight against ISIL/ISIS in Iraq and Syria by launching air strikes from aircraft carriers and forward deployed bases. During their 10-month deployment in 2014-2015 to the Arabian Gulf, CVW-17 aircraft aboard the USS Carl Vinson (CVN-70) Strike Group launched 2,383 combat sorties in support of Operation INHERENT RESOLVE. CVW-17 aircraft deployed 869 precision-guided munitions, totaling over a half million pounds of ordnance, against ISIL/ISIS targets in Iraq and Syria.

The common link for those who participate in this exciting history is their training in Pensacola, Florida. Since 1914, it is there that young student naval aviators and naval flight officers have learned and mastered the unique demands of flying naval aircraft.

II. Roles and Responsibilities

Naval Aviation personnel fall into many categories. Naval Aviators and Naval Flight Officers (NFO) operate the aircraft in today's fleet. Naval Aircrewmembers support flight operations and operate mission equipment in flight. On the ground, maintenance and medical personnel support the mission by keeping both the aircraft and aircrews airworthy. Below is a brief description of some of the major roles within Naval Aviation:



Naval Aviator. Unrestricted Line Officer qualified for duty involving flying as a Pilot. As a qualified aircraft commander (AC), a Naval Aviator retains overall responsibility for the safe conduct of flight operations and physical control of aircraft, regardless of rank.



Naval Flight Officer (NFO). Unrestricted Line Officer who operates the advance systems onboard naval aircraft and may also act as the overall tactical coordinators of multiple air assets during a mission.



Naval Aircrewman. Enlisted personnel in a permanent flight status. Naval Aircrewmembers perform in-flight duties in accordance with various aircrew positions and are responsible to the Aircraft/Mission Commander for the operation, maintenance, and training associated with applicable aircraft systems. Depending on the type of aircraft and mission they perform, Naval Aircrewmembers are divided into five distinct categories (applicable aircraft in parentheses):

1. Aircrewman Mechanical (AWF). Includes flight engineers, crew chiefs, and load masters. Proficient with all in-flight emergency requirements and knowledgeable with all aircraft flight systems (P-3C, EP-3, E-6B, C-2).
2. Aircrewman Operator (AWO). Operates tactical mission systems to detect, classify, track, and attack enemy submarines and surface vessels. Also serves as rescue swimmer during SAR missions and operator of several close in weapons systems. (P-3C, P-8A, UAS).
3. Aircrewman Tactical Helicopter (AWR). Operates tactical mission systems to detect, classify, and attack enemy submarines (MH-60R, UAS).
4. Aircrewman Helicopter (AWS). Serves as the utility Aircrewman operating a wide range of equipment in a wide range of duties, including the rescue swimmer during SAR missions, operator of several close in weapon systems, and operator of mine hunting sensors. (MH-60S, MH-53, UAS)
5. Aircrewman Avionics (AWV). In flight technician/trouble shooter. Maintains and troubleshoots all avionics equipment while in flight. Operates communication systems and electronic warfare equipment (P-3C, EP-3, E-6B, UAS)

Flight Surgeon. Medical representative for an aviation command. The flight surgeon is a board-certified medical doctor and promotes aviation safety to decrease the potential for aircraft accidents through the implementation of aviation medicine programs, flight physicals for aircrew personnel, and other routine medical tasks. The flight surgeon is responsible to the CO of the squadron for medical readiness and routinely flies with the squadron to observe in-flight stressors and crew coordination.



Professional Aviation Maintenance Officer (PAMO). Established in 2009, the PAMO community is comprised of aerospace maintenance duty officers, aviation maintenance limited duty officers, and aviation maintenance chief warrant officers. They have significant experience and display a high level of knowledge in all aspects of aviation warfare support. In addition to serving a minimum of 24 months in an aviation maintenance activity and completing one operational deployment, PAMOs are required to complete a personnel qualification standard (PQS) and successfully pass an oral board. Once qualified, PAMOs serve as leaders within an aviation squadron's maintenance department, supporting aviation missions and the squadron's warfighting capabilities.



III. Operations

The primary function of naval aviation is to closely coordinate with other naval forces in maintaining command of the seas while also establishing dominance in the airspace surrounding vital interests. Naval Aviation supports the following operations:

1. AIR WARFARE (AW)
2. SURFACE WARFARE (SUW)
3. UNDERSEA WARFARE (USW)
4. CLOSE AIR SUPPORT (CAS)
5. COMBAT SEARCH AND RESCUE (CSAR) / SEARCH AND RESCUE (SAR)
6. COMMAND, CONTROL, COMMUNICATION, COMPUTERS, COMBAT SYSTEMS, AND INTELLIGENCE (C5I)
7. LOGISTICS SUPPORT OPERATIONS (LOG)
8. INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE (ISR)
9. MINE WARFARE (MIW)
10. STRIKE WARFARE (STW)

The numerous naval aviation operations are carried out by multiple aviation platforms. In general, there are three categories of aircraft: **Fixed Wing, Rotary Wing, and Tiltrotor**. Within these categories, aircraft are developed with specific missions in mind. Fixed wing naval aviation assets can be further classified into one of two groups: **Carrier Aviation** or **Maritime Aviation**.

IV. Organization

Naval aircraft are grouped together in *squadrons*, or military units composed of a number of similar aircraft. Each squadron is composed of officers and enlisted tasked with planning, flying, and maintaining all of their aircraft in support of the mission at hand. Every squadron is designated with a two or three-letter abbreviation describing the missions they accomplish.

Squadron Type Decoder			
1 st Letter	Meaning	2 nd Letter	Meaning
V	Fixed Wing	Q	Electronic or Reconnaissance
H	Rotary Wing	R	Logistics
		W	Warning
		P	Patrol
		A	Attack
		F	Fighter

Squadron Designations	
Squadron Type	Meaning
VAW	Airborne Early Warning
VP	Maritime Patrol
VFA	Fighter/Attack
VAQ	Electronic Attack
VQ	Fleet Air Reconnaissance
VR/VRC	Fleet Logistics Support (Carrier)
HSM	Helicopter Maritime Strike
HSC	Helicopter Sea Combat
HM	Helicopter Mine Countermeasures

Individual squadrons are often grouped together with other squadrons and surface units to accomplish their mission. Two ways they are grouped together are into Carrier Air Wings or Detachments.

Carrier Air Wing

A Carrier Air Wing (CVW) is composed of squadrons from different Type Wings and are embarked onboard an aircraft carrier. Until 1963, Carrier Air Wings were known as Carrier Air Groups (CAG); thus, the commander of each air wing came to be known as, and is still called, the CAG. The CAG holds the rank of Captain and reports directly to the Carrier Strike Group (CSG) Commander.

A typical modern CVW is composed of the following squadrons, putting the wing at approximately 70 aircraft:

- 4 VFA Squadrons (F/A-18E/F Super Hornet)
- 1 VAQ Squadron (EA-18G Growler)
- 1 VAW Squadron (E-2C/D Hawkeye)
- 1 VRC Detachment (C-2 Greyhound)
- 1 HSC Squadron (MH-60S Knighthawk)
- 1 HSM Squadron (MH-60R Seahawk)

Detachments

Often times, helicopter, logistics, and patrol squadrons do not deploy as a whole squadron. When this is the case, the deploying aircraft are called a detachment. For example, VRC detachments are assigned to a CVW; HSC or HSM detachments each may be assigned to amphibious ships or small combatant ships (CG, DDG, LCS)

Carrier Flight Deck Jerseys

The flight deck is a busy and dangerous place during flight operations. For easy and rapid identification of personnel on the flight deck, the following standardized color-coded jerseys are worn by ship and squadron personnel:

	<p>Purple Aviation Fuels [Nickname: 'Grapes']</p>
	<p>Blue Plane Handlers Aircraft elevator Operators Tractor Drivers Messengers and Phone Talkers</p>
	<p>Green Catapult and arresting gear crews Air wing maintenance personnel Cargo-handling personnel Ground Support Equipment (GSE) troubleshooters Hook runners Photographer's Mates Helicopter landing signal enlisted personnel (LSE)</p>
	<p>Yellow Aircraft handling officers Catapult and Arresting Gear Officers Plane directors</p>
	<p>Red Ordnancemen Crash and Salvage Crews Explosive Ordnance Disposal (EOD) [Nickname: 'Ordies']</p>
	<p>Brown Air wing plane captains Air wing line leading petty officers</p>
	<p>White Air wing quality control personnel Squadron plane inspectors Landing Signal Officer (LSO) Air Transfer Officers (ATO) Liquid Oxygen (LOX) crews Safety Observers Medical personnel</p>

Aviation Enlisted Rates:

Below is a list of aviation enlisted rates commonly found within an aviation squadron **in addition to the aircrewmembers specific rates listed earlier in the chapter**. This list is not meant to be exhaustive of all aviation-related rates. Reference the *Blue Jacket's Manual* for further description of rates.

<u>AD – Aviation Machinist's Mate</u>	Maintain, service, adjust, and replace aircraft engines and accessories
<u>AE – Aviation Electrician's Mate</u>	Maintain, adjust, repair electrical power generating, converting, and distributing systems, as well as lighting, control, and indicating systems in aircraft.
<u>AM – Aviation Structural Mechanic</u>	Maintain and repair aircraft parts (wings, fuselage, tail, control surfaces, landing gear, and attending mechanisms) and hydraulic systems
<u>AO – Aviation Ordnanceman</u>	Responsible for maintaining, repairing, installing, operating, and handling aviation ordnance equipment as well as handling, stowing, issuing, and loading munitions and arms
<u>AT – Aviation Electronics Technician</u>	Maintain and repair the electronic components of weapons, communications, radar, navigation, anti-submarine warfare sensors, electronic warfare, data link, fire control, and tactical displays.
<u>AW – Naval Aircrewman</u>	Perform a wide variety of functions in many naval aircraft, such as operating sensors onboard (radar, radios, acoustic sensors, etc.), performing search and rescue techniques, and operating crew-served weapons.
<u>AZ – Aviation Maintenance Administrationman</u>	Perform clerical and administrative duties as well as plan, schedule, and coordinate maintenance to aircraft.
<u>PR – Aircrew Survival Equipmentman</u>	Pack and care for parachutes as well as service, maintain, and repair flight clothing, rubber life rafts, life jackets, oxygen breathing equipment, protective clothing, and air-sea rescue equipment.

Sources:

1. Airman Non-resident Training Course NAVEDTRA 14014, revised Dec 2012. Naval Education and Training Development Center (pub), United States Government Printing Office, Washington, D.C., 1984.
2. NAVPERS 15839I – Part A
3. NAVPERS 18068F – Navy Enlisted Classifications
4. <http://www.public.navy.mil/bupers-npc/enlisted/community/Pages/default.aspx>
5. <http://www.med.navy.mil/sites/nmotc/nami/academics/Pages/FlightSurgeon.aspx>
6. http://www.navy.mil/submit/display.asp?story_id=50044
7. Kraft, Terry B., "It Takes A Carrier: Naval Aviation and the Hybrid Fight," *Proceedings* 2009, 135(9), <http://www.usni.org/magazines/proceedings/2009-09/it-takes-carrier-naval-aviation-and-hybrid-fight>
8. "The New Face of Naval Strike Warfare," RAND Research Brief, 2005, http://www.rand.org/content/dam/rand/pubs/research_briefs/2005/RAND_RB9137.pdf
9. Lambeth, Benjamin, "American Carrier Air Power at the Dawn of a New Century," 2004, Rand eBook, http://www.rand.org/content/dam/rand/pubs/monographs/2005/RAND_MG404.pdf
10. Batten, Hugh N., "VQ-2 Shines in Operation Iraqi Freedom," *Naval Aviation News*, March-April 2004, <https://www.history.navy.mil/>

11. Hart, Michael, "Lincoln Strike Group Winds Down Active Engagement in Operation Unified Assistance," 08 Feb, 2005, http://www.navy.mil/submit/display.asp?story_id=16955
12. Naval Aviation Vision 2016-2025: http://www.navy.mil/strategic/Naval_Aviation_Vision.pdf
13. Flight Deck Jerseys ("Rainbow Wardrobe"):
<http://www.navy.mil/navydata/ships/carriers/rainbow.asp>
14. Stout, J. A. (2005). *To Be A U.S. Naval Aviator*. St. Paul, MN: Zenith Press
15. http://www.public.navy.mil/comnavsafecen/Pages/acquisition/noise_control.aspx
16. Cutler, Thomas J., *The Bluejacket's Manual* (Annapolis, MD: Naval Institute Press, 2009), 36-39.
17. http://www.navy.mil/submit/display.asp?story_id=93414
18. http://www.navy.mil/submit/display.asp?story_id=86616

WEEK 9: NAVAL AIR WARFARE PLATFORMS

I. Aircraft Designations

All Navy aircraft, like all U.S. military aircraft, are designated with a scheme of letters and numbers that identify each aircraft's particular type, model, and series (T/M/S). Prefix letter(s), placed before the hyphen, identify an aircraft's primary mission(s). The number(s) following the hyphen define the particular model number. The letters following the model number indicate the series of that model (in successive alphabetic increments). The following prefixes (mission designators) are common to U.S. Navy aircraft:

Aircraft Type Decoder	
A	Attack
C	Cargo/Transport
E	Electronic
F	Fighter
H	Helicopter
K	Tanker
M	Mine-Countermeasures & Multi-Mission
P	Patrol
Q	Unmanned
R	Reconnaissance
S	Antisubmarine
T	Trainer
U	Utility
V	VTOL/STOL

II. Fixed Wing

F/A-18E/F Super Hornet



F/A-18E/F Super Hornet	
Role: Fighter/Attack	Carrier-based all-weather fighter and attack aircraft. All F/A-18s can be configured quickly to perform either fighter or attack roles or both, through selected use of external equipment to accomplish specific missions. This 'force multiplier' capability gives the operational commander more flexibility in employing tactical aircraft in a rapidly changing battle scenario. The fighter missions are primarily fighter escort and fleet air defense; while the attack missions are force projection, interdiction, and close and deep air support. The F/A-18E/F Super Hornet replaced the F/A-18C Hornet and has the same capabilities. However, the Super Hornet has a greater range, higher service ceiling, larger payload, increased reliability, and an improved electronics suite. The Super Hornet also serves as the carrier air wing's only air refueling asset.
Distinguishing Features:	Twin V-oriented vertical stabilizers Rectangle shaped air intakes Single seat (E model) or Two seat (F model) cockpit
Crew:	E: 1 Pilot F: 1 Pilot/1 NFO as a Weapons System Officer (WSO)

Responsibilities:	<p>E: Pilot is responsible for aviation, navigation, communication, and tactical employment that includes air-to-air and air-to-ground missions.</p> <p>F: The crew is optimized through sharing the responsibilities above which makes them particularly suited for high task load missions such as close air support and forward air control.</p>
-------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

EA-18G Growler



Role: Electronic Attack	Carrier based and expeditionary (ground based) all-weather electronic attack aircraft. A modified version of the F/A-18F, the EA-18G has replaced the Navy's EA-6B Prowler. The EA-18G Growler integrates the latest electronic attack technology, including the ALQ-218 receiver, ALQ-99 jamming pods, communication countermeasures, and satellite communications. Along with the electronic attack suite, the Growler also features the same APG-79 Active Electronically Scanned Array (AESA) radar found in the Super Hornet.
Distinguishing Features:	<p>Twin V-oriented vertical stabilizers</p> <p>Rectangle shaped air intakes</p> <p>35% larger fuselage and wing surface area compared to the Hornet</p> <p>Two seat cockpit</p> <p>Jamming pods mounted on the wing tips</p>
Crew:	1 Pilot/1 NFO as Electronic Warfare Officer (EWO)
Responsibilities:	The crew is optimized by sharing the responsibilities of aviation, navigation, communication, and tactical employment that includes electronic attack, electronic surveillance, and High-speed Anti-Radiation Missiles (HARM).

F-35C Lightning II



Role: Fighter	F-35C Lightning II is a fifth generation fighter, combining advanced stealth technology with fighter speed and agility, fused targeting, cutting-edge avionics, advanced jamming, network-enabled operations and advanced sustainment. The F-35C will be a critical addition to the carrier strike group (CSG) integrated war-fighting package with stealth advantages to penetrate threat envelopes and the ability to detect and link that information to other CSG aircraft, ships and decision-makers. F/A-18 Super Hornets, with the ability to carry large payloads of advanced weapons will continue to provide lethality and flexibility and to complement the F-35C. The aircraft features a common design across three unique variants for the Air Force (F-35A), Marine Corps (F-35B),
------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	and U.S. Navy, capable of performing ground attack, reconnaissance, and air defense missions.
Distinguishing Features:	Twin V-oriented vertical stabilizers Rectangle shaped air intakes Single seat
Crew:	Crew: 1 x Pilot
Responsibilities:	Responsibilities: To take full advantage of the combination of the aircraft's stealth, avionics suite, and internal weapons carriage to establish a first-look, first-shot, first kill capability.

E-2D Hawkeye



Role: Airborne Early Warning	Carrier based all-weather tactical battle management, airborne early warning, and command and control aircraft. The E-2D uses computerized radar, Identification Friend or Foe (IFF), and electronic surveillance sensors to provide early warning, threat analysis against potentially hostile air and surface targets. Additional missions include surface surveillance coordination, air interdiction, offensive and defensive counter air control, close air support coordination, time critical strike coordination, search and rescue airborne coordination, and communications relay.
Distinguishing Features:	High wing Twin turboprop engines Large rotating radar dome on the spine of aircraft
Crew:	2 Pilots/3 NFOs
Responsibilities:	Pilots: Aviation, navigation, and communication. NFOs: Mission Commander, Sensor Operator, Airborne Command & Control

C-2A Greyhound



Role: Fleet Logistics Support	Carrier Onboard Delivery (COD). Provides long-range logistics support to Carrier Strike Groups. The C-2A can deliver a combined payload of 10,000 pounds over a distance of 1,000+ nm. The interior arrangement of the cabin can readily accommodate cargo, passengers, and litter patients. The large aft cargo ramp/door and a powered winch allow straight-in rear cargo loading and unloading.
Distinguishing Features:	High wing Twin turboprop engines Rear loading ramp
Crew:	2 Pilots/2 enlisted Aircrew
Responsibilities:	Pilot: Aviation Co-Pilot: Navigation and communication Aircrew: Loadmasters for cargo and passengers

P-8A Poseidon



Role: Multi-mission Maritime Aircraft (MMA)	The P-8A is currently being phased in to the fleet to replace the aging P-3C aircraft. It is a modified Boeing 737-800ERX, bringing together a highly reliable airframe and high-bypass turbo fan jet engine with a fully connected, state-of-the-art open architecture mission system. This combination, coupled with next-generation sensors, dramatically improves the Navy's Undersea Warfare (USW), and Surface Warfare (SUW) capabilities.
Distinguishing Features:	Twin turbofan engines with flat lower nacelles Raked wingtips
Crew:	3 Pilots/2 NFOs/3-6 enlisted Aircrew
Responsibilities:	Pilots: Aviation, navigation, and communication. NFOs: Tactical Coordinator (TACCO) that typically serves as the Mission Commander; Navigator/Communications Officer (NAVCOM) Aircrew: Sensor Operators (optical/acoustic/non-acoustic)

E-6B Mercury



Role: Fleet Air Reconnaissance	Dual-mission aircraft. Fulfills TACAMO (Take Charge and Move Out) mission by linking the National Command Authority (NCA) with the nation's nuclear forces (Bombers, ICBMs, SSBNs) by relaying Emergency Action Messages. Also serves as an Airborne Command Post (ABNCP) with the capability to launch U.S. land-based ICBMs via the Airborne Launch Control System (ALCS).
Distinguishing Features:	Boeing 707 airframe with 4 large high-bypass turbofan engines Antenna pod on spine of aircraft. HF antenna pod under each wing tip
Crew:	3 Pilots/2 NFOs/6-9 enlisted Aircrew
Responsibilities:	Pilots: Aviate, navigate, and communicate. May act as Mission Commander. NFOs: Airborne Communications Officer (ACO) and Combat Systems Officer (CSO). Responsible for Communications Central and release authority for all message traffic. May act as Mission Commander. Aircrew: Operation and maintenance of mission systems.

MQ-4C Triton



Role: Persistent Maritime Intelligence, Surveillance, Reconnaissance	The MQ-4C Triton will be a forward deployed, land-based, autonomously operated system that provides a persistent maritime ISR capability using a multi-sensor mission payload (maritime radar, Electro-Optical/Infrared (EO/IR), Electronic Support Measures (ESM), Automatic Identification System (AIS) and basic communications relay). The MQ-4C Triton's ability to perform persistent ISR within a range of 2,000 nm allows the P-8A aircraft to focus on their core missions, USW and SUW/weapons employment and Multi-Intelligence (INT) operations respectively.
Distinguishing Features:	130 ft wing span, domed superstructure, engine on centerline of fuselage, V-oriented twin vertical stabilizer
Crew:	Aircraft is unmanned; 4 personnel required per ground station
Responsibilities:	Air Vehicle Operator, Tactical Coordinator, 2 Mission Payload Operators

III. Rotary Wing

MH-60R 'Romeo' Seahawk



Role: Maritime Strike	The primary missions of the Romeo are USW and SUW. Other missions include intelligence, surveillance, and reconnaissance, search and rescue, vertical replenishment, counter-narcotics operations, and command and control operations. The Romeo has updated radar and sonar systems, electronic signal collection capabilities, a glass-cockpit configuration, and a 'dipping' sonar for active acoustic tracking of submarines.
Distinguishing Features:	Rear-wheel is further forward, closer to the middle of the aircraft Radar dome under nose Door on starboard side only Low pylon mounts When equipped with a FLIR, the turret faces up
Crew:	2 Pilots/1-2 enlisted Aircrew
Responsibilities:	Pilot: Operate the aircraft Co-Pilot: Airborne Tactical Officer (ATO) supervises the tactical situation/directs the Pilot and sensor operators Aircrew: Sensor operators for all onboard systems, rescue swimmers, crew-served weapons operators

MH-60S 'Sierra' Knighthawk



Role: Sea Combat	The MH-60S 'Sierra' is a jack of all trade helicopters. Primary missions include SUW, Special Operations Forces support, and Combat Search and Rescue. Other mission areas include Humanitarian Assistance / Disaster Relief, Search and Rescue, and Logistics.
Distinguishing Features:	The tail wheel is in the very back of the aircraft Large cargo doors are on both sides of the cabin Gunner's windows are behind the cockpit When equipped with a FLIR the turret faces down
Crew:	2 Pilots/1-5 enlisted Aircrew
Responsibilities:	Pilot: Operates the aircraft Co-Pilot: Navigation/tactical mission control Aircrew: Crew chief, aerial gunner/rescue swimmer

MH-53E Sea Dragon



Role: Mine Countermeasures	The primary mission of the MH-53E is Airborne Mine Countermeasures (AMCM). The secondary missions are vertical shipboard delivery and assault support. It is capable of towing a variety of mine hunting/sweeping countermeasures systems, including the Mk 105 magnetic minesweeping sled, the AQS-14A side-scan sonar, and the Mk 103 mechanical minesweeping system. When performing the assault support mission, the MH-53E can be fitted with the GAU-21 .50-cal. machine gun ramp-mounted weapon system.
Distinguishing Features:	Large size (99 feet long) 6 or 7 rotor blades depending on the variant
Crew:	2 Pilots/1-2 enlisted Aircrew
Responsibilities:	Pilot: Operate the aircraft Co-Pilot: Navigation/tactical mission control Aircrew: Sensor operator, loadmaster, and aerial gunner.

MQ-8B Fire Scout

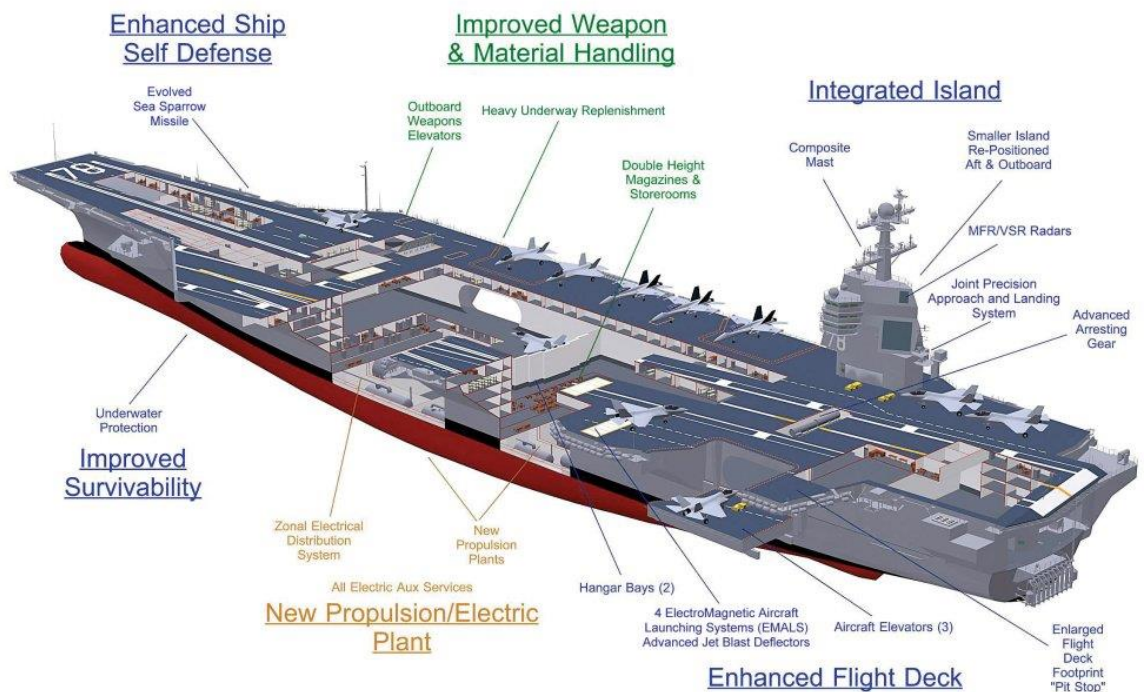


Role: ISR	The MQ-8 Fire Scout is an unmanned autonomous helicopter that provides reconnaissance, situational awareness, and precision targeting support for ground, air and sea forces. The system is comprised of one or more MQ-8 Fire Scout air vehicles, mission control systems, and associated control handling and support equipment. The system can operate from any suitably equipped air-capable ships or land bases. The MQ-8B equipped systems have deployed from Guided Missile Frigates (FFG) and Littoral Combat Ships (LCS)
Distinguishing Features:	Small size (31.5 ft and 2000 lbs), no windows or doors, skids
Crew:	1 Pilot / 1 Aircrewman
Responsibilities:	Pilot: Operates aircraft remotely Aircrew: Sensor Operator

IV. The Future of Naval Aviation

Aircraft Carrier

The Navy's newest aircraft carrier will take Naval Aviation into its second century, incorporating an array of integrated technological improvements and advancements that will enhance the ship's role as the centerpiece of the 21st century carrier strike group. USS Gerald R. Ford (CVN 78), the lead ship of the class, represents the largest, most powerful, and transformational warship ever built. CVN 78 was commissioned in 2017, the numerical replacement for the venerable USS Enterprise (CVN 65), which was deactivated in December 2012 after more than 50 years of service. The Ford Class embodies significant design and technology changes, improved integrated warfighting capabilities originally planned for later ships, and lessons learned from 100 years of aircraft carrier operations. GERALD R. FORD is also the first aircraft carrier designed with all-electric utilities that eliminate steam service lines and other distributed systems from the ship, improve corrosion-control efforts, and substantially reduce manning and maintenance requirements throughout its 50-year service life. The Electromagnetic Aircraft Launch System (EMALS) replaces the manpower intensive and aging steam catapult through the use of an electrically generated moving magnetic field that propels aircraft to launch speed. EMALS expands the launch envelope, allowing launch of both heavier strike fighters and potentially lighter future unmanned aircraft. The system enables the launching and landing of aircraft with less available wind (useful when operating in restricted water space) and it permits a high degree of computer control, monitoring, and automation. The projected capability of EMALS—working in concert with all elements in the redesigned flight deck—to launch more than 160 sorties per day is a significant increase in launch capacity (25 percent) compared to Nimitz-class carriers. The ability to launch more than 270 sorties per day is projected during short periods of high-tempo operations.



The Advanced Arresting Gear (AAG) is a highly reliable system consisting of energy absorbers, power-conditioning equipment, and digital controls designed to replace the existing MK-7 arresting gear in Nimitz-class carriers. EMALS and AAG improve the launch and recovery envelope of the traditional steam catapults and arresting wires, and are expected to produce less stress on airframes, save energy, and result in potentially reduced equipment and aircraft maintenance costs. EMALS will be capable of launching all conventional and short-takeoff fixed-wing carrier aircraft currently projected for the Navy inventory through 2030, including the F-35C Lightning II. Additionally, EMALS and AAG are designed to facilitate integration of unmanned systems, with a goal of launching all future aircraft projected in the inventory through 2050.

The increase in sortie generation rates is also enabled by a combination of the redesigned flight deck, which includes more deck space, a smaller island superstructure set further aft on the ship, and a NASCAR-inspired 'pit stop' concept that reduces the time required to refuel, conduct maintenance, and launch aircraft. Electromagnetic field-driven weapon elevators, a relocated 'bomb farm,' and an updated shipboard ordnance arrangement, improve the flow of weapons from magazines to aircraft, further contributing to increased sortie generation. New capabilities have been integrated into the smaller island, which is positioned 140 feet further aft and three feet further outboard to enhance launch and recovery. The island incorporates the advanced Dual Band Radar integrated warfare system that provides full surveillance, weapon targeting, and air traffic control for the carrier and the strike group. Ford's superior command-and-control and 'plug and play' capabilities will enable a joint task force commander to efficiently coordinate forces far out at sea.

Osprey. The CMV-22B Osprey will replace the C-2A Greyhound as a carrier onboard delivery platform providing logistics support and personnel transfer capabilities to the CVN. The CMV-22B features twin tilt rotors allowing vertical takeoff and landing as well as max speeds of 270 kts in cruise configuration and a range of over 400 nautical miles. The first CMV-22B squadron deployment is expected to take place in 2021.



The Northrop Grumman **X-47B** is a demonstration Unmanned Combat Air Vehicle (UCAV). In May of 2013, an X-47B was successfully launched from an aircraft carrier, with a successful arrested landing conducted in July of that year. The lessons learned from the UCAV demonstrator will be integrated into its follow-on program, the Unmanned Carrier-Launched Airborne Surveillance, and Strike system (UCLASS) which the Navy plans to field by 2020.



Sources:

1. Naval Aviation Vision 2016-2025: http://www.navy.mil/strategic/Naval_Aviation_Vision.pdf
2. <http://www.navsource.org/archives/02/027806.jpg>
3. <http://www.navair.navy.mil/index.cfm>
4. Airman Non-resident Training Course NAVEDTRA 14014, revised Dec 2012. Naval Education and Training Development Center (pub), United States Government Printing Office, Washington, D.C., 1984.
5. Naval Orientation NAVEDTRA 16138-H, prepared by BMCS Neif F. Padgham, revised 1984. Naval Education and Training Development Center (pub), United States Government Printing Office, Washington, D.C., 1984.
6. National Naval Aviation Museum: www.navalaviationmuseum.org
7. Commander Naval Air Forces: www.cnaf.navy.mil/
8. U.S. Naval Aviation History (1910-1995), <https://www.history.navy.mil/research/archives.html>
9. *The Bluejackets Manual*
10. *Ships and Aircraft of the U.S. Fleet*
11. http://www.jsf.mil/f35/f35_variants.htm
12. <http://www.boeing.com/defense/v-22-osprey/>
13. <http://www.navair.navy.mil/index.cfm>
14. http://www.navy.mil/navydata/fact_display.asp?cid=1200&tid=800&ct=1
15. http://www.navy.mil/ah_online/ussford/

WEEK 10: USMC MISSION, ENDURING PRINCIPLES, AND ORGANIZATION

I. Who We Are

Marines and amphibious naval forces operate in an expeditionary lane that makes use of position and tempo across the physical domains. The Marine Corps' special role in the joint force remains grounded in our ethos. Indeed, *who we are* shapes *what we do*, and *how we do it*. To Marines, the intertwined nature of our spirit and our actions is so natural that we struggle to tell our story in any other terms; it is the service-defining principle that has brought victory on hundreds of battlefields. What matters most about the Marine Corps is not its warfighting methodology, but its warfighting philosophy. To understand the role of the Marine Corps in the nation's defense, you have to start with the individual Marine.

We are United States Marines. We have carried a tradition of honor, courage, and commitment since 1775. Marines have fought in large wars and small, smoothly adapting to the nation's needs and demands. The adaptability of Marines to challenges in every clime and place is a hallmark of our Corps. We have fought pirates, insurgents, regulars, and irregulars. We have fought them in the air, on the ground, at sea, and in cyberspace. We are expeditionary, tough, disciplined, and always faithful. We have a well-earned reputation for directness, but this belies a subtlety and complexity in our warfighting.

We serve. We are proud to defend a great nation. In the information age, the headlines come from all continents, and at all hours. Yet, while tyranny rises and falls, while injustice spreads, while innocents are threatened and global stability is challenged, Americans are confident of one thing: their Marines stand ready. Americans need a force that is ready to move to the sound of chaos. Our leaders need a ready force that can be committed at a moment's notice to buy time for strategic decision-making. Wherever and however our citizens, allies, or interests are threatened, this nation needs a force ready to respond to today's crisis with today's force . . . today. In special partnership with the world's finest Navy, Marines are that force.

We make Marines. What happens on the parade decks at Parris Island and San Diego, or in the hills of Quantico, is what makes us Marines—it is the hardening of body and mind, the infusion of discipline and the casting of an indelible esprit de corps. Marines come from all walks of life, every race, every ethnicity, and both genders. *E pluribus unum*: from many, one. We take the best young Americans and shape them through a crucible of tough training. From diversity, a uniformity of character and discipline emerges. We temper them in core values—honor, courage, and commitment—to make them resilient. We polish them to a razor-sharp edge, honing them with a dedication to duty that makes a Marine willing to serve, willing to sacrifice, willing to fight. We instill in young warriors the idea that one succeeds by being part of a team, serving a cause greater than one's self does. 'Marine' means living hard, executing any mission, no matter how austere the conditions. 'Marine' means leaders who are trusted, biased for action, and accountable. 'Marine' means men and women who know that to lead is to serve. 'Marine' means being always faithful to the nation and one's fellow warriors . . . it is a moral imperative that drives Marines, from fire-team leader to Commandant.

We prevail on the battlefield, any battlefield. "The Marines have landed and the situation is well in hand." Our success is founded on one thing: the Marine Corps ethos and its manifestation in the individual Marine. For Marines, failing to achieve success is unthinkable, personally or professionally. Over centuries, the courage and fortitude of Marines have made household names of places like Belleau Wood, Guadalcanal, Iwo Jima, Chosin Reservoir, Khe Sanh, Kuwait City, Fallujah, and Marjah. That legacy continues, revealed in places like a tsunami ravaged Japan, an imploded Libya, a flooded Pakistan, a shell-shocked Beirut, and a Taliban-infested Helmand Province in Afghanistan. We are proud of our heritage, and sometimes wear our pride on our sleeves. I do not think the nation would want it any other way, for we are America's Marines.

We make our nation strong. Building Marines is an investment in the character of our citizenry. The Marine mindset draws from the special characteristics of the American people, and they are rightly proud to be reminded of the virtue that lies within them. The large number of Marines who have gone on to be successful CEOs, entrepreneurs, astronauts, university presidents, and political leaders gives evidence that selfless service, disciplined character, strong values, and mental toughness stay with a Marine long after he or she takes off the uniform. Today's young Marines represent the strength of our youth, the legacy of our elders, and the pride of our nation

– Excerpt from “Who we are” by General James F. Amos, USMC 2012 *Proceedings*, U.S. Naval Institute, Annapolis, MD

III. Mission

As directed by the National Security Act of 1947, the Marine Corps shall be organized, trained, and equipped to:

1. Provide Fleet Marine Forces of combined arms, together with supporting air components, for service with the United States Fleet in the seizure or defense of advanced naval bases and for the conduct of such land operations as may be essential to the prosecution of a naval campaign.
2. Provide detachments and organizations for service on armed vessels of the Navy, and security detachments for the protection of naval property at naval stations and bases.
3. Develop, in coordination with the Army, Navy, and Air Force, the doctrines, tactics, techniques, and equipment employed by landing forces in amphibious operations. The Marine Corps shall have primary interest in the development of those landing force doctrines, tactics, techniques, and equipment that are of common interest to the Army and the Marine Corps.
4. Provide, as required, Marine forces for airborne operations, in coordination with the Army, the Navy, and the Air Force and in accordance with doctrines established by the Joint Chiefs of Staff.
5. Develop, in coordination with the Army, the Navy, and the Air Force, doctrines, procedures, and equipment of interest to the Marine Corps for airborne operations which are not provided for by the Army.
6. Be prepared, in accordance with integrated joint mobilization plans, for the expansion of the peacetime components to meet the needs of war.
7. Perform such other duties as the President may direct.

The collateral functions of the Marine Corps are to:

1. Maintain a Marine Corps Reserve for the purpose of providing trained units and qualified individuals to be available for active duty in the Marine Corps in time of war or national emergency and at such other times as the national security may require.
2. Provide Marine officer and enlisted personnel in support of the Department of State security program overseas.

The implied functions of the Marine Corps are to:

1. Organize, train, and equip Marine Corps forces for assignment to unified and specified commands in support of national war plans.
2. Assign such forces to unified and specified commands, as directed.
3. Support Marine Corps and other forces assigned to unified and specified commands, as directed.
4. Be prepared, in accordance with integrated joint mobilization plans, to expand peacetime components to meet the needs of war.

Marine Corps aviation shall be organized to provide supporting air components for the Fleet Marine Forces in the seizure or defense of advanced naval bases and in the conduct of such land operations as may be essential to the prosecution of a naval campaign; and, as a collateral function, to participate as an integral component of naval aviation in the execution of such other Navy functions as the fleet commanders may direct.¹

¹ Marine Corps Doctrine Publication 1-0, *Marine Corps Operations*, p. 1-15.

III. Ethos

Being a Marine is a state of mind. It is an experience some have likened more to a calling than a profession. Being a Marine is not a job—not a pay check; it is not an occupational specialty. It is not male or female, majority or minority; nor is it a rank insignia. Stars, bars, or chevrons are only indicators of the responsibility or authority we hold at a given time. Rather, being a Marine comes from the eagle, globe, and anchor that is tattooed on the soul of every one of us who wears the Marine Corps uniform. It is a searing mark in our innermost being that comes after the rite of passage through boot camp or Officer Candidates School when a young man or woman is allowed for the first time to say, “I’m a United States Marine.” And unlike physical or psychological scars, which, over time, tend to heal and fade in intensity, the eagle, globe, and anchor only grow more defined—more intense—the longer you are a Marine. ‘Once a Marine, always a Marine.’

This matter of being different is at the very heart of leading Marines. It defines whom and what we are by reflecting the mystical cords of the mind that bind all Marines. What we are, what we have been, what Marines will always be, is enduring.

There is yet another element of being different that defines Marines and that is selflessness: a spirit that places the self-interest of the individual second to that of the institution we know as the Corps. That selflessness is stronger nowhere in American society than among Marines.

The Marine Corps’ vision of leading is less concerned with rank, self-identity, recognition, or privilege than the essence of our Corps: the individual Marine and the unyielding determination to persevere because Marines and the Corps do not fail. Our vision of leading is linked directly to our common vision of warfighting, which needs leaders devoted to leading, capable of independent and bold action, who are willing and eager to assume new and sometimes daunting responsibilities, willing to take risks—not because they may succeed, but because the *Corps* must succeed.²

IV. Enduring Principles

Principles define fundamental beliefs that form the foundation from which Marines derive their ethos and basic operating instincts. The following principles help to further define the cultural identity of Marines in the most basic terms— they express what we believe:

Every Marine a Rifleman. Every Marine - regardless of military occupational specialty - is first and foremost a disciplined warrior.

Expeditionary Naval Force. Marines are ‘soldiers of the sea,’ an integral part of the Naval Services — lean, versatile, flexible, and ready. We are organized, trained, and equipped to conduct naval campaigns and operate on and from naval platforms, or to fight in protracted campaigns ashore.

Combined Arms Organization. In 1952, Congress directed the Marine Corps’ composition as an air-ground combined arms force. This integrated force, known as the MAGTF, has unique and incomparable warfighting capabilities. Our MAGTF contains organic air, ground, and logistics elements under a single command element, making it an effective and integrated combined arms force.

Ready and Forward Deployed. Congress’ intent that the Marine Corps serve as the ‘force in readiness’ was founded on a recognized national need for a force capable of rapid response to emerging crises. This requirement mandates high standards of readiness across the force. We are routinely forward deployed around the globe and stand prepared to respond quickly in times of crisis.

Agile and Adaptable. The Marine Corps’ agility is based on its expeditionary mindset and flexible structure, able to operate either from the sea or in sustained operations ashore. We can adapt quickly with

² Marine Corps Warfighting Publication 6-11, *Leading Marines*, Chapter 1, p. 7-8, 13, 25.

unparalleled speed across an extraordinary range of military operations. Our organizational design and training facilitate a seamless transition between these operations, providing the necessary capability to operate effectively.

Marines Take Care of Their Own. We are stewards of the most important resource entrusted to us – our Nation’s sons and daughters. We make Marines, imbue them with our Core Values, and offer them the opportunity to serve a cause greater than themselves. Marines live up to the motto, Semper Fidelis. We are faithful to those who fall and we care for our wounded Marines and their families.

V. Culture and Mentality

The close integration of dissimilar Marine units stems from an organizational culture centered on the infantry. Every other Marine capability exists to support the infantry. Unlike many Western militaries, the Marine Corps remained conservative against theories proclaiming the ability of new weapons to win wars independently. For example, Marine Aviation has always been focused on close air support and has remained largely uninfluenced by airpower theories proclaiming that strategic bombing can single-handedly win wars.

This focus on infantry is matched with the fact that ‘Every Marine is a rifleman,’ emphasizing the infantry combat abilities of every Marine. All enlisted Marines receive training first and foremost as a rifleman; all officers receive training as a rifle platoon commander. The value of this culture has been demonstrated many times throughout history.

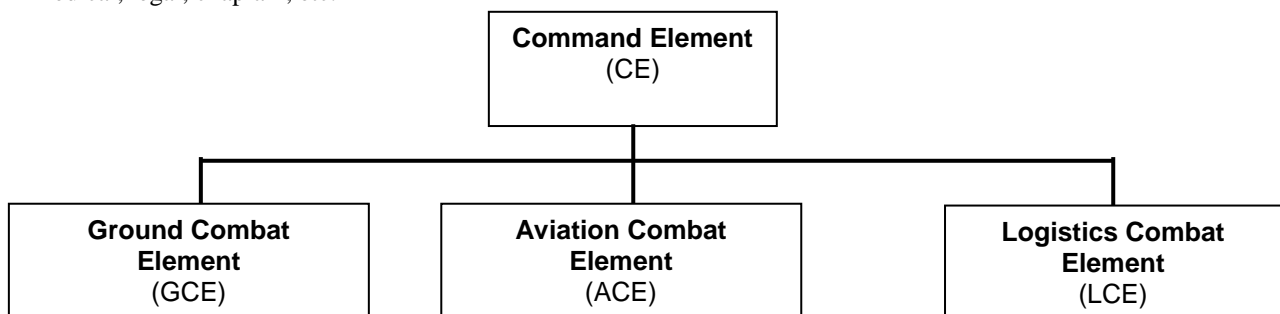
VI. Organization

The Marine Corps is a task-organized, multi-capable military organization. It is a middleweight force that lies between our Special Operations Forces and our nation’s heavier forces in the Army with a force that complements both. It is scalable and adaptive and it provides our Nation with a force capable across the range of military operations.

The **Marine Air-Ground Task Force (MAGTF)** is the Marine Corps’ principal organization. It provides combatant commanders with scalable, versatile expeditionary force able to respond to a broad range of contingency, crisis and conflict situations.

MAGTF (regardless of size) is composed of the following four elements:

1. **Ground Combat Element (GCE):** Infantry (battalion, regiment, or division) augmented with tank, artillery, Light Armored Reconnaissance (LAR), Amphibious Assault Vehicles (AAV), combat engineers, and reconnaissance assets.
2. **Aviation Combat Element (ACE):** Contains aircraft to support the tactical situation. Tactical helicopters with fixed wing assets for close air support
3. **Logistics Combat Element (LCE):** Provides all necessary logistical support to the MAGTF including Transportation, Engineering, Embarkation, Medical/Dental, and Headquarters and Service.
4. **Command Element (CE):** Administration, intelligence, operations, logistics, communications, medical, legal, chaplain, etc.

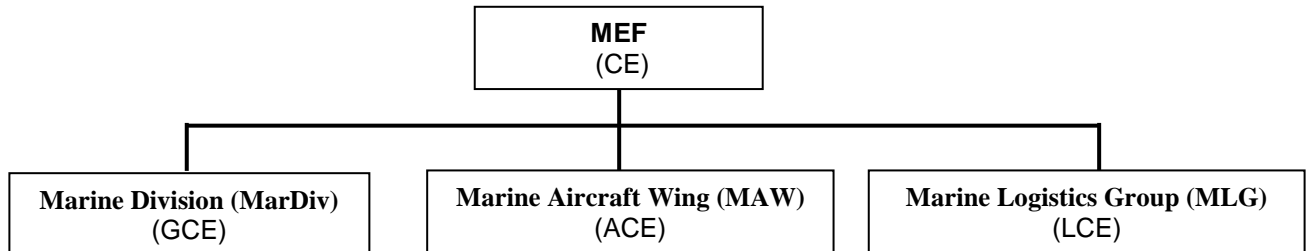


Four Core Elements of all MAGTFs

Although a MAGTF is a task organization tailored to a specific mission, there are four types of MAGTFs: the Marine Expeditionary Unit (MEU), the Marine Expeditionary Brigade (MEB), the Marine Expeditionary Force (MEF), and the Special Purpose MAGTF (SPMAGTF).

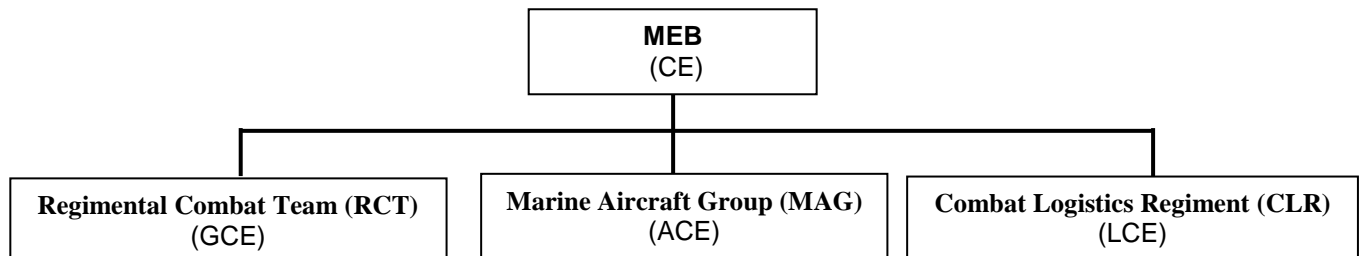
Marine Expeditionary Force (MEF)

The MEF is the largest principal warfighting element in the active force structure of the Marine Corps and is usually commanded by a Lieutenant General. The size and composition of a deployed MEF varies depending on the needs of the mission. Each MEF has one to three Marine Expeditionary Units (MEU) assigned to it that deploy throughout the globe.



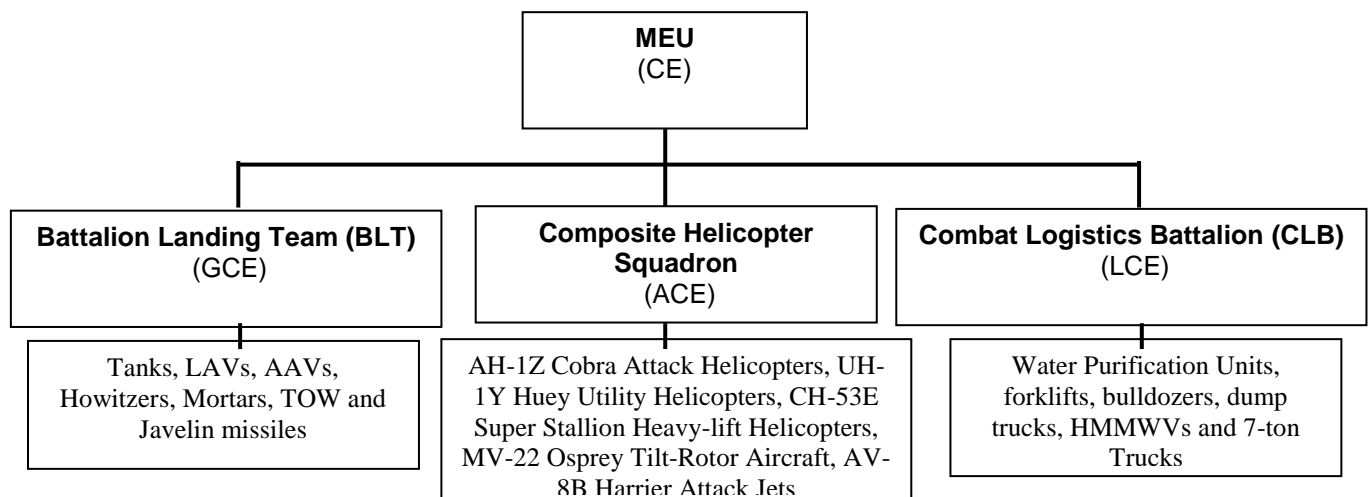
Marine Expeditionary Brigade (MEB)

The MEB is the next largest MAGTF structure the Marine Corps employs. Unlike the MEF, which has permanent structure, the MEB is typically stood up for specific theaters and engagements, such as MEB Afghanistan (MEB A), or deployed as a smaller, forward deployed element of the MEF. The MEB is typically commanded by a Brigadier or Major General and is composed of a Regimental Combat Team (RCT), a Marine Air Group (MAG), and a Combat Logistics Regiment (CLR).



Marine Expeditionary Unit (MEU)

In combat and non-combat situations alike, the Marine Expeditionary Unit (MEU) is our nation's self-contained, forward-deployed response force. Embarked aboard amphibious assault ships, the MEU maintains a constant state of readiness, able to plan and launch a mission within six hours. Each MEU can be customized but generally includes a reinforced infantry battalion, a composite aircraft squadron, and a combat logistics battalion. It is routinely deployed with an Expeditionary Strike Group (ESG).



Special Purpose MAGTF (SPMAGTF)

A special purpose MAGTF (SPMAGTF) may be formed to conduct a specific mission that is limited in scope and focus and often in duration. A special purpose MAGTF may be any Expeditionary Operations size, but normally it is a relatively small force—the size of a Marine expeditionary unit or smaller—with narrowly focused capabilities chosen to accomplish a limited mission. A special purpose MAGTF may be task-organized deliberately from the assets of a standing Marine expeditionary force and deployed from its home base for a particular mission, or it may be formed on a contingency basis from an already deployed MAGTF to perform an independent, rapid-response mission of usually limited scope and duration.³

VII. Locations

Locations of Major Air/Ground Elements (For the most part, odd numbers are on the West Coast and even numbers on the East Coast):

West Coast

- Camp Pendleton, CA: I MEF, 1st Marine Division, 1st Marine Logistics Group
- Marine Corps Air Station (MCAS), Miramar, CA: 3d Marine Aircraft Wing
- 11th, 13th, 15th MEUs*
- **1st MARDIV Subordinate units**
 - Infantry: 1st, 5th, 7th Regiments, each has 3 battalions which are known by name battalion/regiment ie 3/5
 - Artillery: 11th Regiment, has 1st 2nd 3rd and 5th battalions known by battalion/regiment ie 2/11
 - Other attached battalions: 1st Tank, 1st Reconnaissance, 1st Light Armored Reconnaissance, 1st Combat Engineer, 3rd Combat engineer, 3rd Assault amphibian
- **1st MLG Subordinate units**
 - Combat Logistics Regiment 1 and 15
 - 1st Medical and 1st Dental Battalion
 - 7th Engineer Support Battalion
- **3rd MAW Subordinate units**
 - Marine Aircraft Groups 11,13,16,39
 - Marine Air control Group 38

East Coast

- Camp Lejeune, NC: II MEF, 2d Marine Division, 2d Marine Logistics Group,
- MCAS, Cherry Point, NC: 2d Marine Aircraft Wing
- 22nd, 24th, 26th MEUs*
- **2nd MARDIV Subordinate units**
 - Infantry: 2nd, 6th, 8th Regiments, each has 3 battalions which are known by name battalion/regiment ie 1/6
 - Artillery: 10th Regiment, has 1st and 2nd battalions known by battalion/regiment ie 2/10
 - Other attached battalions: 2nd Tank, 2nd Reconnaissance, 2nd Light Armored Reconnaissance, 2nd Combat Engineer, 2nd Assault amphibian
- **2nd MLG Subordinate units**
 - Combat Logistics Regiment 2 and 25
 - 2nd Medical and 2nd Dental Battalion
 - 8th Engineer Support Battalion
- **3rd MAW Subordinate units**
 - Marine Aircraft Groups 14,26,29,31
 - Marine Air control Group 28

³ Marine Corps Doctrine Publication 3, *Expeditionary Operations*, Chapter 3, p. 70-77.

Marine Corps Bases, Okinawa, Japan

- III MEF, 3d Marine Division, 3d Marine Logistics Group, 1st Marine Aircraft Wing
- 31st MEU*
- **3rd MARDIV Subordinate units**
 - Infantry: 3rd and 4th Regiments, each has 3 battalions which are known by name battalion/regiment ie 2/4
 - Artillery: 12th Regiment, has 1st and 3rd battalions known by battalion/regiment ie 3/12
 - Other attached battalions: 3rd Reconnaissance, Combat Assault
- **3rd MLG Subordinate units**
 - Combat Logistics Regiment 3 and 35
 - 3rd Medical and 3rd Dental Battalion
 - 9th Engineer Support Battalion
- **1st MAW Subordinate units**
 - Marine Aircraft Groups 12,24,36,18
 - Marine Air control Group 18

*MEUs are not standing units. The command element of a MEU is a standing command. The units that comprise the GCE, ACE, and LCE rotate after each scheduled deployment. Each particular unit is 'chopped' or attached to a MEU for a period of approximately 18 months.

New Orleans, Louisiana

- Marine Corps Reserves (MARFORRES) – Serves as the headquarters for all Marine Reservists and Reserve units. The four subordinate commands of MARFORRES are the 4th Marine Division, the 4th Marine Aircraft Wing, the 4th Marine Logistics Group, and the Marine Corps Mobilization Command.

VIII. Rifle Platoon

The goal of all initial Marine Corps training is to make each Marine a competent element of a Rifle Platoon, either as a platoon commander or a platoon member.

Mission

The primary mission of a Marine Rifle Platoon is to locate, close with, and destroy the enemy by fire and maneuver or to repel his assault by fire and close combat.

Rifle platoon makeup

The platoon is composed of three rifle squads. Each squad consists of three fire teams. The Rifle Squad is normally employed as part of the rifle platoon and will be assigned a mission as a base of fire or as a maneuver element. The fire team is the basic fire unit and is organized into the following roles.

1. Rifleman – acts as a scout for the fire team, carrying and employing the M16A4 Service Rifle.
2. Team Leader – the Fire team leaders initiate the action directed by the squad leader. In the attack, fire team leaders act as fighter-leaders, controlling their fire teams primarily by example. Fire team members base their actions on the actions of their fire team leader. Throughout the attack, fire team leaders exercise such positive control as is necessary to ensure that their fire teams function as directed. They carry and employ the M4 Carbine.
3. Automatic Rifleman – carries the M27 Infantry Automatic Rifle (IAR), providing the bulk of the firepower for the fire team, and serves as the Assistant Fire Team Leader.
4. Grenadier/Assistant Automatic Rifleman – carries and employs the M203 40mm grenade launcher that provides the fire team with an indirect fire asset to compliment the rest of the team's direct fire weapons. They also carry extra ammunition for the Automatic Rifleman.

The fire team is the smallest and most efficient tactical element in the Marine Corps; this four-man team provides sufficient firepower and exceptional flexibility on the battlefield. Marines depend on the Marines they fight alongside, and nowhere is this commitment more evident—or critical—than in a Marine fire team.

IX. The Four Weapon Safety Rules

There are four weapon safety rules that have been adopted as a foundation for all Marines. These must be strictly adhered to at all times. They are:

- **Rule #1. Treat every weapon as if it were loaded.** When a Marine takes charge of a rifle in any situation, they must treat the weapon as if it were loaded, determine its condition, and continue applying the other safety rules.
- **Rule #2. Never point a weapon at anything you do not intend to shoot.** A Marine must maintain muzzle awareness at all times. This rule exists not only for your safety, but also for the others around you.
- **Rule #3. Keep your finger straight and off the trigger until you are ready to fire.** A target must be identified before moving the finger to the trigger. By keeping your finger straight you prevent the reaction of prematurely firing a round prior to positively identifying the target.
- **Rule #4. Keep the weapon on safe until you intend to fire.** A target must be identified before taking the weapon off safe. This rule is intended to eliminate the chance of the weapon discharging by accident (e.g., brush snagging the trigger). Additionally, this rule acts as a fail safe. It protects you and fellow Marines from allowing an automatic motor-reflex determine when the weapon will fire. Negligent Discharge is usually followed by Non-judicial Punishment.

Before withdrawing from the firing line on the range each weapon will be cleared by visually inspecting the chamber (safety on, magazine removed, bolt pulled to the rear, chamber empty) and verbally stated 'clear' by the shooter and also the coach.

Sources:

1. MCDP 1-0: Marine Corps Operations
2. Marine Corps Vision and Strategy 2025
3. USMC Concepts and Programs 2013
4. <http://www.hqmc.marines.mil/cmc/Home.aspx>
5. MCRP 3-1A Rifle Marksmanship
6. FMFM 6-4 Infantry Company/Platoon
7. Handbook for Marine NCOs, 5th Edition
8. Marine Officer's Guide, 7th Edition
9. MCWP 3-11.2 Marine Rifle Squad <http://www.marines.com/operating-forces/equipment>
10. <http://www.marines.com/becoming-a-marine/commissioning-programs>
11. <http://www.usna.edu/USMCInfo/>

WEEK 11: U.S. MARINE CORPS HISTORY AND TRADITIONS



I. Origin

Birth of the Marine Corps

The United States Marine Corps is a direct descendent of the British Royal Marines, who were founded in 1664. When the 2nd Continental Congress drew up plans for a Navy, it also established a Continental Marine Corps. **November 10, 1775 marks the United States Marine Corps' official birthday.** Tun Tavern in Philadelphia, Pennsylvania is recognized as the birthplace of the Marine Corps.

Samuel Nicholas, a Philadelphia merchant, was commissioned a Captain and ordered to raise the required number of Marines to form two battalions. He is considered the first Commandant of the Marine Corps.

II. History and Traditions

First Amphibious Landing during The Battle of Nassau

The attack on New Providence, Bahamas, led by Samuel Nicholas, was the first amphibious raid in the history of the Marine Corps. Landing on 3 March 1776, the Marines took the British defenders completely by surprise. The British withdrew from Fort Montague and the Marines captured the fort without firing a shot.

Early Traditions

- **Quatrefoil** – One of the traditions, which evolved from the late 1700s and early 1800s, was the use of the Quatrefoil. It enabled our sharpshooting Marines in the riggings of sailing ships to distinguish between friend and foe. Our boarding parties attached crossed pieces of rope to the top of their covers. From this evolved the Quatrefoil. Today the cross-shaped braid is worn on top of the officer's barracks cover.
- **Leatherneck** – The Marines long-standing nickname 'Leatherneck' goes back to the leather collar, or neckpiece, which was worn from 1775 to 1875, that was intended to ensure the Marines kept their heads erect, and to protect their necks from sword slashes. The high collar on the blue dress uniform commemorates it today.
- **Rank Of Sergeant Major** – In 1798 Congress established the rank of Sergeant Major. The first Marine to rise to the rank of Sergeant Major was Sergeant Major Archibald Sommers. In 1957, the 21st Commandant, General Pate, established the billet of Sergeant Major of the Marine Corps as the Commandant's senior enlisted advisor. The first Sergeant Major of the Marine Corps was Sergeant Major Bestwick.
- **Marine Corps Band** – The Marine Band was established in 1798 and has played for every President except George Washington. Thomas Jefferson gave them the title 'The President's Own.'
- **Mameluke Sword** – In 1805, the Ruler of Tripoli, Prince Hamet, presented the Mameluke sword to First Lieutenant Presley O'Bannon as a token of gratitude for the Marines' actions during the Barbary Pirate Wars. A replica of that sword was adopted for use and is carried by all Marine officers. The Mameluke Sword is the oldest weapon still in use today by any of the U.S. Armed Forces.
- **The Scarlet Stripe** – The scarlet trouser stripe first appeared on uniform trousers in 1798, and reappeared in 1840 and 1859, partly because of the military fashions of the day. The popular story, which cannot be supported by fact, is that during the battle of Chapultepec during the Mexican War in 1847, 90% of the Marine officers and noncommissioned officers were casualties. Thirteen of the twenty-three Marine officers participating in this battle were decorated for bravery. Thus, the scarlet



stripe, or 'blood stripe,' worn today on the blue dress trousers is to commemorate all the officer and noncommissioned officer casualties at the battle.

- **'The Grand Old Man of the Marine Corps'** – Archibald Henderson was appointed the 5th Commandant of the Marine Corps in 1820 and remained commandant until 1859, a period of 38 years, and is known as 'the Grand Old Man of the Marine Corps.'
- **Marine Corps Emblem**– During the post-Civil War period, in 1868 the Marine Corps emblem was adopted. The emblem consisted of an eagle with spread wings sitting on top of a globe of the Western Hemisphere with an anchor in the background. The eagle symbolizes the nation, the globe worldwide service, and the anchor naval traditions.
- **Two Medal of Honor Recipients** – Gunnery Sergeant Dan Daly and Major Smedley Butler are the only Marines who have been awarded two Medals of Honor for two separate actions. Gunnery Sergeant Dan Daly was awarded the Medal of Honor for his actions during the Boxer Rebellion in China in 1900 and the Banana Wars in Haiti in 1915. He is also remembered for saying, "Come on, you sons of bitches! Do you want to live forever?" during the Battle of Belleau Wood in WWI. Major Smedley Butler was awarded the Medal of Honor for his actions during the Mexican War in 1914 and the Banana Wars in Haiti in 1915.
- **Father of Marine Aviation** – The development of Marine aviation began in 1912. 2nd Lieutenant Alfred A. Cunningham was the first Marine to earn naval aviation wings. Lieutenant Cunningham worked to establish Marines as aviators and is considered the father of Marine Corps aviation.



World War I (1917)

The Marine Corps underwent a drastic transformation in World War I from a small force of anti-guerrilla fighters to a large conventional force capable of sustained combat.

After 54 days of trench warfare, the Marines pulled out and received orders to protect Paris. They met the Germans at a place called Bois de Belleau (Belleau Wood). As Marines moved to the front, retreating French soldiers encouraged them to 'fall back... retreat...' telling them that advancement was impossible. In classic Marine fashion, Capt Lloyd Williams reportedly answered, "Retreat hell, we just got here!" At Belleau Wood, the 4th Marine Brigade suffered enormous casualties while saving Paris from the Germans. The French government awarded the 4th Marine Brigade France's highest award, the Croix de Guerre.

- **Devil Dog** – German soldiers feared the Marines, calling them 'Teufelhunden' or 'Devil Dog,' a name that is still used by Marines to this day.
- **Women In The Corps** – Women entered the ranks of the Marine Corps for the first time in August of 1918, when 277 reservists and Women Marines joined the Corps, beginning with Opha Mae Johnson.

Post-World War I

During and after World War I, the Marines were consistently called upon to protect American interests and provide security in such places as Haiti, Nicaragua, and the Dominican Republic. During this same period, the concept of close air support was implemented for the first time and the serious study of the amphibious assault was undertaken.

- **Thirteenth Commandant** – Perhaps the most significant event of this period was the appointment of Major General John A. Lejeune (LUH-JERN) as the 13th Commandant of the Marine Corps. His major accomplishments as Commandant include:
 - Guiding the Corps toward the amphibious assault role
 - Establishing the Marine Corps Institute
 - Enhancing the officer corps through the Company Grade Officer's School and the Field Grade Officer's School
 - Organizing Headquarters Marine Corps

The Island Hopping Campaign of World War II **Guadalcanal**

In August 1942, the 1st Marine Division made the first amphibious landing of World War II. When the Marines came ashore, the Japanese launched a sea attack against the U.S. Navy amphibious ships. The operation was not yet complete when the Navy withdrew from Guadalcanal with thousands of Marines and critical equipment aboard. Instead of spearheading an offensive operation, the Marines assumed a

defensive perimeter until the rest of the Marines aboard the ships could return. By February of 1943, the Marines had full control of Guadalcanal and the U.S. concentrated on the offensive in the Pacific.

Tarawa

There were over 4,800 Japanese on Tarawa manning 32 large coastal artillery pieces, 106 machine guns, and 14 tanks. In November 1943, the 2d Marine Division attacked Tarawa. The reefs surrounding the island stopped the majority of the landing craft. The Marines waded to the shore, some 500 hundred yards distant, in the face of machine gun and mortar fire. 76 hours after the start of the assault on Tarawa, the Marines captured the island at the cost of 1,100 dead and 2,300 wounded Marines.

The significance of Tarawa was that the Japanese commander claimed, “a million men assaulting for a hundred years could not take Tarawa.” It took the Marines just 76 hours. Only 17 Japanese surrendered; the rest fought to the death.



Iwo Jima

Iwo Jima was needed in order to provide a clear flight path for American B-29 strategic bombers. The Japanese spent almost 20 years preparing for the defense of this island. On the morning of 19 February 1945, the Marines landed on Iwo Jima. It was the largest Marine amphibious landing to date, and the costliest. The Marines sustained more than 26,000 casualties while fighting the 21,000 Japanese soldiers that defended the barren, rugged terrain. Many of the 1500 caves and pillboxes on the island had reinforced walls ten feet thick.

In recognition of the Marines' heroism in the battle on Iwo Jima, Navy Admiral Chester A. Nimitz said, "Among the Americans who fought and died at Iwo Jima, uncommon valor was a common virtue."

During this battle, Marines raised the American flag on Mount Suribachi. An Associated Press photographer, Joe Rosenthal, snapped a picture, which has taken its place with the most famous pictures and paintings of our country's history. This picture was the inspiration for the Marine Corps War Memorial in Washington, D.C.

Okinawa

The final great land offensive in the Pacific area was the invasion of Okinawa by the combined forces of the Marine Corps and the Army. The Marine Corps landed the two Marine Divisions on the western beaches of Okinawa, with another Marine Division held in reserve. Defending this mighty fortress were 117,000 Japanese. However, on 21 June 1945, after three months of fighting, Japanese resistance ended. The fighting resulted in over 62,000 U.S. casualties. The successful conquest of the island of Okinawa enabled our ships, planes, and submarines to tighten the blockade around Japan's home islands.

The Korean War

The Pusan Perimeter

Following World War II, Korea was divided into North and South along the 38th parallel by the allied nations, with the Soviet Union installing a Communist government in the North and the U.S. facilitating the establishment of a democratic nation in the South. In the summer of 1950, North Korean troops supplied with Russian and Chinese equipment, and advisors crossed the 38th Parallel attacking South Korea. U.S. Army forces were immediately dispatched from Japan along with other United Nations (UN) forces.

The South Koreans and the U.S. Army were pushed back to a small perimeter around the port city of Pusan. Within days, the 1st Provisional Marine Brigade sailed from San Diego for Pusan. This rapid deployment of a combat ready Marine contingent displayed the Marine Corps' concept of being a 'Force in Readiness.'

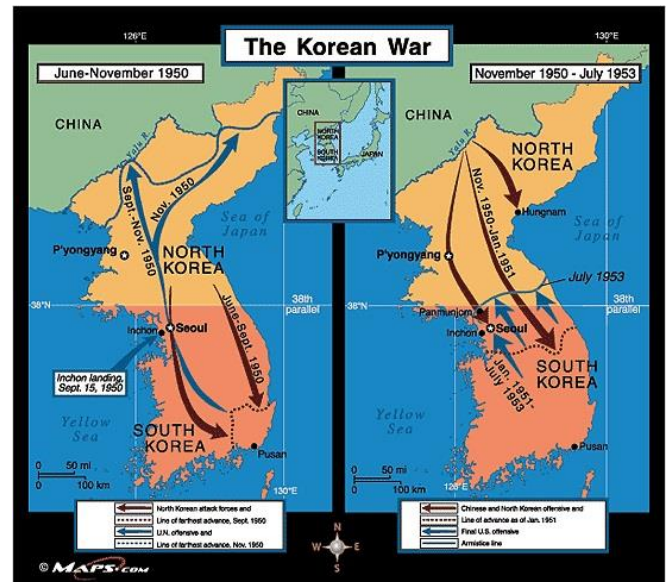
When the Marines arrived in August 1950, elements of the U.S. Army were already surrounded within the Pusan Perimeter. The 1st Provisional Marine Brigade was used to plug holes in the perimeter defense. The Marines then pushed the North Koreans back 26 miles along the left flank.

As the Marines moved in as a blocking force, a North Korean division attacked. The following day the Marines attacked the left flank of the North Korean division and the rest of the regiment soon took the ridges overlooking the river. On 3 September, the North Koreans attacked the perimeter again. The Marines moved in and, after three days of tough fighting, they pushed the North Koreans back 6 miles, securing the perimeter.

The Inchon Landing

The significance of the Inchon Landing was that it landed a significant force behind the enemy closing in on Pusan and it allowed the severing of supply lines to the enemy in the south. This assault was particularly difficult because of the tides and the heavily defensible landing site. The city of Inchon had tidal variation of 33 feet, was surrounded by large mud flats, had an island fortress protecting it, and was surrounded by an 8-foot sea wall, which the Marines had to scale from their landing craft.

In September 1950, the 1st Marine Division, commanded by MajGen Oliver P. Smith, fought in hand-to-hand combat, using flame-throwers and any weapons at their disposal. After 2 days of fighting, the Marines captured Inchon and prepared to advance onto the South Korean capital of Seoul.



The Battle for Seoul

On September 22, 1950, the 1st Marine Division entered Seoul to find it heavily fortified. Casualties mounted as the forces engaged in desperate house-to-house fighting. Seoul was taken after 3 days of heavy fighting.

The Chosin Reservoir

The 1st Marine Division pushed north toward the border between North Korea and Communist China as winter arrived. As the Marines moved north through the frozen mountainous terrain, the Communist Chinese Forces (CCF) prepared to move south. The Marines marched to the west of a man-made reservoir called Chosin. Colonel Lewis B. 'Chesty' Puller served as the Commanding Officer of the 7th Marine Regiment.

On the night of 2 November, just south of the Chosin Reservoir, a Chinese Communist Division attacked the 7th Marine Regiment who was the lead element for the division. The Marines fought off the attack for five days until the Chinese broke contact and simply disappeared.

On 27 November, eight Chinese divisions out-flanked the Marines. The Army units on the Marine's left flank were crumbling and the Marines were dangerously exposed. The UN forces crumbled and retreated. The Marines were left alone with their supply lines cut off, 70 miles from the sea. There was only one choice for the Marines, to fight their way back down the supply lines to the sea. This is when MajGen Smith said, "We are not retreating, we're just attacking in a different direction". It was a testament of the Marines' fighting spirit.

As the 1st Marine Division began their controlled withdrawal from the Chosin Reservoir, the weather became just as fierce as the enemy did. As the Marines withdrew from the Chosin Reservoir, they took all of their men and equipment, evacuated all the dead and wounded, and left nothing to aid the Chinese divisions.

The 1st Marine Division was the only unit to come out of the Chosin Reservoir intact. Colonel 'Chesty' Puller was awarded his fifth Navy Cross for his leadership and bravery. Chesty Puller is the only Marine who has been awarded five Navy Crosses.

The war quickly came to a stalemate. For several months, Marines conducted limited operations. The overall situation changed little in the months to come as the Chinese offered to negotiate. A truce was signed on 27 July 1953.

Three Developments from the Korean War

- Use of lightweight body armor in the latter stages of the war. This is the origin of the flak jackets used in the fleet today.
- Introduction of the thermal boots. Because of the intense cold, frostbite injuries, and the problem of fighting in an arctic environment, all Marine replacements for Korea were sent to Bridgeport, California for extensive cold weather training prior to departure for Korea.
- Introduction of the helicopter into a combat environment. The Marine Corps pioneered the doctrine of Vertical Envelopment; also known as the helicopter assault.

The Vietnam War

The Vietnam War was part of a wider containment strategy, with the stated aim of stopping the spread of communism. The U.S. aim in Vietnam was to secure an independent and non-Communist South Vietnam.

Da Nang

As air strikes went deep into North Vietnam, the Americans established an airbase in the northern part South Vietnam at Da Nang. The U.S. suspected the Viet Cong would attack this air base, so the Marine Corps was called in to protect it. On March 8, 1965, the 9th Marine Expeditionary Brigade landed at Da Nang. They were the first ground combat forces to deploy to South Vietnam and by the end of 1965, more than 38,000 Marines would be there.

Operation STARLITE

In late July of 1965, intelligence reports indicated that the 1st Viet Cong Regiment, some 2,000 strong, was preparing to attack Chu Lai. Acting on this information, the Marines initiated the first regimental-sized operation since the Korean War. On 18 August 1965, a classic ‘hammer and anvil’ operation was launched. It was named Operation STARLITE.

2d Battalion, 4th Marines conducted a helicopter-borne assault from the west and 3d Battalion, 3d Marines conducted an amphibious assault from the southeast. Both battalions converged on the 1st Viet Cong Regiment, and with reinforcement from 3d Battalion, 7th Marines, they dealt the Viet Cong its first major defeat of the war, denying them sanctuary along the coast, and testing the combined helicopter and amphibious doctrine that the Marines had developed and studied for more than a decade. Two Medals of Honor, 6 Navy Crosses, and 14 Silver Stars were among the honors awarded the Leathernecks of Operation STARLITE.

Khe Sanh

The Quang Tri province in which Khe Sanh was located bordered the demilitarized zone (DMZ) and was one of the key objectives of the North Vietnamese Army (NVA) in 1967. U.S. defense of the DMZ was centered on the Khe Sanh Combat Base and the NVA had to take it in order to control the province.

Northwest of Khe Sanh was a group of hills that overlooked the base and was used by the NVA to launch mortar and rocket attacks. The 2d and 3d Battalions of the 3d Marine Regiment attacked the NVA, pushed them off the high ground, and occupied the hills. The significance of the ‘Hill Fights’ was that the Marines denied the NVA control of Quang Tri Province and at the same time enhanced the security of Khe Sanh. However, the NVA would attack the base again on a large scale during the Tet Offensive.

Tet Offensive

On January 31, 1968, 70,000 NVA and Viet Cong forces launched a large-scale operation that coincided with the Vietnamese Lunar New Year called Tet. The Tet Offensive was a coordinated series of attacks on more than 100 cities and towns in South Vietnam. The North Vietnamese believed that the attacks would foment discontent and rebellion among the South Vietnamese and that the offensive would break up the alliance between South Vietnam and the United States.

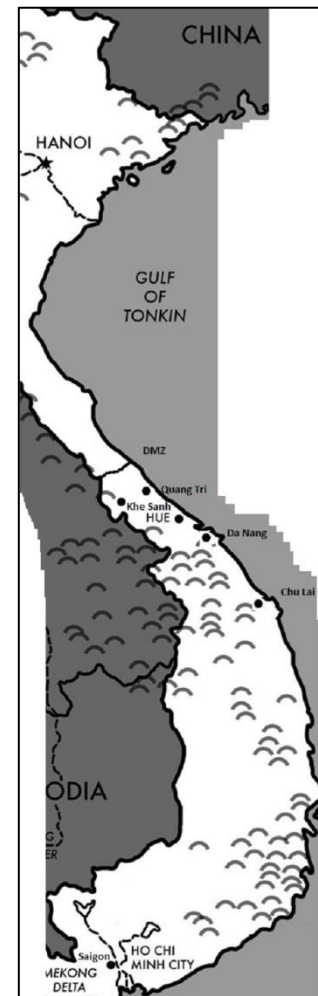
The NVA managed to infiltrate and gain control of Hue city. The Marines fought house-to-house and street-to-street to retake the city; it was the first time since Korea that the Marines fought in this manner. After 24 days of fighting, the NVA forces were defeated and Hue was secured.

At Khe Sanh Combat Base, the Marines came under siege by three NVA divisions for 77 days. Despite being cut off by land, the Marines were supported by massive aerial firepower and resupply and they successfully held Khe Sanh.

Tet related battles continued for four more months, but when it was over, the Communists had suffered a stunning military defeat with 80,000 casualties. Despite the North Vietnamese defeat, the Tet Offensive provoked a political crisis in the U.S. that marked a turning point in the Vietnam War.

Global War on Terrorism (GWOT) and Operation ENDURING FREEDOM (OEF)

Following the terrorist attacks of September 11, 2001, the United States government began the ‘Global War on Terrorism.’



In response to the Taliban government's refusal to respond to known terrorist activities within their borders, Marines were deployed to Afghanistan as part of Operation ENDURING FREEDOM (OEF). The entire American military focused its might on defeating Al-Qaeda. Combat operations began in October, and in November, Marines of the 26th Marine Expeditionary Unit (MEU) were the first major ground forces in Afghanistan. In mid-December 2001, these Marines captured Kandahar Airport and converted it into one of the first coalition command centers in the country.

After the initial invasion, much progress had been made. The threat of violence had been greatly reduced, hundreds of schools had been constructed, and millions in aid had been distributed. In October of 2004, Afghanistan held its first direct elections, and one year later, they conducted the first Afghan parliamentary election.

The fight in Afghanistan was largely a counter insurgency fight also known as COIN. The premise behind COIN operations is to defeat the enemy by winning over the local populace. As the population discovers how the insurgency is negatively affecting their ability to thrive, they begin to aid the coalition forces in their location of and destruction of the enemy insurgents. As the population begins to thrive, the insurgency begins to die. In order to effectively fight the insurgency and win the hearts and minds of the population careful consideration of local community culture and needs is necessary. Because the cultural consideration of women in Afghanistan is so poignant one tactic that the Marine Corps used was the integration of Female Engagement Teams (FETs) alongside infantry units in order to build trust and confidence with Afghan women. What they learned as some of the first cultural outsiders to talk to remote Afghan women helped the Marine Corps define its aid programs and build trust with villagers. The FET program and others like it helped make COIN operations successful.

At the start of 2010, the II Marine Expeditionary Brigade (MEB) led Operation MOSHTARAK. The largest military operation since the beginning of the war in Afghanistan, Operation MOSHTARAK drove the Taliban from cities across southern Afghanistan, including the Taliban stronghold of Marjah, and effectively ended their 2-year rule of the region.

The war in Afghanistan officially became the longest war in U.S. history in June of 2010. Marines continue to fight the Taliban and train Afghan soldiers to eventually shoulder the burden of Afghanistan's national security. After 13 years, on December 28, 2014, President Barack Obama announced the end of Operation ENDURING FREEDOM in Afghanistan. Continued operations in Afghanistan by the United States' military forces, both non-combat and combat, now occur under the name Operation Freedom's Sentinel.

Operation IRAQI FREEDOM (OIF)

Initial Operations

In 2003, Iraq became a second front in the war on terrorism with Operation IRAQI FREEDOM (OIF), with Marine responsibilities ranging from combat and security operations to humanitarian efforts. One of the key objectives of OIF during 2003 was the capture of Iraq's capital, Baghdad. A convoy of 30,000 Marines advanced 500 miles from the border of Kuwait in just 10 days. On April 9, 2003, Marines secured the center of Baghdad. That same day, Coalition forces declared an end to Saddam Hussein's rule.

Al Anbar Province Overview

During the first four years of OIF, the Anbar Province was the deadliest province for American service members, claiming approximately one-third of American fatalities. In a country where most were associated with the Shi'ia branch of Islam, the Anbar Province was the Sunni stronghold that had long provided Saddam Hussein with the support he needed to remain in power. Early in OIF, it provided an important base for Al Qaeda and insurgent operations. Part of its significance came from the fact that the Western Euphrates River Valley served as an important infiltration route for foreign fighters headed to Iraq's heartland. The New York Times compared this region to the Vietnam War's Ho Chi Minh Trail, as foreign fighters and insurgents used the river valley to move in relative safety from the Syrian border to cities like Baghdad, Ramadi, and Fallujah.

Fallujah, Al Anbar Province

Fallujah was one of the least damaged areas of Iraq immediately after the 2003 invasion by the U.S.-led Coalition. Iraqi Army units stationed in the area abandoned their positions and disappeared into the local population, leaving unsecured military equipment behind. Fallujah was also the site of a Ba'athist resort facility called 'Dreamland,' located a few kilometers outside the city proper. The damage the city had avoided during the initial invasion was negated by damage from looters, who took advantage of the collapse of Saddam Hussein's regime. The looters targeted former government sites, the Dreamland compound, and the nearby military bases. Aggravating this situation was the proximity of Fallujah to the infamous Abu Ghraib prison, from which Saddam Hussein, in one of his last acts, had released all prisoners.

In early March 2004, the Army's 82nd Airborne Division transferred authority of Al Anbar province to I Marine Expeditionary Force (MEF). The Marines soon had their hands full when insurgents in Fallujah ambushed a convoy later that month, capturing four American contractors employed by Blackwater USA. The captives were beaten, set on fire, and then hung from a bridge over the Euphrates River. In response, on April 4, 2004, the Marines conducted Operation VIGILANT RESOLVE in which they surrounded the city and tried to find the responsible insurgents, backing off at the request of the provisional government. A cease-fire was declared in May, and the Marines stayed out of the city for the next six months.

The break in fighting gave insurgents in Fallujah a chance to build up. Coalition patrols that came close to the perimeter of the city were met with enemy fire. In early November, the Iraq interim government declared a state of emergency and Iyad Allawi, the prime minister, agreed that something needed to be done to 'clean Fallujah from the terrorists.' **Operation PHANTOM FURY** began November 8, 2004, with American, Iraqi, and British forces entering the city. Regimental Combat Team 1 and Regimental Combat Team 7, the Marine units involved in the assault, entered from the north, and proceeded to fight through the streets. By November 16 most of the major resistance was suppressed, but Marines continued to find isolated cells until December 23.

Fallujah is the greatest urban battle Marines have fought since the 1968 Battle for Hue City. It served as a decisive strike against the Iraqi insurgency, but also showcased the Marine core values of honor, courage, and commitment. At least eight Navy Crosses were awarded for the battle, more than any other single action in Iraq or Afghanistan.

The Marines

The following are the accounts of three Marines in OIF and OEF.

- In 2004, during a reconnaissance mission in the town of Karabilah, Iraq, Corporal Jason Dunham and his men heard gunfire erupt nearby. Cpl Dunham ordered his squad toward the fighting, receiving enemy fire as they moved. At the scene, they discovered seven vehicles scrambling to depart. As they halted the vehicles to search for weapons, an insurgent leapt out. He attacked Dunham and then released a grenade. Without hesitation, the corporal tore off his Kevlar helmet and used it to cover the grenade. He bore the full force of the fatal explosion, saving the lives of at least two other Marines in his squad. Dunham's brave actions distinguished him as the first Marine to be awarded the Medal of Honor since the Vietnam War, and USS Jason Dunham (DDG-109) was named in his honor.
- On 8 September 2009, Corporal Dakota Meyer maintained security at a patrol rally point while other members of his team moved on foot with two platoons of Afghan National Army and Border Police into the village of Ganjgal for a pre-dawn meeting with village elders. Moving into the village, the patrol was ambushed by more than 50 enemy fighters firing rocket propelled grenades, mortars, and machine guns from houses and fortified positions on the slopes above. Corporal Meyer took the exposed gunner's position in a gun-truck as they drove down the steeply terraced terrain in a daring attempt to disrupt the enemy attack and locate the trapped U.S. team. Disregarding intense enemy fire now concentrated on their lone vehicle, Corporal Meyer killed a number of enemy fighters with the mounted machine guns and his rifle, some at near point blank range, as he and his driver made three solo trips into the ambush area. During the first two trips,

he and his driver evacuated two dozen Afghan soldiers, many of whom were wounded. When one machine gun became inoperable, he directed a return to the rally point to switch to another gun-truck for a third trip into the ambush area where his accurate fire directly supported the remaining U.S. personnel and Afghan soldiers fighting their way out of the ambush. Despite a shrapnel wound to his arm, Corporal Meyer made two more trips into the ambush area in a third gun-truck accompanied by four other Afghan vehicles to recover more wounded Afghan soldiers and search for the missing U.S. team members. Still under heavy enemy fire, he dismounted the vehicle on the fifth trip and moved on foot to locate and recover the bodies of his team members. For his daring initiative and bold fighting spirit throughout the 6-hour battle, Corporal Meyer was awarded the Medal of Honor.

- On 21 November 2010, Lance Corporal Kyle Carpenter and a fellow Marine were manning a rooftop security position on the perimeter of Patrol Base Dakota in a small village in the Marjah District of Afghanistan when enemy forces initiated a daylight attack using hand grenades, one of which landed inside their sandbagged position. Without hesitation and with complete disregard for his own safety, Lance Corporal Carpenter moved toward the grenade in an attempt to shield his fellow Marine from the deadly blast. When the grenade detonated, his body absorbed the brunt of the blast, severely wounding him, but saving the life of his fellow Marine. For his undaunted courage, bold fighting spirit, and unwavering devotion to duty in the face of almost certain death, Lance Corporal Carpenter was awarded the Medal of Honor.

Sources:

1. MILLET, R. ALLAN SEMPER FIDELIS, The History of the United States Marine Corps
2. <http://www.marines.com/history-heritage>
3. <http://www.cmohs.org>
4. Operation STARLITE: The First Battle of the Vietnam War by Otto J. Lehrack from Leatherneck Magazine (2005)
5. Fallujah – Looking Back at the Fury by Lance Corporal Benjamin Harris from Marines Magazine (June 29, 2010)
6. <https://www.marines.mil/moh/Citation/>

WEEK 12: USMC WEAPONS AND PLATFORMS

I. Rifle Platoon - Individual Weapons

M16A4 Service Rifle



Primary Function: Designed for three-round burst or single-shot semi-automatic firing, the M16 is lightweight, yet still pinpoint accurate rifle, capable of hitting targets with precision at a maximum effective range of 550 meters.

Caliber: 5.56x45mm NATO

Weight: 8.79 lbs. (with 30 round magazine)

Effective Range: Area TGT – 800 meters, Point TGT – 550 meters

M4 Carbine



Primary Function: Infantry Weapon—less weight and shorter barrel than the M16 making it more appropriate weapon for shorter distances and confined spaces.

Caliber: 5.56x45mm NATO

Weight: 7.5 lbs (with 30 round magazine)

Effective Range: Area TGT – 600 meters, Point TGT – 500 meters

M203 40mm Grenade Launcher



Primary Function: The M203 is a single-shot, 40mm grenade launcher that attaches to the M16A4 assault rifle and the M4 Carbine. When targets cannot be accessed by direct fire, Marines use the M203 Grenade Launcher to engage enemies. Typically, this weapon is carried by either the Fire Team's Grenadier or Fire Team Leader.

Caliber: 40x46mm NATO

Effective Range: Area TGT - 350m, Point TGT - 150 meters

M27 Infantry Automatic Rifle (IAR)



Primary Function: The M27 is the automatic weapon that delivers accurate suppressive fires in support of the Fire Team. It is a lightweight, magazine-fed 5.56mm weapon. The M27 is intended to enhance an automatic rifleman's maneuverability and displacement speed.

Caliber: 5.56mmx45mm NATO

Weight: 7.9 lb (3.6 kg) empty

Effective Range: Area TGT 800m, Point TGT 550m

II. Rifle Company/Battalion - Crew Served Weapons

M249 Light Machine Gun



Purpose: The M249 light machinegun provides Marines with a lighter smaller caliber machinegun that can be used in conjunction with the M240B medium machinegun or depending on the mission as a smaller lighter machinegun that still provides a continuous and high rate of fire to engage long-range targets.

Ammunition: 5.56X45mm NATO-standard ammunition

Weight: 17 pounds with bipod and tools

Length: 41 inches

Maximum effective range: 1000 meters

Maximum range: 3600 meters

Rate of fire: 85 rounds/minute sustained, 725-850 rounds/minute cyclic

Capacity: Ammunition comes in 100- or 200-round belts. The M249 can also accept the standard 30-round M16 magazine

M240B Medium Machine Gun



Purpose: The M240 Machinegun provides Marines with a continuous and high rate of fire to engage long-range targets. It is a heavier automatic weapon than the M249 but provides a faster rate of fire and a longer effective range. Typically, the tripod is employed when the weapon is to

be used for defensive situations, or when precise fire is needed in support of maneuver units. The bipod is always attached and is suitable for use while patrolling.

Ammunition: 7.62mm

Weight with bipod: 24 pounds

Maximum effective range with tripod: 1,800 meters

Maximum range: 3,725 meters

Can be mounted on tanks and light armored vehicles

MK-153 Shoulder Launched Multipurpose Assault Weapon (SMAW)



Purpose: Portable anti-armor rocket launcher. Its mission is to destroy bunkers and other fortifications during assault operations as well as other designated targets with the dual mode rocket and to destroy main battle tanks with the HEAA rockets.

Ammunition: 83mm

Weight:

To Carry: 16.6 pounds (7.54 kg)

Ready-to-Fire (HEDP): 29.5 pounds (13.39 kg)

Ready-to-Fire (HEAA): 30.5 pounds (13.85 kg)

Maximum effective range:

1 x 2 Meter Target: 250 meters

Tank-Sized Target: 500 meters

MK19 Mod 3 Automatic Grenade Launcher



Purpose: At the smallest unit level, the lightest weapons often carry the day, as maneuverability is one of the primary assets of a Marine fire team. When high-volume, suppressive fire support is required, there are few weapon systems as effective as the MK19 Mod 3 Automatic Grenade Launcher. Capable of destroying most light-armored vehicles, protecting supply convoys, and even defending against hovering rotary aircraft, the MK19 provides Marine infantry battalions with the means to deliver massive direct fire or indirect fire from hidden positions. The MK19 rapidly fires explosive 40mm grenades, making it an ideal weapon against armored, mechanized, and enemy infantry forces.

Ammunition: High-explosive, dual-purpose M430 40x53mm grenades

Weight: 72.5 pounds

Weight with tripod: 120 pounds

Maximum effective range: 1,500 yards

Nearest safe distance to launch: 75 meters in combat/310 meters in training

.50 Caliber Machine Gun



Purpose: The Browning .50 Cal Machine gun provides Marines with automatic weapon suppression fire for offensive and defensive purposes. This weapon can be used effectively against enemy personnel, light armored vehicles, and slow, low-flying aircraft.

Ammunition: .50 caliber rounds

Weight: 128 pounds (84-pound gun; 44-pound tripod)

Length: 65.13 inches

Maximum effective range: 1,829 meters with tripod mount

FGM-148 JAVELIN



Purpose: The greatest assets to Marines fighting on the ground are maneuverability and firepower, and perhaps no weaponry provides a better combination of both than the FGM-148 Javelin Anti-tank Missile. In fact, after firing the Javelin, Marines can begin moving to a different area before the missile even reaches its target, preventing the enemy from discovering their position.

Features: The FGM-148 Javelin is a fire-and-forget missile with lock-on before launch and automatic self-guidance. The system takes a top-attack flight profile against armored vehicles, but can also take a direct-attack mode for use against buildings and targets under obstructions. The missile also has the ability to engage helicopters in the direct attack mode. It can reach a peak altitude of 500 feet in top-attack mode and 190 feet in direct mode.

BGM-71 TOW Missile



Purpose: Tube launched, optically tracked wire-guided anti-tank missile capable of penetrating armor 30-inches thick at more than 3,000 meters.

Features: The TOW is one of the most widely used anti-tank guided missiles and can be found in a wide variety of manually carried and vehicle mounted forms, as well as on helicopters.

60mm Mortar



81mm Mortar



Purpose: Marines are known for their exceptional ability to work cohesively as a unit, and nowhere is this more evident than when mortar teams are providing effective, indirect fire on a target. With 60mm and 81mm mortars, Marines work together to provide constant and accurate high-angle suppressive fire on targets they may not be able to even see. Marine mortar teams locate targets by converting chart data to firing data, delivering mortar fire in timely response to the ground units they support.

Features: Serving as lightweight, portable artillery, mortars are fired by dropping each round into the muzzle. The round slides down the base of the barrel where it strikes the firing pin located inside the base cap. The flame from the exploding cartridge ignites the propelling charge, producing the gas pressure that drives the round up and out of the barrel, high into the air. After it has reached its apogee, the mortar round falls to the target.

Types of Mortars: 60mm mortars are organic to the rifle company and have a range of 3,500 meters. 81mm mortars are an asset of the infantry battalion and have a range of 5,700 meters.

Both mortars can fire:

- High Explosive (HE) shells (several varieties) – Effective against lightly armored targets, personnel and fortifications
- Smoke rounds – Effective as a screening or signaling round
- Illumination rounds – Effective in night missions requiring illumination of an enemy target

III. Additional Weapons and Platforms

M777 Howitzer



Purpose: Marines on the ground rely on the Marines by their side, but they also depend on Marine fire support from long range. The M777 Lightweight 155mm howitzer provides timely, accurate, and continuous firepower in support of Marine Infantry forces. In 2005, the Marine Corps began fielding the M777, a much smaller, lighter (9,000 pounds lighter) and more maneuverable towed cannon weapon than its predecessor, resulting in improved transportability and mobility without impacting range or accuracy. 7-ton trucks are used to move the M777s, enabling Marine artillery units to move faster between positions. A must for equipment in an expeditionary force, the howitzer is also highly deployable, able to be lifted externally by both the MV-22 Osprey and CH-53E Super Stallion.

High Mobility Multipurpose Wheeled Vehicle (HMMWV)



Purpose: Since the mid-1980s, there has not been a Marine vehicle more utilized for a wider variety of missions than the Marine HMMWV. Operating on every area of the battlefield, Marine HMMWVs are truly multipurpose vehicles, serving such functions as command and control, troop transport, shelter carrier, towed weapons mover, armament carrier, TOW missile system carrier and even ambulance. For Marine units requiring specific vehicle configurations, Marine HMMWVs have several kits that can be easily installed to meet the requirements of each mission.

Features: 6.2 litre, V8 diesel engine; 3 speed, automatic transmission; Four-wheel drive, independent rear suspension; Can be mounted with the M2 .50 cal, M240 or M249 machinegun; Forging capable with deep-water fording kit installed; Armored plating and bullet-resistant glass can be mounted.

M142 High Mobility Artillery Rocket System (HIMARS)



Purpose: Transportable by the KC-130 Super Hercules, the HIMARS is the Marine Corps' most advanced artillery system, accurately engaging targets over great distances under all weather conditions. With high volumes of lethal rocket and missile fire, the HIMARS delivers precise strikes from over 40 miles away. A weapon system mounted on a truck, the HIMARS provides fire support for Marines fighting in every corner of the battlefield.

Features: From 40 miles out, HIMARS munitions are accurate within 26 feet; Six tubes hold 200-pound rockets; Crew of three Marines; 24,000 pounds; Fires M270 artillery rockets and anti-aircraft missiles; Ready to fire within 15 minutes of being unloaded; Consists of a launcher, carrier and a Fire Control System; Able to launch rockets and move to a different location before the enemy can locate its firing position.

Medium Tactical Vehicle Replacement (MTVR)



Purpose: With a highly survivable armor package, off-road mission profile and large cargo and crew compartment, the MTVR brings Marines and supplies to the fight fast, even in the most austere environments. The MTVR Armor System (MAS) provides complete 360-degree protection, including overhead and underbody armor that can withstand small-arms fire, Improvised Explosive Devices (IEDs) and mine blasts. In addition to transporting Marines and hauling fuel, water, food and supplies on paved roads, dirt roads or makeshift roads, the MTVR is also the primary mover of the M777 Lightweight 155mm howitzer.

Features: Can transport up to 15 tons of payload at a maximum speed of 65 miles per hour, Cargo compartment is 26 feet long, 8 feet wide and 12 feet high, Can ford five feet of water, all MTVR model variants can carry three Marines in the cab, Independent suspension provides excellent off-road maneuverability, Features a central tire inflation system

Light Armored Vehicle (LAV-25)



Primary function: Marines are known for being adaptable, versatile, and reliable. With numerous variants and a proven track record on the battlefield, the LAV-25 has also earned this reputation. Marine Light Armored Vehicles combine speed, maneuverability, and firepower to perform a variety of functions, including security, command and control, reconnaissance and assault. Able to operate on land, in water, carry communications equipment, and provide a weapons platform, the LAV is not just part of a combined arms force—it is one.

Features: Can drive in 4- or 8-wheel drive; Can reach speeds of 62.5 mph on land; Powerful diesel fuel engine; 360-degree traversing turret; Armed with 25mm cannon and two M240 machine guns; Operated by a crew of three Marines; Includes two 4-barrel smoke grenade launchers

Mine-Resistant Ambush-Protected (MRAP) Vehicle/MRAP All-Terrain Vehicle (MATV)



Purpose: With V-shaped hulls, raised chassis and armored plating, the Mine Resistant Ambush Protected Vehicle (MRAP) and MATV have proven to be the single most effective counter to Improvised Explosive Devices (IEDs). Blast-resistant underbodies and layers of thick, armored glass offer unparalleled protection, while all-terrain suspension and run flat combat tires ensure Marines can operate in complex and highly restricted rural, mountainous, and urban terrains.

M1A1 Abrams Tank



Purpose: Marine equipment is not typically described as being ‘heavy,’ but exceptions can be made when ‘heavily armored’ and ‘heavily armed’ are also part of the description. At close to 70 tons, the M1A1 Abrams is among the heaviest tanks in the world, but it more than makes up for its heft with tremendous firepower and surprising maneuverability. The principal battle tank of the Marine Corps, the M1A1 provides armor-protected firepower in support of Marine ground forces.

Features: Bulk of firepower comes from its 120mm smoothbore main gun; Mounted guns include a M2 .50 cal machine gun and two M240 machine guns; 2 six-barreled smoke grenade launchers; Powered by a 1,500 horsepower gas turbine power plant system; Speeds top out at approximately 41 mph; Ammunition is stored in a blowout compartment for crew safety; Operated by a crew of four Marines; Six periscopes provide 360-degree view.

Assault Amphibian Vehicle (AAV)-7



Purpose: From ship to shore to objective, no equipment better defines the distinction and purpose of Marine Corps expeditionary capabilities than the AAV-7 Amphibious Assault Vehicle. Designed to assault any shoreline from the well decks of Navy assault ships, AAVs are highly mobile, tracked armored amphibious vehicles that transport Marines and cargo to and through hostile territory.

Features: Typically, the first vehicles to land during beach raids and assaults; All-welded aluminum hull protects crew from small arms fire; Eight smoke grenade launchers; Turret armed with .50 cal machinegun and 40mm grenade launcher; Can be outfitted with Mine Clearance Line Charges; Operates at speeds of 45mph on land; 8-10 knots in water; Can carry 21 combat-loaded Marines and 3 crewmembers; Can transport 10,000 pounds of cargo; Can fire on land and water; Enough fuel to drive 300 miles inland.

AH-1Z Super Cobra/Viper



Purpose: No aircraft defines the role of close air support better than the Marine AH-1 Super Cobra/Viper. Whether it is providing cover for advancing ground forces or escorting assault support helicopters en route to a landing zone, the AH-1Z is called on when Marines need firepower from the air.

Features: Able to project multiple missiles, rockets and 20mm cannon fire on targets otherwise inaccessible, the AH-1 has played a major role in every U.S. military conflict since Vietnam. Today it continues to provide the precision, armament, and tactical situational awareness to fight in close proximity with our Marines below. Equipped with enhanced navigation displays that distinguish friends from enemies, data transfer systems that deliver real-time aerial reconnaissance to Marines on the ground and composite rotor blades and tail booms that can withstand 23mm cannon fire, the Marine AH-1 is the perfect example of why Marine Aviation has been called ‘flying artillery.’

UH-1Y Huey/Venom



Purpose: No single aircraft provides a better blend of all six Marine Aviation functions than the Marine UH-1. A case study in Offensive Air Support, Assault Support, Command and Control, and Aerial Reconnaissance, the Marine utility helicopter of choice is truly a microcosm of Marine Aviation. With low-flying AH-1s aimed in on the hostile street ahead and hovering UH-1s covering adjacent rooftops, combat Marines can engage under the watchful eye of close air support.

Features: When outfitted with door-mounted .50 caliber and 7.62 machine guns and teamed alongside AH-1s, Marine UH-1s arm MAGTF commanders with unprecedented response, situational awareness and a 360-degree field of fire support for advancing ground forces. The four-bladed UH-1Y Venom features cockpit avionics, a satellite data link network, and 50% increase in range and speed over the UH-1N it replaced in 2014. Now, with a 125% boost in payload and the power to keep up with the larger helicopters they escort, utility helicopters will continue to support Marines for decades to come.

CH-53E Sea Stallion/Super Stallion Helicopter



Purpose: The heavy-lift helicopter of the Marine Corps can carry a 26,000-pound Light Armored Vehicle, 16 tons of cargo 50 miles and back, or enough combat-loaded Marines to lead an assault or humanitarian operation; but perhaps what's most amazing about the largest military helicopter in the U.S. is what it achieves despite its size. Though powerful enough to lift every aircraft in the Marine inventory except the KC-130, the CH-53E Super Stallion is compact enough to deploy on amphibious assault ships, and has the armament, speed, and agility to qualify as much more than a heavy lifter.

Features: Armed with window-mounted .50-caliber machine guns, chaff and flare dispensers for anti-air defense, an in-flight refueling probe for limitless range and a forward-looking infrared (FLIR) imager for night and all-weather navigation, the Marine CH-53E is commonly called on for assault transport of Marine ground forces. Though long-range insertion missions are standard protocol for this Marine workhorse, it is the rapid resupply of Marines at the forefront that makes the Super Stallion one of the most used aircraft in Marine Aviation.

MV-22 Osprey Tiltrotor



Purpose: With the speed and range of a turboprop, the maneuverability of a helicopter and the ability to carry 24 Marine combat troops twice as fast and five times farther than previous helicopters, the Osprey greatly enhances the advantages Marines have over their enemies. The Osprey's impact was felt immediately upon its arrival in Iraq. Commenting on its advanced expeditionary capabilities and staggering operational reach, a top Marine commander went as far as to say it turned his battle space "from the size of Texas into the size of Rhode Island".

Features: Designed for expeditionary assault, raid operations, cargo lift and special warfare; Built with composite materials, fly-by-wire flight controls, digital cockpits; Vertical takeoff and landing, and short takeoff and landing capabilities; In-flight refueling.

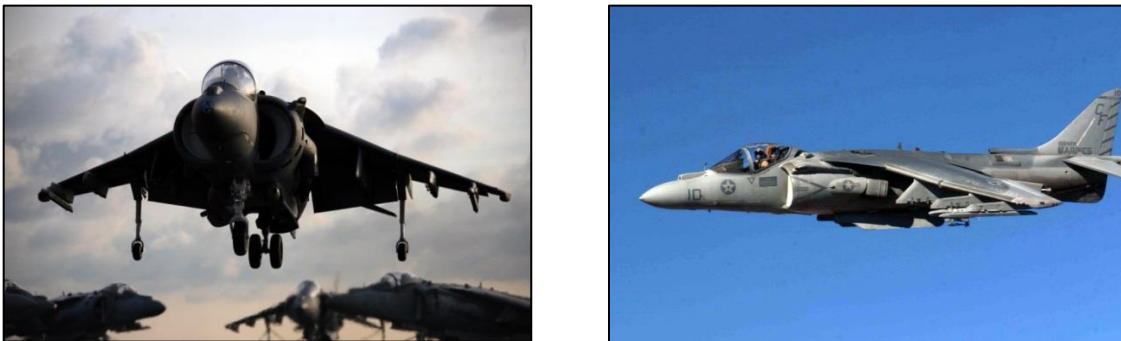
F/A-18 Hornet



Purpose: A basic tenet of all Marine aircraft is the requirement for usability in multiple missions, and the Marine F/A-18 upholds this doctrine. Able to be quickly configured for fighter or attack missions, or a combination of both, the twin-engine, all-weather, day or night Marine jet can be used for fighter escort, enemy air defense suppression, reconnaissance, air control and the calling card of Marine Aviation: close air support.

Features: With external and internal weapon stations able to deliver Sparrow, AMRAAM and Sidewinder air-to-air missiles, air-to-ground munitions in the form of Harpoon and Maverick missiles, general purpose, cluster and laser-guided bombs, and a 6-barrel 20mm gun in the nose section for extremely close encounters, few aircraft in the world are counted on as heavily as the F/A-18 Hornet.

AV-8B Harrier II



Purpose: Representing, arguably, the greatest breakthroughs in aircraft technology, the Harrier was the first VSTOL-capable (vertical/short takeoff and landing) jet in the Marine inventory, giving MAGTF commanders new flexibility on the battlefield. With the ability to attack anywhere, the Harrier forces the enemy to defend everywhere, exposing vulnerabilities the enemy must divert resources to protect.

Features: 22,000 pounds of thrust enable the Harrier II to hover like a helicopter, and then blast forward like a jet at near-supersonic speeds. Like every aircraft in the Marine fleet, this aircraft is used for multiple missions, which include attacking and destroying surface and air targets, escorting helicopters, engaging in air-to-air defense, providing reconnaissance and applying offensive and defensive support with its arsenal of missiles, bombs and an onboard 25mm cannon. Offering the versatility to conduct almost any mission, the Harrier II provides the ideal blend of firepower and mobility to effectively counter enemies engaged by our ground forces.

EA-6B Prowler



Purpose: It is the ability of the EA-6B Prowler to neutralize enemy air defenses that enables Marines to gain the air superiority needed for mission success. Enemy air defenses rely on early warning radar to indicate an impending air strike. However, to acquire a signal, they have to send a signal, and it is the electronic warfare equipment arming Marine Prowlers that illuminates these electronic footprints. The Marine Prowler's ability to detect, sort, classify, jam, and destroy air defenses leaves the enemy with two options: leave the radar on, or turn it off. Either way, their defenses are reduced to expensive but useless metal.

Features: Information is not allowed to return to an enemy's radar because EA-6Bs intercept it first, and the methods by which these signals can be exploited are numerous. Marine Prowlers are equipped with five tactical jamming pods, electronic surveillance systems, radar-seeking HARM missiles, non-kinetic fire systems that leave electronic equipment disabled but intact, and countermeasures that mask the approach of our nearby ground-attack aircraft.

The EA-6B is reaching the end of its service life and it will likely be out of service by the time the class of 2022 selects their fleet platform after completing flight school.

F-35B Lightning II



The **F-35B Lightning II** is the replacement for the aging F/A-18A/C. Variants of the F-35 will be used by the Air Force (A-Variant), Marine Corps (B-Variant with V/STOL capability), and Navy (C-Variant with carrier capability), as well as a number of international partners. The Marine Corps is the first service to stand-up an operational squadron.

KC-130J Hercules



Purpose: To achieve the global reach and rapid deployability our nation requires, Marine Aviation must be able to deliver Marines, fuel, and cargo where needed. Answering the call is the Marine KC-130 Hercules. A tactical tanker/transport aircraft that stretches more than 90 feet in length and 130 feet wing to wing, the KC-130 Hercules can resupply austere battle zones, provide a Direct Air Support Center, insert ground troops, and perform medevac operations. It is during the mission of tactical aerial refueling, however, that the Marine KC-130 has earned the reputation for being best in the world.

Features: Able to carry more than 12,000 gallons of fuel and simultaneously refuel two aircraft at 300 gallons a minute, the Hercules has been called the workhorse of Marine Aviation. Recently, the first armed version of the Marine KC-130 was employed—named the Harvest HAWK (Hercules Airborne Weapons Kit). With the ability to deliver air-to-ground Hellfire missiles, precision-guided bombs, and 30mm auto-cannon rounds, Marines in the air now have another way to support Marines on the ground.

RQ-7B Shadow



Purpose: The recent development and fielding of Unmanned Aircraft Systems (UAS) has delivered even more capabilities to our Marines. One such aircraft, the RQ-7B Shadow, is deployed in squadrons as an asset of the Marine Expeditionary Force or Marine Expeditionary Brigade. Designed to provide reconnaissance, relay communications and assist in target acquisition, the RQ-7B Shadow keeps an eye above the battlefield for extended periods of time, constantly relaying information between Marine air and ground controls. The Shadow enhances the capabilities of Marine commanders across the spectrum of military operations and was first deployed during Operation Iraqi Freedom in September 2007.

Features: Remotely piloted; Conducts reconnaissance, surveillance, target acquisition, indirect fires adjustment, battlefield damage assessment and rear area security support; Equipped with electro-optical and infrared (EO/IR) sensors, communications relay payloads and laser designators; Video and laser targeting is used to locate enemy positions; Launched from a trailer-mounted pneumatic catapult; Fixed, 3-wheel landing gear; Total endurance time up to 6 hours; max speed 135 mph; gross weight 375 lbs; range 68 miles.

Sources:

1. <http://www.marines.com/operating-forces/equipment>

WEEK 13: NAVAL SPECIAL WARFARE



I. Ethos

In times of war or uncertainty, there is a special breed of warrior ready to answer our Nation's call. A common man with uncommon desire to succeed. Forged by adversity, he stands alongside America's finest special operations forces to serve his country, the American people, and protect their way of life. I am that man.

My Trident is a symbol of honor and heritage. Bestowed upon me by the heroes that have gone before, it embodies the trust of those I have sworn to protect. By wearing the Trident, I accept the responsibility of my chosen profession and way of life. It is a privilege that I must earn every day. My loyalty to Country and Team is beyond reproach. I humbly serve as a guardian to my fellow Americans always ready to defend those who are unable to defend themselves. I do not advertise the nature of my work, nor seek recognition for my actions. I voluntarily accept the inherent hazards of my profession, placing the welfare and security of others before my own. I serve with honor on and off the battlefield. The ability to control my emotions and my actions, regardless of circumstance, sets me apart from other men. Uncompromising integrity is my standard. My character and honor are steadfast. My word is my bond.

We expect to lead and be led. In the absence of orders, I will take charge, lead my teammates, and accomplish the mission. I lead by example in all situations. I will never quit. I persevere and thrive on adversity. My Nation expects me to be physically harder and mentally stronger than my enemies. If knocked down, I will get back up, every time. I will draw on every remaining ounce of strength to protect my teammates and to accomplish our mission. I am never out of the fight.

We demand discipline. We expect innovation. The lives of my teammates and the success of our mission depend on me - my technical skill, tactical proficiency, and attention to detail. My training is never complete. We train for war and fight to win. I stand ready to bring the full spectrum of combat power to bear in order to achieve my mission and the goals established by my country. The execution of my duties will be swift and violent when required yet guided by the very principles that I serve to defend. Brave men have fought and died building the proud tradition and feared reputation that I am bound to uphold. In the worst of conditions, the legacy of my teammates steadies my resolve and silently guides my every deed. I will not fail.

II. History

Today's naval special warfare personnel can trace their origins back to the amphibious scouts and raiders, Naval Combat Demolition Units, Office of Strategic Services Maritime Unit, and Underwater Demolition Teams of World War II. While none of those early organizations have survived to the present, their pioneering efforts are mirrored in the missions and professionalism of NSW today.

Naval Combat Demolition Units (NCDUs)

In June 1943, Lieutenant Commander Draper L. Kauffman, 'the father of naval combat demolition' established the Naval Combat Demolition Unit (NCDU) Training School in Fort Peirce, FL to train personnel specifically for European operations in WWII. The NCDUs, composed of six-man teams, were formed with volunteers acquired from the Navy Construction Battalion (Seabee).

By April 1944, 34 NCDUs were deployed to England in preparation for Operation OVERLORD, the Allied invasion of France on the beaches of Normandy. The NCDUs were utilized to destroy an array of barriers and underwater obstacles. The NCDUs suffered 31 dead and 60 wounded, a casualty rate of 52 percent. The majority of the NCDUs were then transferred to the Pacific Theater of operations and eventually absorbed into the UDTs.

Underwater Demolition Teams (UDTs)

The Underwater Demolition Teams were founded in November 1943 in response to the challenges faced by the U.S. Marine Corps in the amphibious landing on Tarawa. It was clear that the Navy needed a unit that could provide hydrographic reconnaissance and underwater demolition of obstacles prior to an amphibious landing. UDT-1 and UDT-2 were subsequently established, and saw action across the Pacific Theater to include the invasions of Saipan, Guam, Peleliu, Iwo Jima, and Okinawa, as well as in the European Campaign. With a formal training program established in Maui, Hawaii, the UDTs would perform mine clearing and demolition raids during the Korean War and canal clearance operations in the Vietnam War.

SEAL Teams

Beginning in 1961, the CNO stressed the need for a naval unit with unconventional warfare capabilities. President John F. Kennedy recognized the importance of such a unit and in 1962 established SEAL Teams ONE and TWO, with personnel transferred from the UDTs. These Teams were first tested in the initial stages of the Vietnam War as advisors to the Vietnamese in the conduct of clandestine maritime operations. Once U.S. troop involvement increased, the SEAL Teams began conducting reconnaissance and direct action missions. During the war, LTJG Joseph Kerry, LT Thomas Norris, and PO Michael Thornton all received Medals of Honor for their actions in combat.

To ensure that special operations forces maintained a high state of readiness and to correct deficiencies accentuated by the failed attempt to rescue American hostages in Iran in April 1980, a comprehensive program of Special Operations Forces (SOF) revitalization began in 1981. Established in 1987, the United States Special Operation Command (USSOCOM) provided the funding and organizational relationships necessary to field a professional U.S. special operations capability.

In 1989, SEALs participated in Operation JUST CAUSE, the invasion of Panama to topple the Noriega dictatorship. NSW forces seized Paitilla Airfield to prevent General Noriega from fleeing by air as well as disabled his boat with explosives to hinder an escape by sea.

From August 1990 thru March 1991, SEALs participated in Operation DESERT SHIELD and Operation DESERT STORM. They conducted beach and land border reconnaissance, combat search and rescue (CSAR), and mine countermeasure missions. SEALs also conducted a maritime deception mission, a feint that successfully drew Iraq forces away from the point of the U.S. assault into Kuwait.

In the recent conflicts of Afghanistan (Operation ENDURING FREEDOM) and Iraq (Operation IRAQI FREEDOM), the SEAL teams have conducted numerous Counterinsurgency and Counterterrorism operations to include Direct Action, Surveillance and Reconnaissance, Foreign Internal Defense and personal security detachment operations for civilian government leaders. Starting in 2009, the NSW force began conducting village stability operations to provide persistent presence within local population and support to the Afghan Local Police program. LT Michael Murphy and SO2 Michael Monsoor received Medals of Honor posthumously in Operation ENDURING FREEDOM and Operation IRAQI FREEDOM respectively. USS Michael Murphy (DDG-112) was also named in honor of LT Murphy. Most recently, SOCS Edward Byers was awarded the Medal of Honor in Operation ENDURING FREEDOM.

III. Organization

Commander, Naval Special Warfare Command (NAVSPECWARCOM), a two-star rear admiral headquartered in Coronado, CA, exercises operational and administrative control of all active and reserve NSW forces stationed in the United States. The NAVSPECWARCOM mission is to man, train, equip, deploy, and sustain NSW forces for operations and activities abroad in support of combatant commanders

and U.S. national interests. NAVSPECWARCOM is an echelon II command under the combatant command of USSOCOM.

Deployable NSW forces are assigned to one of the six NSW Groups. NSWGs 1 and 2 command the eight active duty SEAL teams. Naval Special Warfare Group ONE, based in Coronado, CA, with SEAL Teams ONE, THREE, FIVE, and SEVEN as its subordinate commands. Naval Special Warfare Group TWO, based in Little Creek, VA, with SEAL Teams TWO, FOUR, EIGHT, and TEN as its subordinate commands.

Naval Special Warfare Group THREE, based in Pearl Harbor, HI, is responsible for NSW forces conducting undersea special operations worldwide. Subordinate commands include SEAL Delivery Vehicle Team ONE (SDVT-1), Training Detachment THREE (TRADET-3), and Logistics Support Unit THREE (LOGSU-3).

Naval Special Warfare Group FOUR, based in Little Creek, VA, organizes personnel to deploy combat-ready forces and maritime mobility systems with craft capabilities and capacities in accordance with USSOCOM priorities. Subordinate commands include Special Boat Teams TWELVE, TWENTY, and TWENTY TWO.

Naval Special Warfare Group TEN, based in Little Creek, VA, is responsible for intelligence, surveillance, reconnaissance, and preparation of the environment capabilities, with NSW Special Reconnaissance Teams ONE and TWO, and the Mission Support Center as its subordinate commands.

Naval Special Warfare Group ELEVEN is responsible for NSW Reserve Components and personnel in support of NSW and joint special operations.

Naval Special Warfare Units provide support and forward deployed bases around the globe. NSW Unit-1 is located in Guam and responsible for INDOPACOM. NSW Unit-2 is located in Germany and is responsible for EUCOM. NSW Unit-3 is located in Bahrain and responsible for CENTCOM. NSW Unit - 4 is located in Homestead, FL and responsible for SOUTHCOM. NSW Unit-10 is located in Germany and responsible for AFRICOM.

SEAL Teams

SEAL Teams are comprised of three Troops with three platoons each (nine platoons/Team), a Command and Control Element, and a mobile support element that is deployable overseas for extended periods. The SEAL officer's first leadership assignment is as a Squad Leader (LTJG/LT) to a SEAL platoon, and then progresses to a Platoon Commander (LT), and eventually Troop Commander (LCDR) of three SEAL platoons.

A standard Troop can be task-organized for operational purposes into three platoons, each with 16 personnel. Troop core skills consist of Sniper, Breacher, Communicator, Maritime/Engineering, Close Air Support, Corpsman, Point-man/Navigator, Primary Driver/Navigator (Rural/Urban/Protective Security), Heavy Weapons Operator, Sensitive Site Exploitation, Air Operations Master, Lead Climber, Lead Diver/Navigation, Interrogator, Explosive Ordnance Disposal. The size of each SEAL Team with three troops and support staff is approximately 300 personnel.

The SEAL elements are trained to infiltrate their objective areas by fixed and rotary winged aircraft, Navy surface ships, submarines, vehicles, underwater, or on foot. Their ability to conduct clandestine, high-risk missions and provide real-time intelligence offers decision makers excellent situational awareness and provides multiple options to conduct warfare. NSW is a relatively small force consisting of approximately 9,250 personnel, 2,700 SEALs, 700 Special Warfare Combatant Craft-Crewmen (SWCC), 750 reservists, 4,000 Combat Support (CS) and Combat Service Support (CSS) personnel, and more than 1,100 civilians. NSW constitutes 11 percent of USSOF and less than 2 percent of the Navy's forces.

Special Warfare Combatant Craft-Crewman

SWCC are specially selected and trained enlisted personnel who operate NSW combatant craft and other craft in maritime, coastal, and riverine environment. SWCC operators must complete the 7-week SWCC basic crewman training, which emphasizes physical conditioning, water competency, seamanship, navigation, boat tactics, teamwork, and mental toughness. The course includes a 51-hour navigation, boat tactics, and swimming evolution with little sleep and constant exposure to the elements. Completion of basic SWCC training requires proficiency in coxswain skills, over-the-horizon navigation, small-craft tactics, weapons, communications, maritime insertion and extraction, and coastal patrol and interdiction. On completion of SWCC Basic Crewman Training, students advance to Crewman Qualification Training (CQT).

CQT is a 21-week course covering weapons, seamanship, first aid, navigation, communications, waterborne patrolling, marksmanship, engineering, small-unit tactics, close-quarters combat, combative, SERE Level C, language training, and an introduction to NSW mission planning. Graduates of CQT are designated as Special Warfare Boat Operators (SB), authorized to wear the SWCC insignia, and assigned to a Special Boat Team.

IV. Missions and Capabilities

Missions

- **Direct Action** – Short-duration strikes and other small-scale offensive actions taken to seize, destroy, capture, or recover in denied areas. Direct Action involves ambush, combat swimmer ship attacks, combat search and rescue; close quarters combat (CQC), and visit board search and seizure (VBSS).
Example: Operation NEPTUNE SPEAR (Osama bin Laden raid)
 - **Special Reconnaissance** – Acquiring information concerning the capabilities, intentions, and activities of an enemy. Special Reconnaissance involves counter-sniper operations, hydrographic reconnaissance, and listening and observation posts.
Example: Prior to an amphibious assault by Marines during the Second World War, Under Water Demolition Teams (UDTs) would conduct hydrographic reconnaissance and destroy beach obstacles.
 - **Unconventional Warfare** – Operations conducted through surrogate forces that are organized, trained, equipped, supported, and directed by external forces. Unconventional Warfare involves training foreign guerrilla forces or other clandestine operations to operate in denied areas.
 - **Counterterrorism** – Counter Terrorism involves the prevention, deterrence, and response to terrorism. Example: Since 2009, SEALs have been conducting operations in Yemen against Al-Qaeda in Arabian Peninsula militants.
 - **Foreign Internal Defense** – NSW offers training and other assistance to foreign governments and their militaries to enable the foreign government to provide for its country's national security. Foreign Internal Defense involves training the security forces of other nations in areas such as internal peacekeeping/law enforcement, border defense, counter-drug operations, and military strategy. These operations are continuously ongoing around the world.
Example: SEALs served as advisors and instructors for the Iraqi and Afghan Armies.
- Counterinsurgency** – Counterinsurgency (COIN) is defined as “those military, paramilitary, political, economic, psychological, and civic actions taken by a government to defeat an insurgency”. A key aspect of COIN is the development of host nation security forces. NSW COIN operations are based on the ability to teach combat skills, regional expertise, language skills, and the ability to work among indigenous populations. Example: Operation ENDURING FREEDOM Village Stability Operations (VSO) in which teams have been dispersed in remote, austere, and hostile areas of Afghanistan to enable local security and re-establish or re-empower traditional local governance mechanisms that represent the population and that promote critical local development to improve the quality of life within village communities and districts.

Seabasing

Given the freedom of navigation laws for surface ships and the stealth of submarines, sea based NSW forces are able to operate throughout the oceans and along the littorals of the world with few restrictions. These seabases have lower profiles and a less intrusive presence with no requirements for host nation support or diplomatic clearance, to enable persistent, unobtrusive, mobile SOF presence in remote littoral areas.

Seabasing support can be provided by conventional naval forces (carrier strike group, expeditionary strike group, surface strike group, surface action group, or submarines) as well as Military Sealift ships and commercial vessels.

Limitations

- **Conservation of Forces** – SEAL and SWCC operators require extensive investment in selection, training, and equipment; provide unique capabilities; and are relatively few in number. They cannot be replaced quickly nor expanded rapidly.
- **Sustained Engagement** – NSW forces can deliver a high volume of weapons fire relative to their size and are designed to strike when and where least expected, employing stealth to gain surprise or use other techniques to engage the enemy with a tactical advantage. However, their small size constrains their effectiveness as a static defense force.
- **Timing** – SEALs are a rapid-response force and can normally respond more quickly than other forces. However, preparation and rehearsal time varies with each situation. Some operations require assembly of a significant support package (submarine, ships, aircraft, etc.)
- **Support** – Support requirements may include basing, medical support, detainee operations, IO, fire support, ship, submarine, aircraft, or other attachments. Support considerations include transit to target area, air support, fire support, medical support, quick reaction force, and target security.

V. Naval Special Warfare Craft



Mark VIII SEAL Delivery Vehicle (SDV)	
Mission	The electrically powered Mk VIII SEAL Delivery Vehicle is designed to deliver up to six combat swimmers and their equipment. The Mk VIII is a 'wet' vehicle, meaning that when it submerges the hull is completely flooded, the swimmers wearing underwater breathing apparatus (UBA). The vehicle is carried in a dry deck shelter aboard a U.S. submarine.
Payload	Equipment for up to six combat swimmers
Speed	6 kts
Range	70 miles
Crew	6 (Two operators, Four passengers)



Mine-Resistant Ambush Protected Vehicle (MRAP)	
Mission	Ground mobility vehicle used to carry SEALs in a variety of terrain. The vehicle is designed to protect the crew from explosive events.
Range	420 miles
Speed	60+ mph
Payload	Varies significantly depending on the configuration



Rotary Wing and Tilt Rotor Aircraft	
Mission	Rotary-wing support can be provided by many sources from various services and agencies. These include dedicated support (DS) SOF aircraft and general support (GS) conventional aircraft. They can provide precision overland and overwater insertion and extraction, ISR, and/or fire support. Rotary-wing aircraft are also used by SEAL snipers as overwatch platforms for fire support and to assist in guiding tactical movement of ground forces during assaults.
Payload	Varies significantly on the type of aircraft, configuration, and environmental factors
Speed	RW ~110-170 knots/TR ~250 knots
Range	Varies significantly on fuel tank configuration and ability to conduct in-flight refueling

VI. Future Capabilities

Naval Special Warfare continues to execute some of the most dynamic missions for the DOD. Future officers will work in diverse environments from Helmand Province in Afghanistan to the Horn of Africa,

and need to be culturally attuned to a variety of regions. The focus of NSW and USSOCOM is persistent engagement with our partners and allies around the world. The Commander, USSOCOM, wants a special operator that can work in a joint and interagency environment, act as a diplomat for our country, and continue to represent the best quality warrior in the military.

Sources:

1. NAVY WARFARE PUBLICATION (NWP 3-05) NAVAL SPECIAL WARFARE
2. <https://www.sealswcc.com/> SEAL SWCC History and Information
3. <http://www.public.navy.mil/bupers-npc/officer/communitymanagers/active/Unrestricted/nsw/Pages/SEALOfficerSelection.aspx>

WEEK 14: EXPLOSIVE ORDNANCE DISPOSAL



I. Mission

The mission of Navy EOD is: *To provide the Fleet with the capability to detect, identify, render safe, recover, evaluate, and dispose of explosive and/or hazardous ordnance items that have been fired, dropped, launched, projected, or placed in such a manner as to constitute an increased danger to operations, installations, personnel, or material.*

Navy EOD has the ability to render safe the following types of Unexploded Ordnance (UXO):

- Ground Ordnance (projectiles, rockets, grenades, landmines)
- Air Ordnance (bombs, missiles, aircraft explosive hazards, and dispensed munitions)
- Improvised Explosive Devices (IEDs)
- Weapons of Mass Destruction (WMDs) (chemical, biological, and nuclear weapons)
- Underwater Ordnance (mines, torpedoes, and depth charges)

II. History and Overview

The Explosive Ordnance Disposal (EOD) community was officially organized as a warfare community in July of 1978 as the Special Operations Community, but the core missions and skills of EOD teams were employed and practiced far before the community's birth. A need for ordnance disposal skills was recognized during WWII, as German and Japanese military operations left behind large quantities of dud-fired ordnance. Mine Disposal School was founded in May 1941. Bomb Disposal School was founded in January 1942 by (then) LT Draper Kauffman; based, in large part, on the British Bomb Disposal model. The first two Navy EOD commands were established in 1953.

Today, all four services have EOD Technicians, all of whom are trained at the Naval School Explosive Ordnance Disposal (NAVSCOLEOD) at Eglin Air Force Base, Florida. Navy EOD is organized somewhat differently than the other services in that EOD is its own warfare community in the Navy; in the other services, it is a component of larger communities. Additionally, Navy EOD Technicians must go through rigorous training that enables them to operate in more environments. Navy EOD exists today as the only special operations capable Explosive Ordnance Disposal Technicians who are able to support Naval Special Warfare and Army Special Forces elements through the full range of military operations. Navy EOD is comprised of 425 officers and 1174 enlisted personnel.

The Navy EOD community is primarily focused around the core competencies of EOD: Underwater Mine Countermeasures (UMCM), Mobility (MOB), Special Operations Forces (SOF) support, Anti-Terrorism/Force Protection (AT/FP), and Navy Diving and Salvage Support Operations. Navy EOD units can deploy as a shipboard detachment with a Carrier or Expeditionary Strike Group, as a land-based asset assigned to an Army or Marine Corps unit, or as an independent unit capable of conducting operations in theatre. Additionally, Navy EOD units are special operations capable, specifically and uniquely tasked with support to Naval Special Warfare (NSW) and Army Special Forces (SF).

III. Mission Areas

The mission areas of Navy EOD are:

- **Expeditionary Mine Countermeasures (MCM)**. MCM is historically made up of three components: EOD personnel (UMCM), surface ships (SMCM), and air units (AMCM). Today,

EOD units are able to deploy in an Expeditionary MCM package to provide additional options for Fleet Commanders around the world. EOD personnel are specifically tasked with diving, detecting, rendering safe, and disposal of armed underwater ordnance. Additionally, EOD personnel render safe dud-fired mines, torpedoes, limpet mines, and depth charges.

- **Special Operations Forces (SOF) Support.** As the chosen EOD force for Naval Special Warfare and Army Special Forces, Navy EOD Technicians lend their expertise to SOF units to ensure they achieve mission success. The skills learned in the EOD training pipeline lend themselves to participation in these types of operations. Navy EOD Technicians will participate in advanced training with the SOF unit to include Close Quarters Combat (CQC), advanced Freefall parachuting, and other specialized techniques in order to support the entire spectrum of operations with which that unit may be tasked. Today, approximately 30% of Navy EOD's deployments are in support of SOF missions.
- **Mobility.** Navy EOD Technicians are often deployed all over the world to provide a wide array of combat support to operational commanders. These skills encompass the full array of EOD skills to include counter-IED, ground, air, chemical, biological, and radiological ordnance. Historically, Mobility EOD Platoons have served with distinction in Iraq, Afghanistan, and numerous other areas throughout the world.
- **Expeditionary Diving and Salvage.** Expertise in diving is a vital skill needed for the disposal of underwater ordnance. All Navy EOD Technicians are Navy Divers and are trained in open-circuit SCUBA and the Mk-16 Mod 1, a computerized mixed-gas re-breather with low magnetic properties that allows EOD Technicians to operate on ordnance at up to 300 feet beneath the surface. Navy EOD Officers also serve at Mobile Diving and Salvage Units with Navy Divers in order to conduct salvage, recovery, ship's husbandry, deep submergence, and saturation operations.

IV. Organization

The Type Commander (TYCOM) for Navy EOD is the Commander, Naval Expeditionary Combat Command (NECC). Under NECC, Navy EOD forces are divided into two Groups: EODGRU ONE in San Diego, CA and EODGRU TWO in Little Creek, VA. Each group contains EOD Mobile Units (EODMU) which are comprised of companies and platoons. Each EOD platoon consists of one officer and three to eleven enlisted EOD Technicians, depending on the platoon's mission. Each Group also contains an EOD Training & Evaluation Unit (EODTEU) and a Mobile Diving & Salvage Unit (MDSU).

WEST COAST	EAST COAST
COMEODGRU ONE (Coronado, CA)	COMEODGRU TWO (Little Creek, VA)
EODTEU- 1 (Point Loma, CA)	EODTEU-2 (Ft. Story, VA)
EODMU-1 (Coronado, CA)	EODMU-2 (Little Creek, VA)
EODMU-3 (Coronado, CA)	EODMU-6 (Little Creek, VA)
EODMU-5 (Guam)	EODMU-8 (Rota, Spain)
EODMU-11 (San Diego, CA)	EODMU-12 (Little Creek, VA)
MDSU-1 (Pearl Harbor, HI)	MDSU-2 (Little Creek, VA)

V. Personnel

EOD Technicians and Officers



The EOD Badge. The EOD insignia is often referred to as the “crab” and is issued by all four services. The crab holds significant meaning for all EOD technicians. **The Wreath** is symbolic of achievements and laurels gained through minimizing accident potentials through ingenuity and devotion of EOD service members. **The Bomb** is copied from the World War II bomb disposal badge and represents the historic and major objective of the EOD attack, the unexploded bomb. The three fins on the bomb represent the major areas of nuclear, conventional, and chemical/biological interest. **Lightning Bolts** symbolize the potential destructive power of the bomb and the courage and professionalism of EOD personnel in their endeavors to reduce hazards as well as to render explosive ordnance safe. **The Shield** represents the EOD mission, to protect personnel and property.

All graduates of Naval School Explosive Ordnance Disposal (NAVSCOLEOD) are issued a Basic EOD badge. Whereas other services typically rely on time to dictate when an EOD Technician is awarded the subsequent EOD badges, Navy EOD Technicians pride themselves on proving their expertise and professionalism through a comprehensive board process. Enlisted EOD Technicians must spend two years before taking a board to become a Senior EOD Technician. After earning the Senior EOD badge, a Navy EOD Technician must prove themselves through a grueling, 30-day board process where they must demonstrate expertise and proficiency in order to earn the Master EOD badge.

Like their enlisted counterparts, EOD officers graduate NAVSCOLEOD as Basic EOD Technicians. However, EOD officers no longer complete Senior and Master EOD qualifications. Instead, new EOD officers spend 18 to 24 months demonstrating EOD proficiency and leadership before completing scenario-based oral and performance based qualification board while leading an EOD platoon. Successful completion of these requirements leads to qualification as an EOD Officer. The EOD Officer Qualification badge looks the same as the Master EOD Technician’s, except it is gold rather than silver/pewter.

VI. Tools and Equipment

The following list is by no means all-inclusive of the equipment Navy EOD Technicians use. Rather, these are examples of some of the most commonly used pieces of equipment.

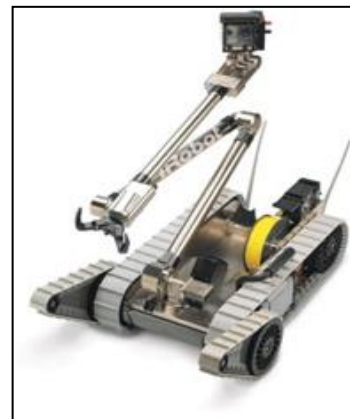
Foster-Miller TALON Bomb Robot

Weight:	115-156lbs
Payload capacity:	100lbs
Arm lift:	10lbs at full extension
	20lbs total lift
Cameras:	3 IR-illuminated



iRobot EOD Packbot Bomb Robot

Weight:	68lbs
Payload capacity:	46lbs
Arm lift:	10lbs at full extension
	30lbs total lift
Cameras:	4 total: 2 color, 1 drive, 1 surveillance



MK-16 Mod 1 Underwater Breathing Apparatus (UBA)

The Mk-16 Mod 1 UBA re-breather produces no bubbles, instead exhaled CO² is 'recycled' with low acoustic and magnetic properties. It is electronically driven, the UBA uses 3 oxygen sensors which monitor the partial pressure of oxygen in the Diver's breathing loop and automatically adds O² if the ppO² is not within pre-established parameters. The Diver monitors rig performance through a primary and secondary electronics display. Divers utilizing the UBA are capable of diving to 300 feet of sea water (FSW). The MK-16 can use two diluent gases: N²O² for dives 150 FSW or shallower, or HeO² for deeper dives.



MED-ENG EOD IX Bomb Suit

This suit provides extensive blast and fragmentation protection. It comes in multiple layers: trousers, groin protector, torso, and helmet. The IX Bomb suit also incorporates a fan and full body cooling system. The entire suit weighs over 85lbs.



VII. EOD Memorial

The EOD Memorial is located at NAVSCOLEOD at Eglin Air Force Base, FL. During the first Saturday in May every year, EOD technicians gather to place names on the wall of those individuals who have been killed in the line of duty during the previous year. The EOD Memorial contains names of sailors, airmen, soldiers, and Marines who have died in the performance of their duties since World War II. Since September 11th, the Navy EOD community has lost 21 EOD Technicians in the line of duty. The two most recent casualties include Explosive Ordnance Disposal Chief (EODC) Jason Finan and Explosive Ordnance Disposal Senior Chief (EODCS) Scott Dayton.

EODC Jason Finan. Jason Finan was born on 26 August 1982 in Anaheim, CA. He enlisted in 2003 and deployed to Iraq with EODMU THREE. EODC Finan served as the Leading Chief Petty Officer of Navy EOD Platoon 3-6-1, deploying with SEAL Team FIVE and Special Operations Task Force-Iraq. In

October 2016, EODC Finan was killed when the vehicle he was riding in struck an improvised explosive device while engaged in combat with ISIL fighters.



EODCS Scott Dayton. Scott Dayton was born on 30 July 1974 in Woodbridge, VA. He enlisted in 1993 and served in operational units all across the world, including multiple deployments to Iraq and Afghanistan. EODCS Dayton served as the Leading Chief Petty Officer of Navy EOD Platoon 2-8-2, assigned to Combined Joint Task Force: Operation Inherent Resolve. In November 2016, EODCS Dayton was killed by an improvised explosive device while operating in Syria.



Sources:

1. Navy EOD: <http://www.public.navy.mil/NECC/Pages/EOD.aspx>
2. NDSTC and NAVSCOLEOD information: <http://www.netc.navy.mil/centers/ceneoddive/eods/>
3. EOD Memorial: <http://www.eodwarriorfoundation.org/eod-memorial>

WEEK 15: RESTRICTED LINE, STAFF CORPS, & LIMITED DUTY OFFICERS AND CHIEF WARRANT OFFICERS

I. Differences between Unrestricted Line, Restricted Line, and Staff Corps Officers

Unrestricted Line (URL) Officers serve in all warfare communities in the United States Navy and are eligible for command opportunities both at sea and ashore. These are the primary officer communities in the Navy. The United States Naval Academy is committed to graduating Unrestricted Line Officers, but each year exceptions are made that allow midshipmen to be assigned Restricted Line and Staff Corps.

Restricted Line (RL) Officers provide highly specialized, technical services that directly support the missions of the United States Naval Service. Restricted Line officers are not generally eligible for command at sea; however, they may command auxiliary vessels and various shore activities. Restricted Line officers wear rank insignia identical to those of Unrestricted Line officers.

Staff Corps (SC) Officers provide various highly specialized services necessary to naval installations, units, service members, and their families. Staff Corps officers may command auxiliary vessels and various shore activities, and may attain command within their own corps. Unlike Line Officers, Staff Corps officers wear their rank on the right collar, and their corps insignia device on the left collar. The corps insignia replaces the star worn by line officers on sleeves and shoulder boards.

II. Restricted Line Communities

Engineering Duty Officer. EDOs apply technical expertise, practical engineering judgment, and business acumen to the research, development, design, acquisition, construction, life cycle maintenance modernization, and disposal of ships and submarines and their associated warfare support systems.

Aerospace Engineering Duty Officer. AEDO provide professional management and technical direction in the entire air weapon system acquisition process from design to production and later product improvements of naval aircraft, spacecraft, and weapons. AEDOs test and evaluate new aircraft, weapons systems, and weapons in various stages of development.

Aerospace Maintenance Duty Officer. In addition to working in fleet maintenance organizations throughout the fleet, AMDOs are very much involved in all aspects of material acquisition and support as top-level Program Managers in NAVAIR and as Commanding Officers of the Naval Aviation Depots. In addition, AMDOs are involved in all aspects of material acquisition and support as top-level Program Managers in NAVAIR and as COs of the Naval Aviation Depots.

Information Warfare Community. IWC is comprised of four communities: Information Professional (IP), Cryptologic Warfare (CW), Intelligence (INTEL), and Meteorology and Oceanography (METOC). USNA midshipmen who are physically qualified can be assigned directly to a small number of Cryptologic Warfare and Information Professional billets, as well as a SWO-Option in any of the four: SWO (IP), SWO (CW), SWO (INTEL), and SWO (METOC). Once SWO-Options qualify as a Surface Warfare Officer, are within six months of promotion to O-3, and have completed specified career milestones, they will be re-designated and transferred to their IWC Community. IWC is discussed in depth in Week 16 of this Pro-Book.

Public Affairs Officer. The Public Affairs (PAO) community is responsible for ‘Telling the Navy Story.’ Navy Public Affairs comprise three functional areas:

1. Media Operations: PAOs work with media outlets to communicate with the American public.
2. Internal Communications: PAOs produce publications, briefings, and video news programs to communicate with Sailors, their families, reservists, retirees, and civilian employees.
3. Community relations: PAOs reach out to the American public through ‘hands-on’ programs like public tours, Congressional and VIP visits and embarks, speaking engagements, open houses, and special events. PAOs serve at sea, ashore, and in joint assignments, and are always deployed

where Navy news is being made. All PAOs join the community through lateral transfer. Today there are about 190 officers in this community, the smallest in the Restricted Line.

Human Resources.

The Human Resources Community (120X) is charged with “delivering Human Resources expertise to define, recruit, develop, assign, and retain a highly-skilled workforce for the Navy Total Force mission.” Its core competencies include Workforce Requirements; Training and Education Development; Personnel Management; and Recruiting.

Foreign Area Officer.











FAOs are the Navy’s maritime international engagement professionals, providing a unique combination of operational experience, cultural knowledge, and language expertise to the fleet. Directly supporting the National and Maritime Strategies, FAOs are force multipliers, forging critical global relationships through persistent and credible presence in 70 countries.

III. Staff Corps Communities

There are five Navy Staff Corps communities: Medical, Supply, Civil Engineer, Judge Advocate General, and Chaplain.

- **Medical Community.** All officers in the Medical, Medical Service, Dental, and Nurse Corps are licensed medical professionals and are organized under the Bureau of Medicine and Surgery.
 - **Medical Corps.** The Medical Corps consists of commissioned doctors who are responsible for maintaining the general health and medical readiness of personnel in the Navy and Marine Corps. They provide direct support to Navy and Marine Corps operational communities ashore, at sea, and on deployment. In addition, these physicians provide medical and administrative services for hospitals and clinics supporting active duty, retirees, and family members.
 - **Medical Service Corps.** This is the most highly diversified Corps within the Medical Community, and includes 2,700 officers who are specialists in clinical, scientific, and administrative health care fields. Health care scientists and clinical care specialists make up about 60 percent of the total Corps, serving in 31 different specialties including aerospace physiology, psychology, physical therapy, physician assistant, optometry, pharmacy, biochemistry, and radiation health, while health care administrators comprise the remaining 40 percent.
 - **Dental Corps.** Commissioned dentists provide dental services on shore and onboard large ships, such as aircraft carriers and amphibious ships. While on sea duty, a Dental Corps Officer is responsible for preventing and controlling dental disease, oral surgery, and supervising dental hygiene. On shore duty, dental officers may also provide a wide variety of specialty services such as orthodontics and implants. In addition, dental officers frequently advance their education through residency or expand their career paths by managing clinics or teaching. There are currently over 1,100 active duty Dental Corps Officers.
 - **Nurse Corps.** Established in 1908 by President Roosevelt, the Nurse Corps is composed of over 4,200 Active Duty and Reserve professional registered nurses from all specialties who provide quality healthcare worldwide to the active duty force, retirees, and beneficiaries, they care for many patients whose illnesses and injuries are no different from those found in civilian facilities. They also care for those who suffer from a variety of injuries and illnesses attained from the operational theater. Additionally, they are educators, researchers, and executives in military medicine.
- **Supply Corps.** Supply Corps Officers handle the supply phases of the naval logistics. The broad responsibilities of the Supply Corps are closely related to those of many executive positions in private industry. The 2,900 Supply Officers are the business managers of the Navy and they are responsible for the supply support of the ships of the active fleet, operational units, and hundreds of naval shore installations. The most important responsibility of the Supply Corps is the worldwide, integrated Navy Supply System, which gets the Fleet what it needs, where and when it needs it.

- The Supply Corps of the United States Navy traces its beginnings to February 23, 1795 when the nation's first Purveyor of Public Supplies, Tench Francis, Jr., was appointed by President George Washington. The Supply Corps is one of the oldest staff corps in the U.S. Navy. The official motto of the Supply Corps is 'Ready for Sea' - reflecting the Supply Corps' longstanding role in sustaining warfighting.
- Supply Corps areas of responsibility are supply chain management, logistics, combat support, readiness, quality-of-life, contracting, and fiscal issues.
- Supply Corps officers are proficient in a variety of disciplines such as supply management and expeditionary logistics, inventory control, disbursement, financial management, contracting, information systems, operations analysis, material and operational logistics, fuels management, food service, and physical distribution.
- Supply Corps Purpose: To optimize the Naval Support Network to meet the Operational Readiness and Quality-of-Life Requirements of our Maritime Forces.
- Supply Corps Mission: To deliver sustained global logistics and Quality-of-Life Support to the Navy and Joint Warfighter.
- **Civil Engineer Corps.** The U.S. Navy Civil Engineer Corps (CEC) was established in 1867 to build and maintain the naval shore establishment. Its officers are the Navy's uniformed professional engineers and architects responsible for executing and managing the planning, design, construction, operation, and maintenance of the Navy's shore infrastructure. CEC Officers work in one of three areas: construction contract management, public works, or the Seabees. The Seabees consist of highly skilled personnel, schooled in both construction and defensive combat. Seabees are responsible for a wide variety of military construction and humanitarian efforts in times of peace or war, to include:
 - Constructing and repairing aircraft runways and parking aprons
 - Constructing munitions storage areas and large scale camp sites
 - Erecting bridges and constructing roads
 - Renovating schools, medical clinics, and municipal facilities
 - Repairing piers and wharves, underwater and above
 - Constructing border outposts, expeditionary camps, community outreach centers, and medical clinics
- **Judge Advocate General Corps.** The JAG corps was established in 1967 and is composed of lawyers who provide legal services to commands, service members, and their families. The Judge Advocate General directs an organization of more than 730 judge advocates in addition to other enlisted and civilian personnel, and provides legal and policy advice to the Secretary of the Navy in all legal matters.
- **Chaplain Corps.** The Chaplain Corps is the Staff Corps established within the Department of the Navy to provide for and manage the delivery of religious ministry by religious ministry professionals within the Department of the Navy and, as authorized, beyond, e.g. to the USCG.
 - Chaplains are Religious Ministry Professionals endorsed by Religious Organizations accredited with the Department of Defense, to serve in the military. Each chaplain is true to his/her religious tradition, there is no 'generic' religion or worship service, while at the same time respecting the beliefs of others and cooperating with chaplains of other religious traditions. Navy chaplains serve with the Navy, Marine Corps, Coast Guard, and Merchant Marines on ship and shore, in CONUS and OCONUS. The four core capabilities of a Navy chaplain are as follows:
 - To PROVIDE religious services, teaching, pastoral counseling, and ministry according to his/her faith tradition.
 - To FACILITATE the free exercise of worship and the provision of religious needs for those of other faith traditions.
 - To CARE for all, including those of the same faith tradition, other faith traditions, or no faith tradition at all. CARE entails treating all with dignity and respect.
 - To ADVISE the Command and leaders at all levels on issues of morale, morals, ethics, spiritual well-being, and emerging religious requirements.
 - Unique to the chaplain is that ONLY the chaplain has Absolute Confidentiality. The chaplain cannot reveal what has been communicated to her/him by Sailor, Marine, or authorized civilian without the permission of the person who communicated the information.

				
Medical Corps	Dental Corps	Nurse Corps	Medical Service Corps	Civil Engineer Corps
				
Chaplain Corps (Christian)	Chaplain Corps (Jewish)	Chaplain Corps (Muslim)	Supply Corps	Judge Advocate General's Corps

IV. The Limited Duty Officer and Chief Warrant Officer Programs

The Limited Duty Officer and Chief Warrant Officer programs are two separate programs that provide the Navy with officer technical managers. Both programs provide the opportunity for outstanding senior enlisted personnel to compete for a commission without the need for a college degree. Combined, these two communities make up more than eleven percent of the officer corps.

- **Limited Duty Officers (LDOs).** As officer technical managers of the Line or Staff Corps, LDOs progressively advance within broad technical fields related to their former enlisted ratings. They fill leadership and management positions at the Ensign through Captain level that require technical background and skills not attainable through normal development within other officer designators. LDOs serve as, but are not limited to serving as, division officers, department heads, OICs, XOs, and COs, ashore or afloat. *LDOs wear identical rank structure to that of Unrestricted Line officers.*
- **Navy Band Officers.** Officers in the Navy Band are Limited Duty Officers who started their careers by enlisting in the Navy Band. Enlisted personnel must be at least an E-6 in order to apply. Upon commissioning, they are assigned to one of fourteen bands, and will rotate every two to three years. Senior billets are those with the Navy Band, Washington, and the U.S. Naval Academy Band.
- **Chief Warrant Officers (CWOs).** Although intended primarily as technical specialists, CWOs may also serve as division officers, department heads, OICs, XO, and CO, ashore or afloat. Like Staff Corps officers, CWOs wear special insignia above the rank devices on their shoulder boards and sleeves to indicate their field of expertise. The ranks of CWO start at CWO2 and end at CWO5.

Chief Warrant Officer Rank Structure of the United States Navy



Sources:

1. NKO: Supply Corps: 2013 - 2017 Strategic Plan, Commander's Guidance 2014
2. NECC Fact Sheet for Seabees: <http://www.necc.navy.mil/>

WEEK 16: INFORMATION WARFARE COMMUNITY



I. Overview

The Information Warfare Community (IWC) was created in 2009, bringing together officers, enlisted, and civilian professionals who possess extensive skills in information-intensive fields. This corps of professionals receives extensive training, education, and work experience in information, cyberspace, intelligence, counterintelligence, human-derived information, networks, space, meteorological, and oceanographic disciplines. Members of the IWC continually develop and deliver warfighting capabilities in support of U.S. Navy, Joint and national war fighting requirements.



Information as a warfighting discipline. Until 2009, the information-intensive communities of Oceanography, Cryptologic Warfare, Information Professional, and Intelligence were treated principally as individual enablers necessary to support the Navy's traditional warfighting pillars. Recognizing the enhanced combat power of fusing the Navy's manpower, information and cyberspace capabilities, the Chief of Naval Operations consolidated these communities under the banner of Information Dominance. In February of 2016, the Information Dominance Corps was redesignated the Information Warfare Community. The Navy's aggregate information capability has begun to emerge as a modern warfighting enterprise, and serves as a potent asymmetric complement to its kinetic warfare capabilities. Information Warfare has been established as the Navy's newest warfighting discipline in support of the Navy's primary tenet of Warfighting First, and information itself has become a potent weapon.

II. Mission

Gain a deep understanding of the inner workings of our adversaries, develop unmatched knowledge of the battlespace, provide our operating forces with sufficient over-match in wartime command and control, and project power through and across cyberspace. The focus of the IWC is:







- Information Warfare
- Kinetic and non-kinetic weapon/defense
- Development and experimentation of manned and unmanned vehicles
- Expansion of the electromagnetic maneuver warfare concept to include space and cyberspace in partnership with the fleet
- Cybersecurity
- The warfighting pillars:
 - Assured Command and Control (C2). Through the Navy's networks, the IWC assures secure and rapid sharing of information across all commands and most platforms, and ensures the ability of commanders to direct operations and coordinate the application of force.
 - Battlespace Awareness. The IWC maintains awareness of the physical environment (i.e. weather, air column, water column, topography, infrastructure, etc.) of the operating area, as well as a robust awareness of the capabilities, vulnerabilities, movement, trends, intentions, and threats posed by potential adversaries thus enabling informed decision making by operational and tactical commanders. Put another way, knowing the enemy and the environment.

- Integrated Fires. IWC capabilities include cyberspace operations, electronic warfare, and information operations that are used to deny, disrupt, defeat, or manipulate an adversary's capabilities, or enhance and coordinate the application of force by U.S. and coalition assets.

Key Concept: The IWC core capabilities that support Navy mission objectives are, assured Command and Control (C2), Battlespace Awareness, and Integrated Fires.

III. Personnel and Capabilities

The IWC is made up of Information Professional Officers (IP), Cryptologic Warfare Officers (CW), Intelligence Officers (INTEL), and Oceanography Officers (METOC). Below is a chart depicting the officer designators and associated enlisted ratings.

Officer  Information Warfare Officer (IWO)	Information Professional (IP) 182X 682X 782X	Cryptologic Warfare (CW) 181X 681X 781X Cyber Warfare Engineer 184X 784X	Intelligence (INTEL) 183X 683X 783X	Meteorology/Oceanography (METOC) 180X 680X
Enlisted  Enlisted Information Warfare Specialist (IW)	Information Systems Technician (IT, B460) 	Cryptologic Technician (CT, B5XX) (CTI, B51X; CTM, B520; CTN, B525; CTR, B540/B550; CTT, B550) 	Intelligence Specialist (IS, B600) 	Aerographer's Mate (AG, A410) 
Other	IT Civilian	Cryptologic Civilian Space Cadre 5500x 6206x Subspecialists	Intelligence Civilian	METOC Civilian

Information Professional (IP)

Information Professional (IP) officers operate, maintain, secure, plan, acquire, and integrate three network domains afloat and ashore. The domains are separated based on the classification of information being transmitted on them [ref. (6)]:

- **NIPRNET:** Non-Classified Internet Protocol Routing Network, used for Unclassified information only
- **SIPRNET:** Secret Internet Protocol Routing Network, used for information up to and including information classified at the Secret level
- **JWICS:** Joint Worldwide Intelligence Communications System, used for information up to and including Top Secret (TS) and Sensitive Compartmented Information (SCI).

The two primary assignments for IP officers are either Fleet Information Warfare or Cyber and Net-Centric Commands that are summarized below [ref. (13)]:

1. **Fleet Information Warfare.** These Navy IP officers are responsible for vital shipboard functions that support everything including air operations, ship machinery control, logistics, intelligence systems, medical, and quality of life systems. While the same systems exist on smaller combatants, IPs at sea are typically found only on large deck platforms such as CVNs, LHDs, and LHAs.
2. **Cyber and Net-Centric Warfare Commands.** These are assignments ashore and include a myriad of IP facilities as well as various staffs.

Cryptologic Warfare (CW)

The Cryptologic Warfare Community provides the Commander with kinetic and non-kinetic means of achieving key objectives by affecting adversary and protecting friendly capabilities. This is achieved through the application of:

- Cyberspace Operations (CO), categorized as: Offensive Cyberspace Operations (OCO) and Defensive Cyberspace Operations (DCO), and Department of Defense information network (DODIN) operations and defense.
- Signals Intelligence (SIGINT) – The collection and analysis of electromagnetic signals from an adversary’s communication, radar, and weapons systems.
- Electronic Warfare (EW) – Includes Electronic Attack (EA) which targets an adversary, Electronic Protection (EP) which protects friendly units, and Electronic Support (ES) which includes the detection of Indications and Warnings (I&W).

Assignments for CW Officers begin with the 8-week Cryptologic Warfare Basic Course (CWBC). Following graduation from the Basic Course, CW Officers are typically assigned to one of four National Cryptologic Centers - San Antonio, Texas; Kunia, Hawaii; Augusta, Georgia; or Fort Meade, Maryland. Following their initial tour, Cryptologic Warfare Officers have several educational opportunities. One is the Naval Postgraduate School. Another is the Junior Officer Career Cryptologic Program, a competitive three-year program that offers participants the opportunity to develop broad technical and operational expertise through a combination of academics and an intensive internship at the National Security Agency. Follow on tours provide opportunities for critical CW assignments, such as a Cryptologic Resource Coordinator (CRC), the Information Warfare Commander (IWC), and positions within the Cyber Mission Force (CMF) – to include National Mission Teams (NMT), National Support Teams (NST), Combat Mission Teams (CMT), Cyber Protection Teams (CPT), or Combat Support Teams (CST). There are also opportunities to be imbedded with SEAL teams and Marine Units.

Cryptologic Technicians (CT)

CTs are the enlisted Information Warfare Specialists of the Navy. Due to the highly technical and specialized nature of their jobs, the CT community is broken into various branches:

- Cryptologic Technician, Collection (CTR) – Provide expert in-depth analysis on complex digital communications signals, exploit signals of interest to identify, locate, and report worldwide threats. Provide tactical and strategic signals intelligence, guidance, and information warfare support to surface, subsurface, air, and special warfare units.
- Cryptologic Technician, Interpretive (CTI) – Provides language support for national and naval missions. Languages could include Arabic, Persian-Farsi, Chinese, Korean, Russian, Spanish, Hebrew, and less commonly taught languages like Somali, Urdu, Hindi, Baluchi, Swahili, and more obscure Arabic dialects.
- Cryptologic Technician, Maintenance (CTM) – Maintain, configure, and install cryptologic and ancillary systems used to conduct Information and Cyberspace Operations.
- Cryptologic Technician, Networks (CTN) – Conduct network focused target development; plan and execute both offensive and defensive cyberspace operations.
- Cryptologic Technician, Technical (CTT) – Operate electronic intelligence-receiving and direction-finding systems, as well as systems that produce high-power jamming signals used to deceive electronic sensors and defeat radar-guided weapon systems.

SIGINT Capabilities

Ship's Signals Exploitation Space (SSES). The Navy's afloat Signals Intelligence (SIGINT) collection and analysis work center is SSES. SSES provides real time SIGINT tactical support using ship's sensors and national resources in support of national, theater, and fleet cryptologic requirements. Operationally, SSES collects and analyzes foreign signals and provides tactically relevant time-sensitive I&W data extending beyond the horizon. All aircraft carriers (CVN) and amphibious assault ships (LHA/LHD), as well as many CGs and DDGs have a SSES. On CVNs and LHA/LHDs, a junior CW officer will head a division of CTs who work in SSES, but on smaller ships (*i.e.* CGs and DDGs) a smaller CT detachment will man SSES that is usually headed by a LT or a CWO. [ref. (6)]

EP-3 Aries. The Navy's most capable airborne SIGINT collection platform is the EP-3. The EP-3 provides commanders with near real-time tactical SIGINT and full motion video intelligence. With sensitive receivers and high-gain dish antennas, the EP-3 exploits a wide range of electronic emissions from deep within targeted territory. The crew fuses the collected intelligence along with off-board data and disseminates the collaborated information for direct threat warning, indications and warnings, information dominance, battle space situational awareness, suppression of enemy air defenses, destruction of enemy air-defense, anti-air warfare, and anti-submarine warfare applications. In addition to Pilots, NFOs, and AWs, aircrew qualified CTs, CW Officers, Intelligence Officers and ISSs, are assigned to and fly in EP-3 squadrons. [ref. (8)]



U.S. Navy EP-3 Aries. Note the many antennae used for SIGINT collection.

Intelligence (INTEL)

The Naval Intelligence Community provides evaluated intelligence about an adversary's capabilities, vulnerabilities, movement, trends, and intentions in support of planning and operations. Intelligence allows anticipation or prediction of future situations and circumstances and it informs decisions by illuminating the differences in available courses of action.

One goal of naval intelligence is to reduce the risk to operations by identifying adversary capabilities, vulnerabilities, and intentions. It attempts to impart knowledge of the situation through the application of three basic intelligence functions that form the foundation of required analytical support to the commander:

1. **Intelligence Preparation of the Battlespace (IPB)** – Intelligence Preparation of the Battlespace (IPB), sometimes also referred to in Joint Doctrine, as Joint Intelligence Preparation of the Operating Environment (JIPOE), is the systematic and continuous analysis of the adversary, terrain, and weather in the assigned or potential battlespace. Its goals include understanding the adversary's forces, doctrine, tactics, training, and probable courses of action, together with the

physical and environmental characteristics of the target area. IPB identifies gaps in knowledge that require intelligence collection efforts.

2. **Indications and Warning (I&W)** – The goal of Indications and Warning (I&W) is to provide early warning of potential hostile action. To accomplish this goal, the analyst must be familiar with an adversary's operational order of battle (*i.e.* inventory) and normal operating patterns. The intent of I&W is to prevent surprise and reduce risk through early detection of adversary actions that may threaten friendly forces.
3. **Targeting** – Targeting is a function of both intelligence and operations, in which an adversary's critical vulnerabilities are identified for possible attack or disruption. Targeting is an analysis process in which the components of a target, or target system, and their vulnerabilities and relative importance are assessed to determine what effect their loss or impairment would have on the adversary. Intelligence can indicate where selective employment of force can have a major effect. For example, the destruction of a single enemy radar site can render multiple surface-to-air missile (SAM) sites useless. *Targeteering*, which is an intelligence function, identifies which weapons will achieve the desired effects on a specific target.

Intelligence Specialist (IS) is the enlisted rating associated with INTEL Community. While all ISs have a common core of duties (assist in collection, processing, analysis and dissemination of intelligence products and reports; prepare and present intelligence briefs; assist in mission planning and debrief; assist in IPB; and safeguard classified materials), the four areas of IS specialization are:

1. Imagery Analyst – Process, interpret, measure, and annotate imagery and geospatial products
2. Naval Special Warfare Analyst – Provide intelligence support for NSW mission planning, and assist in processing, interpreting, and disseminating collected information
3. Strike Warfare Analyst – Support strike mission planning, mission debrief; assist in assessing enemy vulnerabilities; perform target analysis, and bomb hit assessment
4. OPINTEL Analyst – Produce Operational Intelligence (OPINTEL) by collecting, analyzing, and processing all-source intelligence regarding an adversary's trends in military operations, training, and capabilities; perform Indications and Warning (I&W).

Carrier Intelligence Center (CVIC). Pronounced 'civic,' several different work centers comprise CVIC, which is an afloat intelligence production and analysis center located aboard every CVN. Most of these work centers are collocated within a suite of spaces on the ship. CVIC serves as the organic intelligence center for a Carrier Strike Group (CSG). Numerous intelligence activities are conducted in CVIC such as imagery interpretation and reporting, intelligence production, strike planning, OPINTEL, mission debrief, and providing I&W to other U.S., coalition, and allied operational units. As such, CVIC maintains close liaison with other fleet assets, naval shore commands, and joint intelligence and operational commands. CVIC maintains close liaison with fleet and theater I&W watches, Navy and joint intelligence reachback agencies, and specialized national or theater targeting/analytical centers. CVIC provides timely, customized, relevant all-source intelligence products and I&W for operational commanders and mission planners in all mission areas. [ref. (6)]

Joint Intelligence Center (JIC). The JIC is the afloat intelligence production and analysis center located aboard every LHA/LHD that supports the operational commanders of an Amphibious Ready Group (ARG) in the same basic ways that CVIC serves within a Carrier Strike Group. The most notable difference between a CVIC and a JIC is the presence of Marine Corps intelligence functions working jointly in the JIC. [ref. (6)]

Levels of Intelligence

STRATEGIC

Senior Military and Civilian Leaders
Combatant Commanders

- Assist in developing national strategy and policy
- Monitor the international situation
- Assist in developing military plans
- Assist in determining major weapon systems and force structure requirements
- Support the conduct of strategic operations

OPERATIONAL

Combatant and Subordinate Joint Force
Commanders and Component Commanders

- Focus on military capabilities and intentions of enemies and adversaries
- Monitor events in the Joint Force Commander's area of interest
- Support the planning and conduct of joint campaigns
- Identify adversary centers of gravity

TACTICAL

Commanders

- Support planning and conducting battles and engagements
- Provide commanders with information on imminent threats to their forces
- Provide commanders with obstacle intelligence

Intelligence Sources (i.e. the “-INTS”)

GEOINT -- Geospatial Intelligence

- Imagery
- IMINT - Imagery Intelligence
- Geospatial Information

HUMINT -- Human Intelligence

- Debriefings
- Source Operations
- Interrogation Operations
- Document and Media Exploitation

SIGINT -- Signals Intelligence

- COMINT - Communications Intelligence
- ELINT - Electronic Intelligence
 - ** Technical ELINT
 - ** Operational ELINT
- FISINT - Foreign Instrumentation Signals Intelligence

MASINT -- Measurement and Signature Intelligence

- Electromagnetic Data
- Radio Frequency Data
- Geophysical Data
- Radar Data
- Materials Data
- Nuclear Radiation Data

OSINT -- Open-Source Intelligence

- Academia
- Media Broadcasts
- Interagency
- Internet
- Newspapers/Periodicals

Key Concept: Each “-INT” provides one source of information leading to all source analysis. Thus, intelligence is derived from all available sources, such as HUMINT, SIGINT, OSINT, and is combined into customized and relevant intelligence products supporting warfare commanders.

Meteorology/Oceanography (METOC)

Both the terms 'METOC' and 'OCEANO' are used to refer to the Oceanography community that provides actionable information to include meteorological, climatological, oceanographic, and space environment observations, analyses, prognostic data or products and meteorological and oceanographic effects. The METOC Community has four Warfare Directorates that support the warfighter.

- Undersea Warfare Directorate – Supports Anti-Submarine and Mine Warfare using state-of-the-art technology to capture the characteristics of the water column, provide predictions of sensor and weapon performance, employ Unmanned Underwater Vehicles (UUV) and side scan sonar, and conduct advanced planning.
- Expeditionary Warfare Directorate – Provides Naval Special Warfare (NSW) with information that defines the physical environment allowing optimization of mission planning for tactical advantage. Deployments with SEAL teams are common, requiring outstanding physical fitness and an ability to conduct METOC support operations in remote locations.
- Weather Services Directorate – Supports several distinct operations:
 - Fleet Operations – METOC support for afloat units. Officers are generally attached to a specific ship (LHD/LHA/CVN), Strike Group, or Numbered Fleet.
 - Maritime Operations – Responsible for providing afloat units with enroute weather (WEAX) and Optimum Track Ship Routing, a service designed to keep ships safely away from hazardous weather.
 - Aviation Operations – Focused on flight weather support to aviation units around the world.
- Precise Time and Astrometry Directorate
 - Positioning and Timing – The Naval Observatory is the preeminent authority in the areas of Precise Time and Astrometry, and distributes Earth Orientation parameters and other Astronomical Data required for accurate navigation and fundamental astronomy.
 - Navigation – Focused on providing hydrographic surveys supporting real world operations, as identified by Combatant Commanders and other DoD customers. Consists primarily of USNS hydrographic survey vessels and the Fleet Survey team. Their combined objective is to deliver navigation products within a single deployment (45-60 day turnaround).

Aerographer's Mate (AG) is the enlisted rating associated with the METOC community. AGs collect, measure, and analyze elements of the physical operating environment (land, sea, air, space). They prepare weather forecasts and weather briefs. They prepare and disseminate air space and water column analysis in support of operations. They predict how the physical environment impacts the performance of sensors and weapons systems.

Sources:

1. OPNAV Instruction 5300.12, October 2009, *Establishing the Information Dominance Corps*
2. *Navy Strategy for Achieving Information Dominance*, 2012 November 28
3. *U.S. Navy Information Dominance Roadmap 2013-2028*
4. *The Bluejacket's Manual*, 24th ed.
5. NAVPERS 18068F, *Navy Enlisted Occupational Standards, Volume I*
<https://www.public.navy.mil/bupers-npc/reference/nec/NEOCSVol1/Pages/default.aspx>
6. NWP 2-01, *Intelligence Support to Naval Operations*
7. NTTP 6-02, *C4I Infrastructure*
8. <http://www.navair.navy.mil/>
9. NAVMETOCCOMINST 3140.1M, *Meteorological and Oceanographic Support Manual*
10. Joint Publication 2-01, *Joint and National Intelligence Support to Military Operations*
11. Joint Publication 3-13.1, *Electronic Warfare*
12. Joint Publication 3-05, *Special Operations*
13. *Information Professional Officer Career Handbook 2014*
14. Joint Publication 2-01.3, *Joint Intelligence Preparation of the Operating Environment*
15. Joint Publication 3-12 (R), *Cyberspace Operations*

WEEK 17: U.S. NAVY ENLISTED PERSONNEL AND SHIPBOARD FAMILIARIZATION

I. Introduction

In preparation for your 3/C cruise, it is important for you to understand more about the enlisted Sailors with whom you will be paired and working with. Enlisted Sailors in the modern Navy have a higher level of training and education than ever before. Many of our Sailors have acquired college credits and degrees either before entering the Navy or as a result of self-development. Today the Navy requires unprecedented technical proficiency and expertise in its enlisted Sailors. Officers are tasked with leading these motivated individuals and developing them into a cohesive team with mission accomplishment as the highest priority. Given the quality and diversity of these sailors, officers will find leading them both challenging and rewarding. The trust and professionalism shared between an officer and his or her Sailors starts with an appreciation and respect for the value of these individuals and a desire to know them beyond their productivity levels. Therefore, it is essential that officers learn about their Sailors, how they are trained, and how they advance.

For all branches of the military, the initial enlistment requires an eight year service obligation. The eight years is broken into active, reserve, and/or inactive reserve service. For example, the Master at Arms rating requires a four year active obligation, and the remaining four years will be spent in the Individual Ready Reserve (IRR) status. While in the IRR status, you are under no obligation to attend Reserve drills but you could be called back to active duty if a national need arises.

II. Paygrade, Rating, and Rates

Every member of the Navy is either nonrated, rated, or a commissioned officer. Men and women who enlist in the Navy begin as nonrated personnel. A combination of experience and specialized training will allow them to move into a rated category and then advance through a number of levels. Rated personnel are called 'petty officers.' Nonrated and rated personnel together are referred to as 'enlisted personnel.'

Paygrade

Everyone in the Navy has a paygrade. A paygrade defines a person's relative standing in the Navy and, of course, determines how much money they are paid per month. A new enlisted recruit enters the Navy as an E-1, which is the first enlisted paygrade. Enlisted personnel advance through their paygrades by taking advancement exams (E-4 through E-7) and having their records evaluated by a selection board (E-7 through E-9).

Rating

A **rating** is an occupational specialty in the Navy. In order to qualify for a rating, a Sailor must work their way through the general apprenticeship levels (E-1 through E-3) or attend a service school. Personnel in paygrades E-1 through E-3 can be considered either designated or non-designated. Non-designated personnel pick one of three available Professional Apprenticeship Career Track (PACT) programs: Airman, Seaman, or Fireman. A PACT Sailor seeking to advance into a specific rating is considered a 'striker' and is required to achieve a significant level of experience and training toward a particular rating to formally recognize as a 'designated striker.' Once designated a formal rating abbreviation is added to the general rate and paygrade (i.e., BMSA, YNSR, etc...)

There are three categories of ratings: general, service, and emergency.

- General ratings are occupations for paygrades E-4 through E-9. Each general rating has a distinctive badge. Examples are OS, GM, ET.
- Service ratings are those general ratings that are subdivided into specific services. Examples are Gas-turbine systems Technician (GS), which is subdivided into GSE (electrical) and GSM (mechanical).
- Emergency Ratings can be created in times of war or national emergency and are ratings not normally needed by the Navy. There are currently no emergency ratings active today.

The following is a list of common ratings that you should know by name and abbreviation:

AB (Aviation Boatswain's Mate)	HM (Hospital Corpsman)
AT (Aviation Electronics Technician)	IT (Information Systems Technician)
AD (Aviation Machinist's Mate)	IS (Intelligence Specialist)
AE (Aviation Electrician's Mate)	LN (Legalman)
AO (Aviation Ordnanceman)	LS (Logistics Specialist)
AS (Aviation Support Equipment Technician)	MA (Master-at-Arms)
AW (Aviation Warfare Systems Operator)	MC (Mass Communications Specialist)
CS (Culinary Specialist)	MM (Machinist's Mate)
CT (Cryptologic Technician)	MU (Musician)
DC (Damage Controlman)	NC (Navy Counselor)
EM (Electricians Mate)	OS (Operations Specialist)
EN (Engineman)	QM (Quartermaster)
ET (Electronics Technician)	PS (Personnel Specialist)
EOD (Explosive Ordnance Disposal Technician)	SO (Special Warfare Operator)
FC (Fire Controlman)	ST (Sonar Technician)
GM (Gunner's Mate)	YN (Yeoman)

Rate

Petty Officers are identified by a combination of letters and/or numbers that represent the individual's paygrade and rating. This is known as an enlisted personnel's **rate**. The first two or three letters represent the general or service rating; the number or letter(s) following indicate the paygrade. An enlisted person who identifies him/herself as BM2 Smith would be a Boatswain's Mate Second Class. The 'BM' is the general service rating and the '2' indicates the paygrade of an E-5. Examples:

HM3	Hospital Corpsman Third Class (Petty Officer)
LN2	Legalman Second Class (Petty Officer)
OS1	Operations Specialist First Class (Petty Officer)
LSC	Chief Logistics Specialist
CTTCS	Senior Chief Cryptological Technician-Technical
MMCM	Master Chief Machinist Mate

III. Roles and Responsibilities

Petty Officers

In the Navy, E-4 to E-6 personnel are considered non-commissioned officers (NCOs), and are called Petty Officers. Petty Officers perform not only the duties of their specific career field but also lead junior enlisted personnel. They take responsibility for their subordinates, address grievances, inform the chain of command on matters pertaining to good order and discipline, and may even have to place personnel on report. The title Petty Officer comes from the French word *petit* meaning small. In medieval England, villages had several 'petite' or 'petty' officers who were subordinate to major officials. Thus, Petty Officers are assistants to senior officers.

Chief Petty Officers

In the Navy, E-7 to E-9 personnel are senior NCOs collectively known as the Chief's Mess. In addition to elading their Enlisted Sailors, Chiefs are specifically tasked, in writing, with the duty of training Junior Officers (Ensign, Lieutenant (j.g.), Lieutenant, and Lieutenant Commander). They have separate berthing and dining facilities (where feasible), wear khaki uniforms similar in appearance to a commissioned officer's, and perform separate duties from other enlisted Sailors. Advancement to Chief Petty Officer (E-7) or above requires a peer review by existing Chief Petty Officers beyond the normal examination score and performance evaluation process. The proper form of address to a Chief Petty Officer is 'Chief,' 'Senior Chief,' or 'Master Chief.'








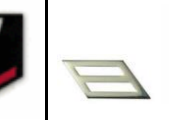

Command Master Chief (CMC)

After obtaining Master Chief Petty Officer, service members may choose to further their career by becoming a Command Master Chief Petty Officer (CMC). A CMC is considered to be the senior-most enlisted service member within a command, and is the special assistant to the Commanding Officer in all matters pertaining to the health, welfare, job satisfaction, morale, utilization, advancement and training of the command's enlisted personnel. CMC insignia are similar to the insignia for Master Chief, except that the rating symbol is replaced by an inverted five-point star, reflecting a change in their rating.

IV. Uniform Insignia

Enlisted personnel will wear rating badges or insignias on all uniforms with the exception of non-rated personnel when they wear utilities and coveralls. Insignias and badges with no rating specific markings will be worn on utilities or coverall for E-4 personnel and above. Personnel in paygrades E-7 through E-9 wear collar devices (i.e., gold anchors with USN and fouled chain). A Senior Chief will have one Silver Star above the anchor, and a Master Chief will have two silver stars. When wearing either the peacoat or outer jacket, rating badges or collar devices will be worn with the exception of non-rated personnel. An E-4 (Petty Officer Third Class) wears one chevron on their rating badge, an E-5 (Petty Officer Second Class) has two, and an E-6 (Petty Officer First Class) has three.

The insignia shown below depict that a Boatswain's Mate (BM). The crossed anchors below the 'crow' identify the individual as a BM on the rating badge. Notice the star in the place of the anchors on the insignia of the Master Chief Petty Officer of the Navy. The star shows the individual is a CMC.

Non-Commissioned Officer and Enlisted Rate Structure of the United States Navy				
Master Chief Petty Officer of the Navy	Master Chief Petty Officer	Senior Chief Petty Officer	Chief Petty Officer	Petty Officer First Class
E-9	E-9	E-8	E-7	E-6
				
Petty Officer Second Class	Petty Officer Third Class	Seaman	Seaman Apprentice	Seaman Recruit
E-5	E-4	E-3	E-2	E-1
				No insignia

Note: Personnel in paygrades E-3 and below are identified by their diagonal stripes and the color assigned to their prospective community.

General Apprenticeships

Seaman

Airman

Fireman

Hospital Corpsman

Constructionman

Color of Stripes

White on Black Background/
Black on White Background

Green Stripes on Black or White Background

Red Stripes on Black or White Background

White on Black Background/
Black on White Background

Black on White Background

Light Blue Stripes on Black or White Background

V. Naval Enlisted Classification (NEC) Codes

The Navy Enlisted Classification (NEC) system, of which the NEC coding system is a part of, supplements the enlisted rating structure in identifying personnel on active or inactive duty with special skills and billets in manpower authorizations that require these skills. NEC codes identify a non-rating wide skill, knowledge, aptitude, or qualification that must be documented to identify both people and billets for management purposes. For example, not all Boatswain's Mates (BM) are qualified LCAC Loadmaster's. They would go through the qualification process and earn the NEC BM-700B. This tells the detailer – the administrative personnel at Navy Personnel Command (NAVPERSCOM) in Millington, TN, who match individuals to specific assignments (billets) in the Navy- that this particular Sailor can be assigned an LCAC Loadmaster billet anywhere in the Navy. With few exceptions, NECs are assigned to personnel by the Enlisted Personnel Management Center (EPMAC) in New Orleans.

There are five types of NEC codes: Entry Career Field, Rating Career Field, Special Career Field, Tracking, and Planning.

VI. Service Schools

For some ratings, graduation from a particular service school is necessary for advancement. Selection for a service school depends on the rate, time in service, current duty assignment, school quotas, and the operational schedule of the Sailor's unit. The five types of enlisted service schools are:

- **Class A** – Provides the basic technical knowledge required for job performance and further specialized training. A NEC may be awarded to identify the skill.
- **Class C** – Advanced skills and techniques needed to perform a particular job are taught. A NEC may also be awarded to identify the level of skill.
- **Class E** – Designated for professional education leading to an academic degree.
- **Class F** – Trains fleet personnel who are en route to, or are members of ships' companies. Also provides individual training such as refresher, operator, maintenance, or technical training of less than 13 calendar days. A NEC is not awarded.
- **Class R** – This is the basic school that provides initial training after enlistment, also known as 'boot camp' or 'recruit training.' It prepares the recruit for early adjustment to military life by teaching basic skills and knowledge about military subjects. Class R schooling for all recruits is conducted at Recruit Training Center, Great Lakes, IL.

VII. Enlisted Advancement

The Navy Advancement Center (N3 Department) is responsible for Navy-wide administration of the Navy Enlisted Advancement System. Advancement in the Navy means greater responsibility, increased pride, better pay, and more privileges. Advancements to Petty Officer in the Navy are made through centralized competition based on a Final Multiple Score (FMS) process with Sailor evaluations and a measure of rating knowledge as the primary elements. The general requirements for advancement are:

- Recommendation by the Commanding Officer/OIC
- Advancement to E-2 and E-3 is based on Time-In-Rate (TIR), 9 months in length, and performance.
- Advancement to E-4 through E-9 is based on a combination of time in service, TIR, awards, performance (evaluations), and score on the annual/semi-annual exams held in March and September for E-4 through E-6. For E-7 the advancement exam is held annually, in January. A selection board is convened in July and results are posted in early August. For E-8 and E-9, advancement is based on performance and board selection.
- Be in proper path of advancement
- Fulfill special requirements (citizenship, security, medical, ASVAB) for certain ratings.
- Successfully complete Service School; if required
- Meet all physical readiness/body fat standards per OPNAVINST 6110.1(series)
- Eligibility documented in electronic service record entry

- Career Waypoint-PACT (C-WAY) Approval
- Complete Selectee Leadership Course

The advancement-in-rate examination is a tool used, as part of the Final Multiple Score, to help rank qualified candidates on the basis of rating and professional military knowledge at the next higher rate. Sailors are ranked within their rating/paygrade, and the number of Sailors advanced is based on Navy needs.

VIII. Shipboard Familiarization

Bullseyes

All shipboard spaces are given a ‘bullseye’ to identify the deck, frame, and distance from centerline at which they are located. Just as a town or city has a system using street signs and addresses to aid in navigation, so does a Navy ship. The top sequence of numbers on a bullseye refers to the deck, frame, and distance from centerline—for example, 4-95-3-M means that the space is located on the 4th deck, at the 95th frame, the 3rd compartment to starboard of centerline (because 3 is an odd number—‘port even, starboard odd’), and is a magazine. Further compartment letter identifiers (the last letter in a bullseye) can be found in Chapter 12 of the *Bluejacket’s Manual*.

Enlisted Deck Watches

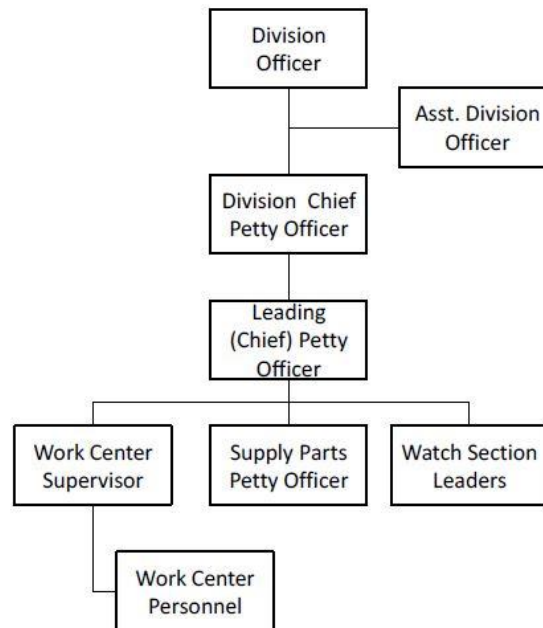
- Boatswain’s Mate of the Watch (BMOW): As the senior enlisted deck watchstander, the BMOW is charged with assisting the Officer of the Deck in carrying out the daily routine. The BMOW is responsible for ensuring all stations are manned, passing word, supervising all other enlisted deck watchstanders, and maintaining the appearance and cleanliness of the pilothouse.
- Quartermaster of the Watch (QMOW): As the navigator’s representative on the bridge, the QMOW is responsible for fixing the ship’s position, advising the Officer of the Deck with respect to navigation, maintaining the deck log, and raising or lowering signal flags as required.
- Helmsman: The helmsman is responsible for steering the ship and maintaining a steady course in accordance with the conning officer’s standard commands.
- Lee Helmsman: The lee helmsman is responsible for controlling the ship’s engines in accordance with the conning officer’s standard commands.
- Petty Officer of the Watch (POOW): Similar responsibilities to the BMOW, but only stationed in port. Subordinate to the Officer of the Deck, the POOW is responsible for passing word, carrying out the daily routine, maintaining the deck log, and maintaining the appearance and cleanliness of the quarterdeck.

Topside Responsibilities and Identification

Many deck evolutions onboard a Navy ship are potentially hazardous and require personnel involved in these evolutions to wear the proper Personal Protective Equipment (PPE), which includes hard hats. These evolutions range from launching the ship’s boats to anchoring or even refueling while underway. One can easily determine which responsibilities each person has by the color hard hat they are wearing:

- White: Officer/CPO or Safety Observer
- Yellow: Petty Officer in Charge (POIC)
- Blue: Line Handler/Deck Rigger
- Purple: Fuel Handler
- Red: Line Thrower Gunner

Typical Divisional Chain of Command



Sources:

1. Enlisted Rating Insignia: http://www.navy.mil/navydata/navy_legacy_hr.asp?id=259
2. U.S. Navy Ranks and Rates: <http://www.navy.mil/navydata/ranks/rankrate.html>
3. Navy Enlisted Promotion Chart: <http://usmilitary.about.com/od/navy/1/blpromchart.htm>
4. Navy Advancement Center: <https://www.mnp.navy.mil/group/navy-advancement-center/my-advancement> CAC needed for access
5. Chief Petty Officer Heritage: <https://www.history.navy.mil/browse-by-topic/communities/chief-petty-officers.html>
6. *The Bluejacket's Manual*
7. OPNAVINST 3120.32D (Standard Organization and Regulations Manual of the U.S. Navy)
8. *The Watch Officer's Guide*
9. NAVEDTRA 14343 (Boatswain's Mate)

WEEK 18: CURRENT GLOBAL CHALLENGES

I. State Based Challenges

Information for this module is drawn from the fundamental strategic guidance of the U.S. government. The National Security Strategy Report (NSS) is a White House publication intended to articulate the global security interests, goals, and objectives of the United States (source: National Security Strategy Archive, <http://nssarchive.us/>). The classified National Defense Strategy was mandated by Congress to replace the Quadrennial Defense review. Secretary of Defense Mattis released the NDS in January 2018 with an unclassified synopsis. The Chairman of the Joint Chiefs of Staff also crafts the National Military Strategy (NMS). In addition to this guidance, the DoD annually provides threat assessment reports to Congress. The Director, Defense Intelligence Agency (DIA) appears before Congressional committees to provide ‘assessments based upon the agency’s worldwide human intelligence, technical intelligence, counterintelligence, and document and media exploitation capabilities, along with information from DIA’s partners in the Intelligence Community (IC) and the entire defense intelligence enterprise, international allies, and open sources.’ These documents are carefully reviewed and scrutinized to properly represent the available intelligence and official U.S. government intentions. As such, the majority of this module is comprised of direct excerpts in order to avoid misstatements or ambiguities.

The 2018 DIA Worldwide Threat Assessment notes that competition among countries will increase in the coming year as major powers and regional aggressors exploit complex global trends while adjusting to new priorities in US foreign policy. The risk of interstate conflict, including among great powers, is higher than at any time since the end of the Cold War. The most immediate threats of regional interstate conflict in the next year come from North Korea and from Saudi Arabian and Iranian usage of proxies in their rivalry. At the same time, the threat of state and non-state use of weapons of mass destruction will continue to grow.

- Adversaries and malign actors will use all instruments of national power—including information and cyber means—to shape societies and markets, international rules and institutions, and international hot spots to their advantage.

- China and Russia will seek spheres of influence and to check US appeal and influence in their regions. Meanwhile, US allies’ and partners’ uncertainty about the willingness and capability of the United States to maintain its international commitments may drive them to consider reorienting their policies, particularly regarding trade, away from Washington.

- Forces for geopolitical order and stability will continue to fray, as will the rules-based international order. New alignments and informal networks—outside traditional power blocs and national governments—will increasingly strain international cooperation.

Tension within many countries will rise, and the threat from Sunni violent extremist groups will evolve as they recoup after battlefield losses in the Middle East.

- Slow economic growth and technology-induced disruptions in job markets are fueling populism within advanced industrial countries and the very nationalism that contributes to tension among countries.

- Developing countries in Latin America and Sub-Saharan Africa face economic challenges, and many states struggle with reforms to tamp down corruption. Terrorists and criminal groups will continue to exploit weak state capacity in Africa, the Middle East, and Asia.

- Challenges from urbanization and migration will persist, while the effects of air pollution, inadequate water, and climate change on human health and livelihood will become more noticeable. Domestic policy responses to such issues will become more difficult—especially for democracies—as publics become less trusting of authoritative information sources.

(Source: 2018 DIA Worldwide Threat Assessment)

Regional challenges from state actors are highlighted in the NSS, NDS, NMS, and the CNO’s January 2016 ‘A Design for Maintaining Maritime Superiority,’ and DIA Worldwide Threat Assessment. These documents specifically mention a return to great power competition, noting that Russia and China have advanced their military capabilities. North Korea’s aggressive actions threaten security and stability in North Asia, while Iran poses a threat in the Middle East. These four states are part of a broad array of

threats and opportunities confronting the US, including threats from non-state actors (terrorist groups, transnational criminal organizations) and global trends (technological innovations, climate change, demographic shifts). Never the less, these four states – due to a range of factors such as military capability, intentions, geography, and political institutions – are the principal state based challenges to U.S. national security in the near term. The threats facing our military today are commonly referred to as the 4+1 for the four states and Islamic extremism (once exemplified by al-Qaeda, but now embodied by ISIL).

China

Bottom Line Up Front (BLUF): China will continue to pursue an active foreign policy—especially in the Asia Pacific region—highlighted by a firm stance on its sovereignty claims in the East China Sea (ECS) and South China Sea (SCS), its relations with Taiwan, and its pursuit of economic engagement across the region. Regional tension will persist due to North Korea’s nuclear and missile programs and simmering tension over territorial and maritime disputes in the ECS and SCS. China will also pursue efforts aimed at fulfilling its ambitious Belt and Road Initiative to expand China’s economic reach and political influence across Eurasia, Africa, and the Pacific through infrastructure projects.

(Source: 2018 DIA Worldwide Threat Analysis)



In 2016, the armed forces of the Chinese Communist Party (CCP) began implementing the sweeping organizational reforms that President Xi Jinping and other Chinese leaders unveiled in 2015. This reorganization is the latest phase in China’s long-term military modernization program, which China’s leaders have characterized as essential to achieving great power status and what President Xi calls the “China Dream” of national rejuvenation. The leadership portrays a strong military as critical to advancing China’s interests, preventing other countries from taking steps that would damage those interests, and ensuring that China can defend itself and its sovereignty claims.

The military reforms seek to enhance the People’s Liberation Army’s (PLA) ability to conduct joint operations; improve its ability to fight short-duration, high-intensity regional conflicts at greater distances from the Chinese mainland; and strengthen the CCP’s control over the military. The changes instituted last year included establishing new command elements and units including the Joint Staff Department, the Joint Operations Command Center, the Overseas Operations Office, and the Joint Logistics Support Force. The PLA also established five regionally-based joint theaters, replacing the decades-old ground force-dominated seven military regions (MR).

China has leveraged its growing power to assert its sovereignty claims over features in the East and South China Seas. China has used coercive tactics, such as the use of law enforcement vessels and its maritime militia, to enforce maritime claims and advance its interests in ways that are calculated to fall below the threshold of provoking conflict. In the East China Sea, China continued to use maritime law enforcement ships and aircraft to patrol near the Senkaku Islands to challenge Japan’s claim.

In the South China Sea, China continued construction at its military outposts in the Spratly Islands. Important milestones in 2016 included landing civilian aircraft on its airfields on Fiery Cross, Subi, and

Mischief Reefs, as well as landing a military transport aircraft on Fiery Cross Reef. In July 2016, an arbitral tribunal constituted under the compulsory dispute settlement procedures in the United Nations Convention on the Law of the Sea (LOSC), issued a ruling in favor of the Philippines with respect to issues involving the interpretation and application of the LOSC. Among other things, the tribunal ruled that China's "nine-dash line" cannot represent a lawful maritime claim to the extent that any of the claims it reflects would exceed the limits of China's maritime entitlements under the Convention. The tribunal did not rule on sovereignty claims to land features, an issue that is outside the scope of the Convention. China rejected the ruling.

Relations between China and Taiwan cooled in 2016, after Tsai Ing-wen won the Taiwan presidential election in January, bringing the Democratic Progressive Party (DPP) back to power for the first time since 2008. China has stressed that Taiwan must accept the so-called "1992 Consensus," which holds that China and Taiwan are part of "one China" but allows for different interpretations, for there to be peace and stability in the Taiwan Strait.

China's leaders remain focused on developing the capabilities to deter or defeat adversary power projection and counter third-party intervention—including by the United States—during a crisis or conflict. China's officially-disclosed military budget grew at an average of 8.5 percent per year in inflation adjusted terms from 2007 through 2016, and Chinese leaders seem committed to increases in defense spending for the foreseeable future, even as China's economic growth slows.

China's military modernization is targeting capabilities with the potential to degrade core U.S. military-technological advantages. To support this modernization, China uses a variety of methods to acquire foreign military and dual-use technologies, including cyber theft, targeted foreign direct investment, and exploitation of the access of private Chinese nationals to such technologies. Several cases emerged in 2016 of China using its intelligence services, and employing other illicit approaches that violate U.S. laws and export controls, to obtain national security and export-restricted technologies, controlled equipment, and other materials.

As China's global footprint and international interests have grown, its military modernization program has become more focused on supporting missions beyond China's periphery, including power projection, sea lane security, counterpiracy, peacekeeping, and humanitarian assistance/disaster relief (HA/DR). In February 2016, China began construction of a military base in Djibouti that could be complete within the next year. China likely will seek to establish additional military bases in countries with which it has longstanding, friendly relationships.

U.S. defense contacts and exchanges support overall U.S. policy and strategy toward China. They are carefully tailored to clarify and develop areas of cooperation where it is in our mutual interest and to manage and reduce risk, including by encouraging China to be more transparent about its military and security affairs. They are conducted in accordance with the statutory limitations of the National Defense Authorization Act Fiscal Year 2000.

The United States will continue to monitor China's military modernization, and it will continue to adapt its forces, posture, investments, and operational concepts to ensure the United States retains the ability to defend the homeland, deter aggression, protect our allies and partners, and preserve regional peace, prosperity, and freedom.

(Source: 2017 DoD Annual Report on China)

North Korea

BLUF: North Korea's weapons of mass destruction program, public threats, defiance of the international community, confrontational military posturing, cyber activities, and potential for internal instability pose a complex and increasing threat to US national security and interests. The Democratic People's Republic of Korea (DPRK or North Korea) remains one of the most critical security challenges for the United States and the broader international community. In particular, North Korea's willingness to undertake provocative and destabilizing behavior, including attacks on the Republic of Korea (ROK), its continued

development of nuclear weapons and long-range ballistic missiles, and its proliferation of weapons in contravention of United Nations Security Council resolutions (UNSCRs) pose a serious threat to the United States, the region, and the world. (Source: 2018 DIA Worldwide Threat Assessment and 2015 DoD Annual Report on DPRK)

In the wake of accelerated missile testing since 2016, North Korea is likely to press ahead with more tests in 2018, and its Foreign Minister said that Kim may be considering conducting an atmospheric nuclear test over the Pacific Ocean. Pyongyang's commitment to possessing nuclear weapons and fielding capable long-range missiles, all while repeatedly stating that nuclear weapons are the basis for its survival, suggests that the regime does not intend to negotiate them away.

Ongoing, modest improvements to North Korea's conventional capabilities continue to pose a serious and growing threat to South Korea and Japan. Despite the North Korean military's many internal challenges and shortcomings, Kim Jong Un continues to expand the regime's conventional strike options with more realistic training, artillery upgrades, and close-range ballistic missiles that improve North Korea's ability to strike regional US and allied targets with little warning. (Source: 2018 DIA Worldwide Threat Assessment)



Since assuming control in December 2011, Kim Jong Un's regime has used force and the threat of force combined with inducements to quell domestic dissent and strengthen internal security; co-opt the North Korean military and elites; develop strategic military capabilities to deter external attack; and challenge the ROK and the U.S.-ROK Alliance. In April 2013, Kim announced the 'byungjin' policy, which emphasizes the parallel development of the country's economy and nuclear weapons program, to reinforce his regime's domestic, diplomatic, economic, and security interests. (Source: 2015 DoD Annual Report on DPRK)

North Korea fields a large, conventional, forward-deployed military that retains the capability to inflict serious damage on the ROK, despite significant resource shortfalls and aging hardware. The U.S.-ROK Alliance has deterred large-scale conventional attacks by maintaining a robust combined defense posture and strong military readiness. North Korea's continued pursuit of nuclear technology and capabilities and development of intermediate- and long-range ballistic missile programs underscore the growing threat it poses to regional stability and U.S. national security. North Korea's pursuit of a submarine-launched ballistic missile capability also highlights the regime's commitment to diversifying its missile force, strengthening the missile force's survivability, and finding new ways to coerce its neighbors. Furthermore, North Korea continues to proliferate ballistic missile technology prohibited under UNSCRs 1718, 1874, 2087, and 2094, exacerbating the security challenge for the United States and the international community. (Source: 2015 DoD Annual Report on DPRK)

North Korea first tested a nuclear weapon in 2006 and has conducted several tests since. The US IC assesses the prime objective of the DPRK nuclear weapons program is to develop a nuclear warhead that is 'miniturized' or sufficiently small to be mounted on long-range ballistic missiles, but assessments of progress have differed (Source: 2015 DoD Annual Report on DPRK)

Given the continued and growing threat from North Korea, its nuclear and missile programs, and its proliferation of related technology, the U.S. Department of Defense will continue to manage the North Korean security challenge through close coordination and consultation with the international community, particularly the ROK and Japan. The United States remains vigilant in the face of North Korea's continued provocations and steadfast in its commitments to allies in the region, including the extended deterrence commitments provided through both the nuclear umbrella and conventional forces. (Source: 2015 DoD Annual Report on DPRK)

Iran

BLUF: Iran will seek to expand its influence in Iraq, Syria, and Yemen, where it sees conflicts generally trending in Tehran's favor, and it will exploit the fight against ISIS to solidify partnerships and translate its battlefield gains into political, security, and economic agreements. Iran remains a destabilizing actor that threatens security by defying international law and pursuing capabilities that would allow it to develop nuclear weapons. In July 2015, Iran agreed to conditions of the Joint Comprehensive Plan of Action (JCPOA) that could drastically rollback its nuclear program in exchange for the lifting of international economic sanctions. While this agreement may successfully curb Iran's nuclear ambitions, Iran's other destabilizing activities will continue to pose a threat to the Middle East, especially to the security of our allies and partners in the region and around the world. (Source: 2018 DIA Worldwide Threat Analysis & analysis reflecting current events)



Iran's national security policy is the product of many, and sometimes competing, factors: the ideology of Iran's Islamic revolution; Iranian leadership's perception of threats to the regime and to the country; long-standing Iranian national interests; and the interaction of the Iranian's regime's various factions and constituencies. Successive Administrations have identified Iran as a key national security challenge, citing Iran's nuclear and missile programs as well as its long-standing attempts to counter many US objectives in the region. In the February 2016 Director of National Intelligence annual threat assessment testimony before Congress, DNI James Clapper described Iran as "present[ing] an enduring threat to US national interests because of its support to regional terrorist and militant groups and the Assad regime, as well as its development of advanced military capabilities." (Source: December 2016 Congressional Research Service: Iran's Foreign and Defense Policies)

Iran remains a significant challenge to the United States within the Middle East and Southwest Asia. Although it continues to implement the Joint Comprehensive Plan of Action (JCPOA), Iran is engaged in the region's conflicts to further its security goals and expand its influence with neighboring countries. To that end, Iran remains committed to modernizing its military; building the capacity of its partners across the

region, including designated terrorist organizations; and forging new partnerships, while balancing a desire to gain from its reintegration into the global economic system.

Iran's national security strategy continues to focus on deterring and, if necessary, defending against external threats, undermining the current regional security architecture, seeking new partnerships, and expanding its efforts to complicate U.S. actions. Competition with other regional powers, such as Saudi Arabia, could exacerbate sectarian tensions in the region beyond those already fueled by ISIS.

Iran also faces several significant domestic political and economic challenges, such as government and financial sector inefficiencies and state involvement in the private sector, that have consequences for Tehran's security policies. Internal political debates between pragmatic conservatives led by President Ruhani and traditional conservatives, including several leaders in the Islamic Revolutionary Guard Corps (IRGC), will shape the outcome of Iran's presidential election in 2017 and influence the degree of Iran's integration into the global economic system.

The JCPOA has curtailed Iran's nuclear program and has established benchmarks for the lifting of UN restrictions on the import and export of certain advanced conventional weapons and ballistic missiles through 2020 and 2023, respectively—pending Iran's continued compliance. If the International Atomic Energy Agency (IAEA) reaches the "broader conclusion" that Iran's nuclear program is peaceful before those dates, these restrictions will end. Since implementation of the JCPOA, the IAEA has been monitoring Iran's nuclear-related obligations under the agreement. The agency continues to verify and report that Iran has not enriched uranium above allowable levels, maintains limits on centrifuge numbers, allows the IAEA to monitor nuclear fuel and heavy water stocks, and has been conducting enrichment R&D within JCPOA-prescribed limits.

Iran will look to the UNSCR 2231 and JCPOA dates as benchmarks to expand its military modernization. The regime will also seek to distribute some financial gains from the JCPOA to its security forces, although we believe domestic social and economic expenditures will remain the priority for Tehran in the near term.

Iran's conventional military doctrine is designed to protect Iran from the consequences of its assertive regional policy, spearheaded by the Islamic Revolutionary Guards Corps—Qods Force. Iran employs a complex set of military and national security capabilities, including unconventional military forces and cyber capabilities, which serve as force multipliers. Iran also dedicates elements of its military to counter localized insurgencies among its minority groups, particularly against the Kurdish and Baloch elements.

Iran continues to pursue new military capabilities and enhance existing weapon systems. In 2016, Supreme Leader Ayatollah Khamenei stated that Iran needed to enhance its defensive and offensive power, and he asked senior military officials to push forward the country's arms development programs. We expect Iran to give priority to improving its ballistic missile, air and air defense, and maritime forces.

Iran has the region's largest ballistic missile arsenal, consisting of at least five different systems. Tehran has claimed its missiles can strike targets throughout the region, up to 2,000 kilometers from Iran's border. Iran will continue to improve the range, lethality, and accuracy of some of those systems and will pursue the development of new systems, despite restrictions placed on development of nuclear capable ballistic missiles by UNSCR 2231. Tehran has claimed it is also pursuing long-range, precision cruise missiles, which will present an increased threat in the region. In addition, Iran maintains the largest underground facility program in the Middle East and primarily uses this capability to protect and conceal many aspects of its missile program. In 2016, Iran publicly unveiled two new short-range ballistic missiles, which Tehran claims are capable of striking targets in a 500-km and 700-km range. Iran will continue to develop space launch vehicles—boosters that are capable of ICBM ranges if configured for that purpose.

We expect Iran to integrate the recently delivered Russian S-300 air defense systems into its network as part of an effort to strengthen its defenses against air and standoff munition attacks. Iran aspires to purchase an array of advanced conventional weapon systems, but we have no indication that any major purchases are imminent. Both the Iranian Navy and the IRGC Navy will field increasingly lethal weapons, including

more advanced mines, small submarines, armed unmanned aerial vehicles, attack craft, and ship- and shore-based antiship cruise missiles.

Led by the IRGC–Qods Force, Iran’s regional efforts remain focused on operations in Syria and Iraq. We anticipate that large numbers of Iranian troops and Shia foreign fighters will remain engaged in proregime operations in Syria and that Tehran’s cooperation with Damascus and Moscow will deepen. Iran continues to support Shia militia forces in Iraq and provide training and equipment to the Iraqi government. Although the long-term nature of Iran’s relationships remains unclear, Iran has expanded its influence through the Shia militias in Iraq, and we expect that it will seek lasting influence in Syria.

The IRGC–Qods Force also is likely to maintain support to the Huthis in Yemen. Several coalition interdictions of Iranian shipments during the past year demonstrated Iran’s persistent efforts to support the Huthis, probably as a counter to Saudi Arabia and to expand Tehran’s overall regional influence.

(Source: 2018 Defense Intelligence Agency Worldwide Threat Assessment; 2017 Defense Intelligence Agency Statement for the Record: Worldwide Threat Assessment to Senate Armed Services Committee and December 2016 Congressional Research Service: Iran’s Foreign and Defense Policies)

Russia

BLUF: Moscow views military power as critical to achieving key strategic objectives and has devoted significant resources to modernizing its forces. Russian leadership considers a capable, survivable nuclear force as the foundation of its strategic deterrent and modern, agile general purpose forces as vital for power projection in the region and expeditionary deployments far outside its borders. Moscow will continue to aggressively pursue its foreign policy and security objectives by employing the full spectrum of influence and coercion, including cyber operations. Its powerful military, coupled with the actual or perceived threat of intervention, allows its whole-of-government efforts to resonate widely. (Source: 2017 Defense Intelligence Agency Statement for the Record: Worldwide Threat Assessment to Senate Armed Services Committee)



Since 2008, Russia’s military has undergone substantial reforms. The reform program has focused largely on streamlining command structures and increasing professionalism, increasing unit combat readiness and personnel training, and reequipping forces through an ambition acquisition program. Russia has also pursued an ambition modernization program as it steadily increased defense spending. In 2010, Russia announced a new 10-year State Armaments Program (SAP) for 2011-2020, calling for significant upgrades and new weapons procurements. Although the SAP has achieved some significant results, the Russian economy has faced challenges since 2014 with falling oil prices and international sanctions. (Source: December 2016 Congressional Research Service: Russia: Background and US Interests)

President Vladimir Putin will continue to rely on assertive and opportunistic foreign policies to shape outcomes beyond Russia’s borders. He will also resort to more authoritarian tactics to maintain control amid challenges to his rule. Moscow will seek cooperation with the United States in areas that advance its interests. Simultaneously, Moscow will employ a variety of aggressive tactics to bolster its standing as a

great power, secure a “sphere of influence” in the post-Soviet space, weaken the United States, and undermine Euro-Atlantic unity. The highly personalized nature of the Russian political system will enable Putin to act decisively to defend Russian interests or to pursue opportunities he views as enhancing Russian prestige and power abroad.

Russia will compete with the United States most aggressively in Europe and Eurasia, while applying less intense pressure in “outer areas” and cultivating partnerships with US rivals and adversaries—as well as with traditional US partners—to constrain US power and accelerate a shift toward a “multipolar” world. Moscow will use a range of relatively low cost tools to advance its foreign policy objectives, including influence campaigns, economic coercion, cyber operations, multilateral forums, and measured military force. Russia’s slow 24 economic growth is unlikely to constrain Russian foreign policy or by itself trigger concessions from Moscow in Ukraine, Syria, or elsewhere in the next year.

President Putin is likely to increase his use of repression and intimidation to contend with domestic discontent over corruption, poor social services, and a sluggish economy with structural deficiencies. He will continue to manipulate the media, distribute perks to maintain elite support, and elevate younger officials to convey an image of renewal. He is also likely to expand the government’s legal basis for repression and to enhance his capacity to intimidate and monitor political threats, perhaps using the threat of “extremism” or the 2018 World Cup to justify his actions.

In 2018, Russia will continue to modernize, develop, and field a wide range of advanced nuclear, conventional, and asymmetric capabilities to balance its perception of a strategic military inferiority vis-à-vis the United States.

(Source: 2018 DIA Worldwide Threat Assessment)

Ukraine Crisis: The Ukraine – Russia relationship suffered turbulence even prior to 2014, with disputes over Ukraine’s ties to NATO and the EU, the status of Russia’s Crimea based Black Sea Fleet, and the transit of Russian natural gas via Ukraine to Europe. The Euromaidan protests over the postponement of Ukraine’s association agreement with the EU led to violent clashes between protestors and government forces. Ukraine’s armed conflict with Russia emerged in February 2014, with Moscow annexing Crimea the following month. In September 2015, Moscow began placing more emphasis on diplomacy after a year of often intense fighting along the line of contact. While maintaining the strong separatist military force it trained, equipped, and furnished with leadership, the Kremlin focused on implementing the Minsk II agreement to institutionalize influence with Ukraine without risking more sanctions. Despite deemphasizing a military approach to Ukraine, Moscow retains the ability to rapidly redeploy troops to the border, including prepositioning logistics stockpiles. (Source: 2015 Defense Intelligence Agency Worldwide Threat Assessment; 2016 Defense Intelligence Agency Statement for the Record: Worldwide Threat Assessment to Senate Armed Services Committee; and December 2016 Congressional Research Service: Russia: Background and US Interests)

Ukraine remains at risk of domestic turmoil, which Russia could exploit to undermine Kyiv’s pro-West orientation. These factors will threaten Ukraine’s nascent economic recovery and potentially lead to changes in its foreign policy that further inflame tension between Russia and the West.

The conflict in eastern Ukraine is likely to remain stalemated and marked by fluctuating levels of violence. A major offensive by either side is unlikely in 2018, although each side’s calculus could change if it sees the other as seriously challenging the status quo. Russia will continue its military, political, and economic destabilization campaign against Ukraine to stymie and, where possible, reverse Kyiv’s efforts to integrate with the EU and strengthen ties to NATO. Kyiv will strongly resist concessions to Moscow but almost certainly will not regain control of Russian-controlled areas of eastern Ukraine in 2018. Russia will modulate levels of violence to pressure Kyiv and shape negotiations in Moscow’s favor.

Russia will work to erode Western unity on sanctions and support for Kyiv, but the Kremlin is coping with sanctions at existing levels.

(Source: 2018 Defense Intelligence Agency Worldwide Threat Assessment; 2017 Defense Intelligence Agency Statement for the Record: Worldwide Threat Assessment to Senate Armed Services Committee; and December 2016 Congressional Research Service: Russia: Background and US Interests)

The Arctic: The Arctic region is a major emphasis for Russian security policy. Moscow has increased the readiness of its Northern Fleet through increased exercise activities and refurbishing airbases and has added air-defense and coastal-defense cruise missiles and ground force assets to the region. The Joint Strategic Command (OSK) 'North,' established in late 2014 based on the Northern Fleet, will be reinforced by an air force and air defense (PVO) army. Despite this increased military focus on the Arctic, we believe Russia will likely prefer to use existing multilateral and bilateral mechanisms to address competing claims and other security issues in the region. (Source: 2017 Defense Intelligence Agency Statement for the Record: Worldwide Threat Assessment to Senate Armed Services Committee)

Force Modernization: Russia's future force will be smaller, but more capable of handling a range of contingencies on Russia's periphery and expeditionary operations. We expect continued effort to improve joint operations capabilities and rearmament. Russia's ambitious rearmament program will be challenged by corruption and industrial inefficiency, Western sanctions, and the poor state of its economy. Moscow will continue its military modernization efforts despite these difficulties, but many major programs will likely face delays or cuts Russia places the highest priority on the maintenance of its robust arsenal of strategic and nonstrategic nuclear weapons. Moscow is making large investments in its nuclear weapon programs. Strategic nuclear forces priorities include force modernization and command and control facilities upgrades. Russia will field more road-mobile SS-27 Mod-2 ICBMs with multiple independently targetable reentry vehicles, deploy more Dolgorukiy class ballistic missile submarines with SS-N-32 Bulava submarine-launched ballistic missiles, and will continue the development of the RS-26 ICBM and next-generation cruise missiles. NATO officials assert that Russia has staged about a dozen unannounced, large-scale snap military drills in 2015-2016. Besides testing units' readiness for battle, mobilization procedures, equipment, and command systems, the exercises are presumed to be a signal to NATO through the display of forces and weaponry. (Source: 2016 Defense Intelligence Agency Statement for the Record: Worldwide Threat Assessment to Senate Armed Services Committee; December 2016 Congressional Research Service: Russia: Background and US Interests)

Space and Counterspace: Russia is advancing its space-based intelligence, surveillance, and reconnaissance (ISR) capability and has nearly doubled the number of satellites in its ISR constellation since 2014. Moscow views U.S. dependence on space systems as key enablers for military operations as a vulnerability. Russian military doctrine highlights counterspace capability as a force multiplier. Russia has a highly advanced space surveillance network, a prerequisite for counterspace operations, and is modernizing and expanding these systems. Russia's counterspace capabilities include satellite warning-enabled denial, deception, and jamming systems targeting satellite communications. Russian leaders assert that their armed forces have antisatellite weapons and conduct antisatellite research. (Source: 2016 Defense Intelligence Agency Statement for the Record: Worldwide Threat Assessment to Senate Armed Services Committee)

Cyberspace: In January 2017, the Office of the Director of National Intelligence (ODNI) released a declassified report on Russian activities and intentions related to the 2016 US presidential election. The report states that the CIA, FBI, and NSA have "high confidence" that President Putin "ordered an influence campaign in 2016 aimed at the US presidential election. On December 29, 2016, President Obama imposed sanctions for election-related malicious cyber activity. (Source: December 2016 Congressional Research Service: Russia: Background and US Interests)

II. Foreign Terrorist Organizations

Foreign Terrorist Organizations (FTOs) are designated by the Secretary of State in accordance with section 219 of the Immigration and Nationality Act (INA). FTO designations play a critical role in the fight against terrorism and are an effective means of curtailing support for terrorist activities. Legal Criteria for Designation under Section 219 of the INA as amended:

- It must be a foreign organization.
- The organization must engage in terrorist activity, as defined in section 212 (a)(3)(B) of the INA (8 U.S.C. § 1182(a)(3)(B)), or terrorism, as defined in section 140(d)(2) of the Foreign Relations Authorization Act, Fiscal Years 1988 and 1989 (22 U.S.C. § 2656f(d)(2)), or retain the capability and intent to engage in terrorist activity or terrorism.
- The organization's terrorist activity or terrorism must threaten the security of U.S. nationals or the national security (national defense, foreign relations, or the economic interests) of the United States.

An interactive map of FTOs can be accessed via the Office of the Director of National Intelligence, National Counterterrorism Center (NCTC) Counterterrorism Calendar at <https://www.nctc.gov/site/groups.html>.

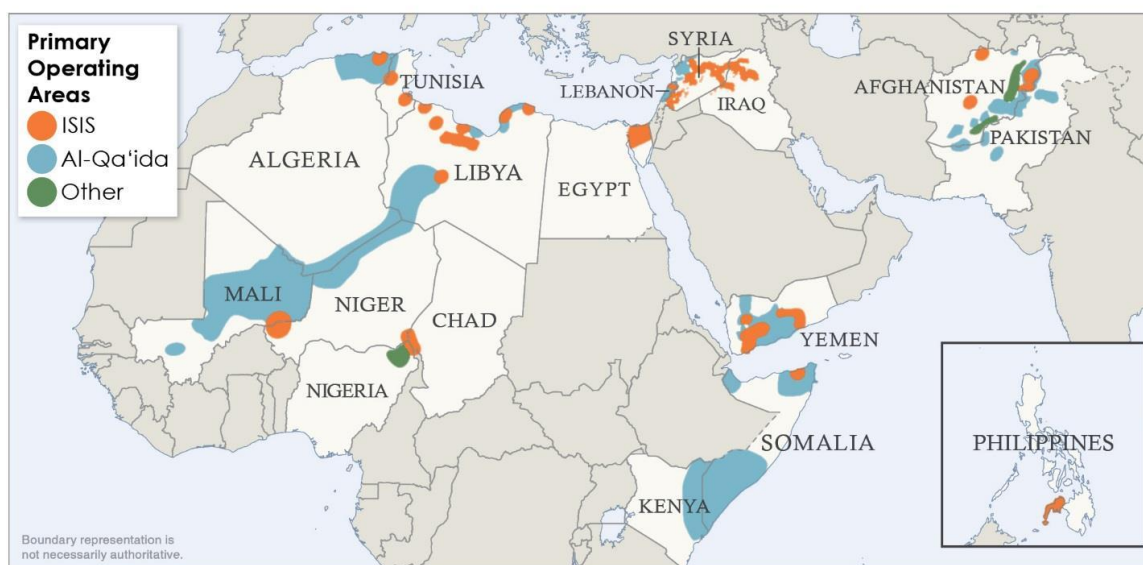
In February of 2018 the Director of the Defense Intelligence Agency (DIA) provided the Annual Worldwide Threat Assessment to the Senate Armed Services Committee. The Assessment noted that Sunni violent extremists—most notably ISIS and al-Qa'ida—pose continuing terrorist threats to US interests and partners worldwide, while US-based homegrown violent extremists (HVEs) will remain the most prevalent Sunni violent extremist threat in the United States. Iran and its strategic partner Lebanese Hezbollah also pose a persistent threat to the United States and its partners worldwide.

Sunni Violent Extremism

Sunni violent extremists are still intent on attacking the US homeland and US interests overseas, but their attacks will be most frequent in or near conflict zones or against enemies that are more easily accessible.

- Sunni violent extremist groups are geographically diverse; they are likely to exploit conflict zones in the Middle East, Africa, and Asia, where they can co-mingle terrorism and insurgency.
- ISIS and al-Qa'ida and their respective networks will be persistent threats, as will groups not subordinate to them, such as the Haqqani Taliban Network.

Sunni Violent Extremists' Primary Operating Areas as of 2017



17-15890 12-17

Source: DIA Threat Assessment 2018

ISIS

Over the next year, we expect that ISIS is likely to focus on regrouping in Iraq and Syria, enhancing its global presence, championing its cause, planning international attacks, and encouraging its members and sympathizers to attack in their home countries. ISIS's claim of having a functioning caliphate that

governs populations is all but thwarted.

- ISIS core has started—and probably will maintain—a robust insurgency in Iraq and Syria as part of a long-term strategy to ultimately enable the reemergence of its so-called caliphate. This activity will challenge local CT efforts against the group and threaten US interests in the region.
- ISIS almost certainly will continue to give priority to transnational terrorist attacks. Its leadership probably assesses that, if ISIS-linked attacks continue to dominate public discourse, the group’s narrative will be buoyed, it will be difficult for the counter-ISIS coalition to portray the group as defeated, and the coalition’s will to fight will ultimately weaken.
- Outside Iraq and Syria, ISIS’s goal of fostering interconnectivity and resiliency among its global branches and networks probably will result in local and, in some cases, regional attack plans.

Al-Qa’ida

Al-Qa’ida almost certainly will remain a major actor in global terrorism because of the combined staying power of its five affiliates. The primary threat to US and Western interests from al-Qa’ida’s global network through 2018 will be in or near affiliates’ operating areas. Not all affiliates will have the intent and capability to pursue or inspire attacks in the US homeland or elsewhere in the West.

- Al-Qa’ida’s affiliates probably will continue to dedicate most of their resources to local activity, including participating in ongoing conflicts in Afghanistan, Somalia, Syria, and Yemen, as well as attacking regional actors and populations in other parts of Africa, Asia, and the Middle East.
- Al-Qa’ida leaders and affiliate media platforms almost certainly will call for followers to carry out attacks in the West, but their appeals probably will not create a spike in inspired attacks. The group’s messaging since at least 2010 has produced few such attacks.

Homegrown Violent Extremists

Homegrown violent extremists (HVEs) will remain the most prevalent and difficult-to-detect Sunni terrorist threat at home, despite a drop in the number of attacks in 2017. HVE attacks are likely to continue to occur with little or no warning because the perpetrators often strike soft targets and use simple tactics that do not require advanced skills or outside training.

- HVEs almost certainly will continue to be inspired by a variety of sources, including terrorist propaganda as well as in response to perceived grievances related to US Government actions.

Iran and Lebanese Hezbollah

Iran remains the most prominent state sponsor of terrorism, providing financial aid, advanced weapons and tactics, and direction to militant and terrorist groups across the Middle East and cultivating a network of operatives across the globe as a contingency to enable potential terrorist attacks.

Lebanese Hezbollah has demonstrated its intent to foment regional instability by deploying thousands of fighters to Syria and by providing weapons, tactics, and direction to militant and terrorist groups. Hezbollah probably also emphasizes its capability to attack US, Israeli, and Saudi Arabian interests.

Sources:

1. 2018 National Security Strategy is available on the White House website at:
<https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf>
2. 2018 National Defense Strategy unclassified synopsis is available on the DoD website at:
<https://www.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>

3. 2017 Defense Intelligence Agency (DIA) Worldwide Threat Assessment to Senate Armed Services Committee at: <http://www.dia.mil/News/Speeches-and-Testimonies/Article-View/Article/1189500/statement-for-the-record-worldwide-threat-assessment/>
4. 2018 Defense Intelligence Agency (DIA) Statement for the Record: Worldwide Threat Assessment of the Intelligence Community: <https://www.intelligence.senate.gov/sites/default/files/documents/os-dcoats-021318.PDF>
5. 2017 Annual Reports to Congress are available on the DoD website at: <https://www.defense.gov/News/Publications/>
6. Strategic Defense Reviews: <http://www.defense.gov>
7. Foreign Policy at Brookings. *The Iran Nuclear Deal: Prelude to Proliferation in the Middle East?* <http://www.brookings.edu/~media/Research/Files/Reports/2016/05/iran-deal-regional-proliferation/The-Iran-Nuclear-Dealwebv4.pdf?la=en>
8. National Counterterrorism Center – Counterterrorism 2016 Calendar https://www.nctc.gov/site/pdfs/ct_calendar.pdf
9. State Department: Foreign Terrorist Organizations <https://www.state.gov/j/ct/rls/other/des/123085.htm>
10. Ronald O'Rourke. "China Naval Modernization: Implications for US Navy Capabilities – Background and Issues for Congress." Congressional Research Service. 29 March 2017. <https://fas.org/sgp/crs/row/RL33153.pdf>
11. Katzman, Kenneth. "Iran's Foreign and Defense Policies." Congressional Research Service. 19 January 2018. <https://fas.org/sgp/crs/mideast/R44017.pdf>
12. Welt, Cory. "Russia: Background and US Policy." Congressional Research Service. 21 August 2017. <https://fas.org/sgp/crs/row/R44775.pdf>

4/C MIDSHIPMEN QUALIFICATION STANDARDS

Reference: Professional Knowledge Book (Pro-Book)

Purpose of MQS: To establish the learning objectives (LO) for Pro-Quizzes, Pro-Exams, Professional Competency Boards (PCB), and Professional Competency Assessments (PCA).

Signature Authorities: These are identified for each LO and are either a SME (Subject Matter Expert) or a midshipman within the chain of command. By signing off a LO, the signature authority is affirming that the midshipman receiving the signature has demonstrated the requisite knowledge. The signature authority shall fill out all required information (printed name, alpha, signature, and date) or, if a SME desires, he/she may print/sign/date a roster that shall be included in each midshipman's MQS. Each midshipman is responsible for achieving applicable LOs prior to a quiz/exam/board/assessment.

- Chain of Command (CoC)
 - 4/C midshipmen shall receive signatures from 3/2/1/C midshipmen in their CoC.
 - 3/C midshipmen shall receive signatures from 2/1/C midshipmen in their CoC.
 - 2/C midshipmen shall receive signatures from 1/C midshipmen in their CoC.
- Subject Matter Experts (SME)
 - Based on their billet and/or experience, only some individuals are equipped to provide signatures for specific LOs.
 - Some are in the Brigade (i.e., Company Financial Officer). Others are on the Naval Academy staff (i.e., Senior Enlisted Leader).
 - SMEs are signature authorities for any item in their respective area.
 - A current list of warfare community/service SMEs is provided at the end of the MQS.

I. Midshipmen Regulations

1. Know the requirements for midshipmen behavior & attendance at Formation and Meal. Ref. 5400.6S 1.5

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

2. Know the Athletic Reserve period workout standards including where and when you can workout. Ref. 5400.6S 1.6

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

3. Know when the different midshipmen classes are allowed to utilize Drydock for take-out and sit-down meals. Ref. 5400.6S 1.8

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

4. Understand the process for TAPS and Late Lights. Ref. 5400.6S 1.9

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

5. Understand the Town Liberty Schedule and the Uniform Requirements for each class. Ref. 5400.6S 1.11

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

6. Understand the Weekend Eligibility Requirements and the regulation regarding awarded weekends. Ref. 5400.6S 1.11

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

7. Know and understand the Table of Priorities. Ref. 5400.6S 2.1

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

8. Understand the Special Request Approval Authority guidelines. Ref. 5400.6S 2.2

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

9. Understand the differences between and definitions to Hazing and Discrimination. Ref. 5400.6S 3.2-3.3

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

10. Know the Upperclass-4/C Relationship guidelines and the other midshipmen relationships (midshipmen-USNA staff, enlisted personnel, officers, and other midshipmen). Ref. 5400.6S 3.6-3.10

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

11. Understand the regulations regarding the consumption of alcohol. Ref. 5400.6S 4.3

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

12. Know the required reading that pertains to the different midshipmen ranks. Ref. 5400.6S 4.7

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

13. Know and understand the Class Specific Rates. Ref. 5400.6S 6.2

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

14. Understand the guidelines regarding Bancroft Room Regulations. Ref. 5400.6S 6.3

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

15. Understand proper military protocol for King Hall. Ref. 5400.6S 6.9

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

16. Understand the general Uniform rules for USNA-Sponsored Events. Ref. 5400.6S 6.15

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

II. Financial Literacy

1. Know and understand the significance of the following related to the Midshipmen Pay System: (Pro-Book)

1. MyPay
2. Leave and Earnings Statement (LES)
3. Pay Day
4. Held Pay
5. Advance for Clothing and Equipment (ACE) Loan
6. Outside Funds
7. Taxes
8. Service Member's Group Life Insurance (SGLI)
9. Naval Academy Business Services Division (NABSD)
10. Charitable Allotments
11. Travel Reimbursement
12. Commuted Rations (COMRATS)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

2. Know each of the following 'financial tools': (Pro-Book)

1. Checking account
2. Savings account
3. Money Market account
4. Certificates of Deposit (CD)
5. Bonds
6. Mutual Funds
7. Exchange Traded Funds (ETFs)
8. Stocks
9. Individual Retirement Accounts (IRA)
10. Credit Cards
11. Career Loans

_____	_____	_____	_____
(Company Financial Officer)	Alpha	Signature	Date

3. Know the difference between compound and simple interest. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

4. Know examples of good and bad money habits. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

5. Know the following: (Pro-Book)
1. How to obtain a Credit Report
 2. The different levels of Credit Scores
 3. How to dispute fraud in a Credit Report

Print Name (CoC) Alpha Signature Date

6. Develop your Personal Budget and explain its importance. A template is provided on the Midshipmen Financial Advisor website: <http://intranet.usna.edu/FinancialAdvisor/Guides/budgeting.php>.

(Company Financial Officer) Alpha Signature Date

7. Read the lesson on 'How to Read the Midshipmen LES' and understand your MIDN LES:
<http://intranet.usna.edu/FinancialAdvisor/links.php>

Print Name (CoC) Alpha Signature Date

8. Log onto your account on the MyPay website: <https://mypay.dfas.mil>

Print Name (CoC) Alpha Signature Date

III. Military Courtesies, Customs, and Ceremonies & USNA Notable Graduates

1. Know when to render a salute/when not to render a salute and discuss specific situations. (Pro-Book)

Print Name (CoC) Alpha Signature Date

2. Know how to properly address officers and enlisted personnel. (Pro-Book)

Print Name (CoC) Alpha Signature Date

3. Know the procedures for colors when conducted ashore and underway. (Pro-Book)

Print Name (CoC) Alpha Signature Date

4. Know the procedures to half-mast the national ensign. (Pro-Book)

Print Name (CoC) Alpha Signature Date

5. Know how colors are shifted aboard a U.S. Navy ship. (Pro-Book)

Print Name (CoC) Alpha Signature Date

6. Know the procedures to board and depart a U.S. Navy ship. (Pro-Book)

Print Name (CoC) Alpha Signature Date

7. Know the customs associated with the Bridge, Quarterdeck, Officers' Country, and CPO Country. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

8. Comprehend the significant accomplishments of USNA graduates and have conversational knowledge of those listed. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

IV. Mission and Organization of the Navy

1. Know the mission of the Navy and comprehend the Navy ethos. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

2. Know the CNO's Core Attributes. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

3. Understand the National Security Act of 1947 and know the members of the National Security Council. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

4. Know the responsibilities of the SECNAV, CNO, and CMC. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

5. Comprehend the Administrative and Operational chains of command. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

6. Understand Command and Control as it pertains to the U.S. Navy. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

7. Know the Geographic and Functional Unified Combatant Commands and their AORs. (Pro-book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

8. Know the numbered Fleet Commanders, their HQ locations, and the Combatant Commander each supports. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

V. Operational Mission Area, Capabilities, and the Current Maritime Strategy

1. Know the Navy's Operational Mission Areas. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

2. Know the two largest operational units of the U.S. Navy and the typical composition of each. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

3. Comprehend the National Security Strategy's four vital national interests. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

4. Comprehend the National Defense Strategy's Strategic Approach. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

5. Understand the Design for Maintaining Maritime Superiority concept and know the CNO's four lines of effort and four Navy Core Attributes (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

VI. Surface Warfare

1. Know the mission of Surface Warfare. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

2. Know the different operations and unique capabilities the surface fleet is capable of conducting. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

3. Know the visual identification, mission, weapons, aircraft, and crew size of U.S. Navy ship classes: (Pro-Book)

1. CVN-68 Nimitz Class
2. CVN-78 Ford Class
3. CG-47 Ticonderoga Class
4. DDG-51 Arleigh Burke Class
5. DDG 1000 Zumwalt Class
6. LCS Class
7. MCM-1 Avenger Class
8. PC-1 Cyclone Class
9. MK VI Patrol Boat
10. LSD-41 Whidbey Island Class
11. LSD-49 Harpers Ferry Class
12. LPD-17 San Antonio Class

13. LHD-1 Wasp Class, LHA-1 Tarawa Class, LHA-6 America Class
14. LCU & LCM
15. LCAC

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

4. Demonstrate knowledge of recent events pertaining to Surface Warfare. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

VII. Submarine Warfare

1. Know the mission of Submarine Warfare. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

2. Know the insignia worn by Submariners and its background. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

3. Know how the following events influenced submarine design and capability: (Pro-Book)

- a. American Revolution
- b. Civil War
- c. Pre-World War Era
- d. WWI
- e. WWII
- f. Cold War

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

4. Know the visual identification, mission, weapons, specific capabilities, and crew size of U.S. Navy submarines to include SSNs, SSBNs, and SSGNs. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

5. Be familiar with future projects of Submarine Warfare. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

6. Know and comprehend the combat systems associated with U.S. Navy submarines. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

VIII. Naval Air Warfare

1. Be familiar with Naval Aviation history as listed in the Pro-Book, and specifically know the following: (Pro-Book)

- Name of the first Naval Aviator to successfully take off from and land on a ship
- Name of the first aircraft carrier
- Location of the first Naval Air Station

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

2. Know the roles and responsibilities of Naval Aviators, Naval Flight Officers (NFO), Naval Aircrewmen, Flight Surgeons, and Professional Aviation Maintenance Officers and identify their respective warfare insignia. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

3. Understand the different Naval Aviation operations. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

4. Know squadron types and meanings and be able to identify the composition of a typical carrier air wing (CVW). (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

5. Know the flight deck jersey colors and the corresponding duties. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

6. Know the basic enlisted rates of Naval Aviation. (Pro-Book)

_____	_____	_____	_____
Print Name (SME – Officer or Enlisted)	Rank	Signature	Date

IX. Naval Air Warfare Platforms

1. Comprehend the components of aircraft designations. (Pro-Book)

_____	_____	_____	_____
Print Name (CoC)	Alpha	Signature	Date

2. Be able to identify the following U.S. Navy aircrafts designation/name and their role/capabilities, distinguishing features, crew composition, and responsibility: (Pro-Book)

- F/A-18E/F Super Hornet
- EA-18G Growler
- F-35C Lightning II
- E-2D Hawkeye
- C-2A Greyhound
- P-8A Poseidon
- MQ-4C Triton
- E-6B Mercury

- i. MH-60R 'Romeo' Seahawk
- j. MH-60S 'Sierra' Knighthawk
- k. MH-53E Sea Dragon
- l. MQ-8 Firescout

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

3. Demonstrate knowledge of future advances in Naval Aviation. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

X. U.S. Marine Corps Mission, Enduring Principles, and Organization

1. Comprehend the mission of the U.S. Marine Corps. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

2. Know the six Enduring Principles of the U.S. Marine Corps. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

3. Know the elements and organization of the MAGTF, MEF, MEB, MEU, and SPMAGTF. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

4. Know the locations of the Marine Expeditionary Forces (MEF) and their associated Marine Aircraft Wings (MAW) and Divisions. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

5. Know the composition of a Rifle Platoon. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

6. Know the four weapon safety rules. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

XI. U.S. Marine Corps History and Traditions

1. Know the origin of the birth of the U.S. Marine Corps. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

2. Know the historical significance of the Marine Corps early traditions, to include the significance of the Devil Dog and Women in The Corps, as listed in the Pro-Book.

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

3. Know the historical significance of the following locations/events in Marine history. (Pro-Book)

- a. Battle of Nassau
- b. Battle of Belleau Wood
- c. Battle of Guadalcanal
- d. Battle of Tarawa
- e. Battle of Iwo Jima
- f. The Inchon Landing
- g. The Chosin Reservoir
- h. Operation STARLITE
- i. Operation PHANTOM FURY

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

4. Know the historical significance of the following Marines. (Pro-Book)

1. Captain Samuel Nicholas
2. Brevet Brigadier General Archibald Henderson
3. Sergeant Major Dan Daly
4. Major General Smedley Butler
5. Sergeant Major Wilbur Bestwick
6. Corporal Jason Dunham
7. Corporal Dakota Meyer
8. Lance Corporal Kyle Carpenter

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

XII. USMC Weapons and Platforms

1. Know the primary function and effective range, and be able to identify the individual weapons of the U.S. Marine Corps. (Pro-Book)

- a. M16A4
- b. M4
- c. M203
- d. M27

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

2. Know the purpose and be able to identify the crew served weapons of the U.S. Marine Corps. (Pro-Book)

1. M249
2. M240
3. MK-153
4. MK19 Mod 3
5. .50 Caliber MG
6. FGM-148
7. BGM-71

8. 60/80mm Mortars

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

3. Know the purpose and features of and be able to identify the additional weapons and platforms of the U.S. Marine Corps. (Pro-Book)

- a. M777
- b. HMMWV
- c. HIMARS
- d. MTRV
- e. LAV-25
- f. MRAP/MATV
- g. M1A1
- h. AAV-7
- i. AH-1Z
- j. UH-1Y
- k. CH-53E
- l. MV-22
- m. F/A-18
- n. AV-8B
- o. EA-6B
- p. F-35B
- q. KC-130J
- r. RQ-7B

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

XIII. Naval Special Warfare

1. Know the role LCDR Draper Kauffman played during WWII and his significance to the development of NSW. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

2. Know the historical reasons for the creation of Naval Combat Demolition Units (NCDUs), Underwater Demolition Teams (UDTs), and modern SEAL Teams. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

3. Understand the organization and composition of SEAL teams. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

4. Know the mission and capabilities of NSW. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

5. Comprehend the benefits of Seabasing. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

6. Comprehend the limitations of NSW. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

7. Know the mission and characteristics of and be able to identify each NSW craft. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

XIV. Explosive Ordnance Disposal

1. Comprehend the mission of Navy EOD. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

2. Know what drove the need for ordnance disposal skills and the creation of the EOD community. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

3. Know the mission areas of Navy EOD. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

4. Understand the organization of Navy EOD. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

5. Know the difference and relationship between EOD Technicians and Officers. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

6. Know the tools and equipment Navy EOD Technicians use as listed in the Pro-Book. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

XV. Restricted Line, Staff Corps, Limited Duty, and Chief Warrant Officers

1. Know the differences between URL, RL, and SC Officers. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

2. Know the six Restricted Line communities and their roles. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

3. Know the five Staff Corps communities and their roles. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

4. Know the four subsets of the Medical Community and their roles. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

5. Know the purpose of the Limited Duty Officer (LDO) and Chief Warrant Officer (CWO) programs and who competes for these commissions. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

XVI. Information Warfare Community

1. Know the three core capabilities of the Information Warfare Community (IWC): (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

2. Know the four IWC officer communities. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

3. Know the four IWC enlisted communities. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

4. Know the three network domains used in the Navy and know their associated classification levels. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

5. Know the function of SSES and the platforms on which it can be found. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

6. Know the function of CVIC and the platform on which it can be found. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

7. Know the three Levels of Intelligence. (Pro-Book)

Print Name (CoC) Alpha Signature Date

8. Know the three categorizations of Cyberspace Operations. (Pro-Book)

Print Name (CoC) Alpha Signature Date

9. Using your Common Access Card (CAC), log in to Navy Knowledge Online (NKO) and complete (1) Uncle Sam's OPSEC and (2) Privacy and Personally Identifiable Information (PII) Awareness Training. Print certificates of completion and turn in to your Company Training Officer prior to taking this week's Pro-Quiz. (<http://my.navy.mil/>)

Print Name Alpha Signature Date
(Company Training Officer)

XVII. U.S. Navy Enlisted Personnel and Shipboard Familiarization

1. Know the difference between a paygrade, a rating, and a rate. (Pro-Book)

Print Name (CoC) Alpha Signature Date

2. Know the common ratings by name and abbreviation in this chapter. (Pro-Book)

Print Name (CoC) Alpha Signature Date

3. Know the roles of a Petty Officer (PO), a Chief Petty Officer (CPO), and a Command Master Chief (CMC). (Pro-Book)

Print Name (SEL) Alpha Signature Date

4. Know and be able to identify by uniform insignia the Navy enlisted ranks (Pro-Book)

Print Name (CoC) Alpha Signature Date

5. Understand the NEC system and know the five types of NEC codes. (Pro-Book)

Print Name (CoC) Alpha Signature _____

6. Know the five types of enlisted service schools. (Pro-Book)

Print Name (CoC) Alpha Signature Date

7. Know the general requirements for enlisted advancement. (Pro-Book)

Print Name (CoC) Alpha Signature Date

8. Comprehend and apply the concept of a shipboard 'bullseye.' (Pro-Book/Ch. 12 of Bluejackets Manual)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

9. Know the duties of the following enlisted deck watches. (Pro-Book)

- a. BMOW
- b. QMOW
- c. Helmsman
- d. Lee Helmsman
- e. POOW

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

10. Know the topside responsibilities and how to identify deck personnel. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

11. Know the typical shipboard divisional chain of command. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

XVIII. Current Global Challenges

1. Comprehend the unique challenges posed by China. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

2. Comprehend the unique challenges posed by North Korea. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

3. Comprehend the unique challenges posed by Iran. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

4. Comprehend the unique challenges posed by Russia to include the significance of the Ukraine Crisis, the Arctic region, force modernization, space and counterspace, and cyberspace. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

5. Know the criteria for designating a Foreign Terrorist Organization (FTO) and which cabinet member is authorized to designate them. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

6. Comprehend the origin and threat posed by Sunni violent extremism, ISIS, Al-Qa'ida, HVE, and Hezbollah. (Pro-Book)

Print Name (CoC)	Alpha	Signature	Date
------------------	-------	-----------	------

Subject Matter Experts (SME)

APPENDIX A

Surface Warfare Officers

LT	ALEXANDER	LT	RALEY, JR.	LCDR	McCORVEY
LT	BAIRD	LT	RAMOS	LCDR	PULLIAM
LT	BONIWELL	LT	RAY	LCDR	RAYBURG
LT	BULL	LT	REED	LCDR	SHANLEY
LT	CELLON	LT	SAAVEDRA	LCDR	SZUROVY
LT	CLOUSE	LT	SETTLE	LCDR	WELSH
LT	CUMPSTON	LT	SHEERIN	CDR	CHAPMAN
LT	DENDOR	LT	SIMMONS	CDR	CHECCA
LT	DINKINS	LT	SMITH II	CDR	FLEMING
LT	DIRCKS	LT	STEPP	CDR	GRAHAM
LT	DRISCOLL	LT	TEICHGRAB	CDR	JELINEK
LT	FEENSTRA	LT	UCHIDA	CDR	McCLURE
LT	FLUHR	LT	VANOURNEY	CDR	MITCHELL
LT	GARCIA	LT	VENTRESCA	CDR	OSTWIND
LT	GRIMM	LT	VERNAM	CDR	SCOTT
LT	HANSBERRY	LT	WALLACE	CDR	SPENCER
LT	HINE	LT	WARD	CDR	VAVASSEUR
LT	IAFRATO	LT	WRIGHT	CAPT	CHADWICK II
LT	INFANTE	LT	YOUNG	CAPT	LANG, JR.
LT	JACKSON	LT	ZACCHEO	CAPT	SWITZER
LT	JACKSON	LCDR	BARRS		
LT	JOHNSTON	LCDR	BARRY		
LT	JORDAN	LCDR	BOEHM		
LT	KAMINSKY	LCDR	BROCK		
LT	KENTON	LCDR	COOP		
LT	KING	LCDR	FOX		
LT	MALDONADO, JR.	LCDR	DAVIS		
LT	McCADDEN	LCDR	GOOD		
LT	McCULLOUGH	LCDR	GOSNELL		
LT	MILLER	LCDR	HETHERINGTON		
LT	MILLS	LCDR	HEYWORTH IV		
LT	OQUINN	LCDR	HOFFMEISTER		
LT	ORR	LCDR	JONES		
LT	PULIDO	LCDR	KRIEGER		
LT	PULVER	LCDR	LITCHFORD		

Surface Warfare Senior Enlisted

QMC	ALLEN	OSCS	KALMBACH
EMC	AREVALO	CMDCM	KIRBY
ETNC	ARGO	GMC	LARUE
ABHC	BLAND	OSCS	MAUDSLEY
ATC	CAMPOSANO	HMCS	MCCRAY
ABHC	CASTANON	HMC	MCGEE
ETC	COOLEY	CTTCS	PARTRIDGE
EMNC	GARABIS	CTRCS	PLUMMER
CSC	ELDRIDGE	QMC	REDDICK
YNCS	GREEN	AECS	REYNOLDS
OSC	HARLEY	AFCM	VASQUEZ
AEC	HUFF	GMCS	WAGNER
FCCS	JEFFERSON	AMCS	WASHA

Naval Aviators

PILOTS

LT	ALLEN	LT	RUBY	CDR	DONAHUE
LT	BLAIS, J.	LT	RYKACZWESKI	CDR	DOWNEY
LT	BORNEMEIER	LT	SANCHEZ	CDR	GOURDINE
LT	CHURCH	LT	SMITH	CDR	KADAR
LT	CRAWFORD II	LT	STEINER	CDR	KENNEDY
LT	DEVINE	LT	YEAGER	CDR	KING
LT	DIFRANCO	LT	ZACCARIA	CDR	KINTZLEY
LT	GRIDER	LCDR	BARKLEY	CDR	LAZZARO
LT	HALL	LCDR	BERTHELOTTE	CDR	MONTAGNET
LT	HOGAN	LCDR	BURICH	CDR	MOULIS
LT	HYMAN	LCDR	COWDEN	CDR	NORTON
LT	JACKSON, L.	LCDR	DEWITT	CDR	OVERSTREET, T.
LT	JENSEN	LCDR	DIETRICH	CDR	REGOLI
LT	KORBEIN	LCDR	FARRELL	CDR	SANDERS
LT	MEARS	LCDR	GHAFFARI	CDR	SCHULTZ
LT	MCGILL	LCDR	GOODENOUGH	CDR	TINJUM
LT	MILLERD	LCDR	GUETHLER	CDR	WAGENER
LT	NEFORAS	LCDR	KRIEGER	CAPT	BAILEY
LT	NOSTRO	LCDR	LEAVITT	CAPT	CALHOUN
LT	O'GREEN	LCDR	LUST	CAPT	GRADY
LT	OSMUN	LCDR	MCKEE	CAPT	KENNEDY
LT	PETROSIK	LCDR	ROLAND, JR	CAPT	MARSH II
LT	RECK	LCDR	SLAUGHTER II	CAPT	MCGRATH
LT	RICE, J. L.	LCDR	TABER	CAPT	MICHEL
LT	RICE, J. R.	LCDR	TEMKIN	CAPT	OVERSTREET, V.
LT	ROY	LCDR	VAN DAM		

NFOs

LT	BLAIS, M.
LT	BOWMAN II
LT	HILL
LT	COLLINS
LT	RIVERA
LT	ROSA
LT	SHAW
LCDR	CLEARY
CDR	BELSON
CDR	DITTMAR
CDR	DRAYTON
CDR	FORAKER
CDR	FLYNN
CDR	HAUTH
CDR	HEWGLEY
CDR	JANKE
CDR	REX
CAPT	ANDREW
CAPT	BILZOR
CAPT	HOWES
CAPT	RENTFROW
CAPT	TESTERMAN
VADM	CARTER

Naval Aviation Senior Enlisted

ABHC	BLAND	AECS	REYNOLDS
ATC	CAMPOSANO	ADC	SOPIAK
ABHC	CASTANON	AZC	VANDERBILT
AD1	COULOMBE	AFCM	VASQUEZ
ATCS	AECS		
AEC	HUFF		
AWSCS	MARTIN		

Marine Corps Officers

1st Lt	FORD	NF	Capt	WEDDINGTON	74A
1st Lt	PETERSEN	NF	Capt	WHEELLEY	0802
Capt	BLUNDETTO	0402	Capt	YEE	0402
Capt	BOYCE	7208	Maj	BENNING	7532
Capt	BROWN	0802	Maj	CURRY	7566
Capt	CAMPBELL	7565	Maj	EBEY	7509
Capt	CARLSON	8803	Maj	GARDNER	0202
Capt	CHIAVEROTTI	0602	Maj	HAINES	7532
Capt	COVINGTON	7208	Maj	HAWKINS	7562
Capt	GILREATH	3404	Maj	KHALSA	0202
Capt	GRAVES, JR.	7509	Maj	KUIPER	0302
Capt	HILLER	4402	Maj	RUBINSTEIN	8824
Capt	IOBST	0802	Maj	SHINN	0302
Capt	JOHNSON III	7565	LtCol	COLEMAN	7562
Capt	KRAYEWSKY	7557	LtCol	OPLADEN	11A
Capt	MARTINO	1302	LtCol	WEIS	0802
Capt	MASSEY III	4402	Col	SMITHERMAN	0602
Capt	McMENAMIN	0302			
Capt	PAUL	0602			
Capt	STAWNYCZYJ	1302			
Capt	SWITZER	NE			
Capt	WAHEED	0402			
Capt	WALSH	0802			

Marine Corps Senior Enlisted

SSgt	BAUDANZA	6541
SSgt	OROZCOCOLORADO	619
SSgt	ONTIVEROS	3521
SSgt	MORENO-MARTINEZ	6672
GySgt	OWENS	3052
GySgt	MERRYMAN	369
GySgt	PRICE	659
GySgt	KHAN	619
GySgt	OLIVAS-MENDOZA	111
MSgt	JUMAWAN	369

Submarine Officers

LT	DANIELS	LT	WHEATON
LT	HENSON	LT	ZETTLER
LT	KELLY	LCDR	ATWOOD
LT	LAUN	LCDR	CHURCHILL
LT	LINSLEY	LCDR	GEORGE
LT	LUETKENHOELTER	LCDR	HRUBY
LT	MARTIN	LCDR	REHBERG
LT	MILDEN	LCDR	SEGLEM
LT	MOELLER	LCDR	SHEY
LT	MOORE	CDR	CHAPMAN
LT	MOYETTE	CDR	LAING
LT	RAMOS II	CAPT	ROBERTS
LT	RODRIGUEZ		
LT	ROGERS		
LT	TESTINO		
LT	VAGTS		

Submarine Senior Enlisted

ETNC	ARGO
STSCS	MCCRORY
ETNCS	WISNIEWKI

Naval Special Warfare Officers

CWO5	JOSLIN
LT	SUESS
LCDR	BLAIR
CDR	LEDFORD

Naval Special Warfare Senior Enlisted

SOCS	LUNA
------	------

Explosive Ordnance Disposal Officers

LT	JONES
LT	DEBUCK
LCDR	RYAN

Explosive Ordnance Disposal Senior Enlisted

EODCS	BRYAN
-------	-------

Oceanography/METOC Officers

LCDR	TELLADO
LCDR	THOMPSON
CDR	BLEIDORN
CDR	INGERSOLL
CAPT	SANABIA

Cryptologic Warfare Officers

LCDR	KENNEY
LCDR	ODUNUKWE
LCDR	WALSH
LCDR	WOOD
CDR	DOHERTY
CDR	EMMERSEN

Information Professional Officers

CDR	WU
CDR	MOULIS
CDR	WENDELIN
CAPT	BUSS
CAPT	LINDSAY

Intelligence Officers

LT	POYNOR
LT	SETHAPHONG
LT	UNGAR
LCDR	MANNING, JR.
LCDR	MARKS
CDR	HOFFMAN

Information Warfare Corps Senior Enlisted

CTIC	PAYNE
CTTCS	PARTRIDGE
CTRCS	PLUMMER

Medical Corps Officers

LT	NEUBERT
LT	WALKER
LCDR	STANGE
LCDR	LEWIS
CDR	WALTZ
CDR	LECLERE
CDR	BURKHART
CDR	WILLIAMS
CAPT	PYNE
CAPT	LEE

Medical Service Corps Officers

LT	REYES
LT	STOVER
LT	PELTZ
LT	GREENE
LCDR	PETROU
LCDR	PORTER
LCDR	DUFAULT
CAPT	RALPH

Dental Corps Officers

LT	STEIGERWALD
LT	NOVAK
LT	MILFORD
LCDR	DARCEY
LCDR	BRAUD
LCDR	BOHMAN
LCDR	BENNETT
CDR	LIU
CDR	HUBER
CAPT	SCOTTY
CAPT	WORM
CAPT	FIKES

Nurse Corps Officers

LT	BITANT
----	--------

Engineering Duty Officers

LT	SEWELL
LCDR	HEDDERLY
CDR	VANSLYKE
CDR	FLOOD
CAPT	REASON, JR.

Supply Corps Officers

LT	AHMED
LT	ANDREOLI
LT	HERNANDEZ
LT	HUGHES
LT	MONTEITH
LT	MYERS
LT	ROBILLARD
LCDR	ERMOSHKIN
LCDR	PHANN
LCDR	QUINN
CAPT	TURNER

Civil Engineer Corps Officers

LT	KENNEDY
LT	JONES
LT	LAWSON
LT	LOMAX
LT	McLAUGHLIN
LT	OLSON
LT	WEBB
CDR	MAGOULICK
CDR	SUNG

Civil Engineer Corps Senior Enlisted

CEC	LAWSON
-----	--------

Civil Engineer Corps Senior Enlisted

BUC	SCHOTT
SWC	MCCALL

Chaplain Corps Officers

LT	JOHNSON
LT	BALLABAN
LT	McPARTLAND
LT	MILLER
LT	UYBOCO
CDR	BURNS, JR.
CAPT	FOLEY

Judge Advocate Corps Officers

LT	MARTIN
LT	O'BRIEN
LT	WALKER
LCDR	ORMISTON
LCDR	PITTERSON
LCDR	STENTIFORD
CAPT	HILL, JR.

Chief Warrant Officers and Limited Duty Officers

CWO	JOSLIN, JR.
CWO	HUNT, JR.
CWO5	CUMMINGS
LT	TURNER, JR.
LCDR	COLBERT
LCDR	NICHOLS
LCDR	SWAPP