



Design for Undersea Warfare

Update One

Commander's Guidance for the United States Submarine Force
and Supporting Undersea Forces

November 2012

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Introduction

Design for Undersea Warfare: Update One

Purpose: This document updates the original Design for Undersea Warfare (DUSW) issued in July 2011 and builds upon the force-wide alignment it generated. The DUSW provides Commander's Guidance and aligns those who develop, support, operate, and employ Undersea Forces through three Lines of Effort:

- **LOE 1: Provide Ready Forces** – Provide undersea forces ready for operations and warfighting.
- **LOE 2: Maximize Employment Effectiveness** – Conduct effective forward operations and warfighting.
- **LOE 3: Develop Future Force Capabilities** – Prepare for future operations and warfighting.

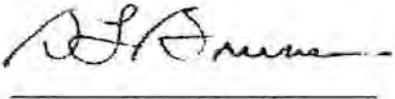
The DUSW also describes how our culture and goals enable Undersea Forces' unique contributions to National Security. In the sixteen months since we introduced the original DUSW we targeted improvements in readiness and operations, specifically we focused on:

- Increasing the number of surge ready assets
- Reaffirming the Commanding Officer's responsibilities and authority
- Increasing warfighting experimentation and demonstration
- Formalizing new platform and payload requirements
- Raising the national investment commitment to undersea forces

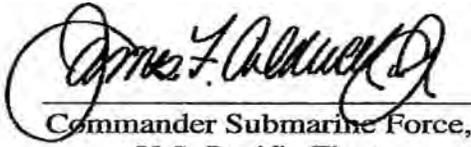
Changes: This update sharpens our focus as mariners and warfighters, and emphasizes the value of our people. To communicate these themes, the following were added:

- **Part I:** Sets the stage for this update by linking our role to the larger national effort.
- **Part II:** Describes our primary Lines of Effort, the key focus areas within each for 2013, and introduces our "Undersea Warrior Foundation of Strength."
- **Part III:** Lays out **Commander's Intent** that links our tenets and goals to the **CNO's Sailing Directions** and the capabilities and value we deliver every day. Part III also includes **Commander's Guidance to our Commanding Officers**, sharpening expectations for maintaining proficiency in critical mariner skills and the professional and personal development of our people.

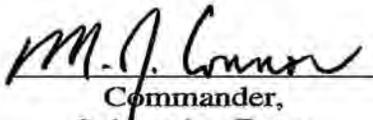
Action: This first update to the DUSW provides our Undersea Forces with a vision for continuing our dominance of the undersea domain. History shows that sustaining this advantage in a rapidly changing world requires creativity and the willingness to pursue aggressive innovation and development. This is our strategic framework: Read it, think about it, discuss it and act on it.



Director,
Submarine Warfare Division



Commander Submarine Force,
U.S. Pacific Fleet



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Part I

The Undersea Domain and the Future of Undersea Warfare

Purpose: Every person supporting the undersea force – at sea or ashore, military or civilian – plays an important role in an important mission. We expect a lot from our people in terms of hard work and high standards and we owe it to them to explain why.

America’s Unique Global Role: The United States is a maritime nation. Since our nation’s beginning the oceans have provided us with access to world markets and a natural defensive barrier. With 70% of the Earth covered by water and 90% of the world’s trade carried by sea, our national strategy has long relied upon sea power. For more than a century, one of our national goals has been protection of the seas for the benefit of all nations. We use our global maritime presence and significant capability to keep sea lanes free and to deter regional tensions and conflict.

The Undersea Advantage: Undersea forces are uniquely capable of deterring our enemies, collecting intelligence, and delivering ordnance. In many situations the submarine is the perfect tool to both inform diplomacy and initiate action should diplomacy fail. It is the Undersea Force that provides our Nation the ability to shape adversary strategic decisions and deter both global and regional aggression.

Concealment allows us to inject confusion, complicate adversary decision-making, induce doubt and help deter.

Submarines and Submarine Culture: We are a small elite force that provides a large contribution to the Navy team. We are 7% of the Navy’s people operating 25% of the Navy’s combatants. We own the undersea domain and operate where and when we choose. Our shared submarine culture is not equipment, systems or ships – it is the spirit of our people that has been at the core of submarine operations for over one hundred years.

The Broader Undersea Family: Our family includes the various elements that make up the broader Undersea Warrior team: The highly skilled cadre of experts that form our Integrated Undersea Surveillance (IUSS) team – warriors who operate on the front lines every day, identifying threats to the United States’ security and economy as early and distant from our shores as possible. Our two forward deployed submarine tenders – experts in providing expeditionary maintenance that enables our warships to fight at our enemies’ doorstep. Our builders and shore-side maintainers – craftsmen who provide and sustain the world class platforms that give us confidence to operate independently great distances from our own shores. Our trainers – instructors who create, coordinate and execute the training and education vision for the Submarine Force.

The Future of Undersea Warfare: It is our responsibility to capitalize on our unique ability to access denied areas, enable follow-on joint force access, and continue to fight on the leading edge. We must also be able to inflict devastating attacks ourselves, unsupported, to project power ashore and assert U.S. sea control before the rest of the Joint Force gains access. This requires dependence on traditional undersea warfare areas such as torpedo employment and Tomahawk strikes, but will also increasingly depend upon new capabilities that trick, jam or blind adversary sensors, disrupt cyber systems, cripple targets without killing them, destroy seabed targets, attack shallow and fast surface ships, and permit time-critical strikes against distant targets. Our success will predominantly depend upon our Commanding Officers’ ability to sustain a solid foundation of submarine mariner and warfighter skills to support flexing to short-fused missions. We are in a period of rapid change and we must act decisively to take advantage of opportunities and sustain our undersea advantage.

Stealth allows us to attack with surprise at the time and place of our choosing, from within the adversary’s defensive perimeter, maximizing disruption.

Part II

Foundation of Strength and Lines of Effort

Part II builds upon Part I and articulates our approach to meeting the challenges we will confront.

Foundation of Strength: This update emphasizes the importance of developing our Sailors, the men and women who man our boats, our Integrated Undersea Surveillance (IUSS) teams, the instructors in our schools, our operational and shore staffs, and our shore-side and expeditionary maintenance teams. Each of these Sailors is a member of an elite, high performance team integral and fundamental to our undersea success. Developing and retaining these Sailors is not only our responsibility, but also essential to our future success for generations to come.

Lines of Effort: Each of the Lines of Effort introduced in the original DUSW remain here; they are what we do to deliver our unique capabilities and value to our country. These Lines of Effort are:

- **Provide Ready Forces**
- **Maximize Employment Effectiveness**
- **Develop Future Force Capabilities**

Under each Line of Effort we cite three focus areas deserving our near term action. For each, we describe actions required and responsible parties.

Foundation of Strength: Undersea Warriors

Our effectiveness depends on the men and women who fight, support, and repair our ships. They are the foundation of strength that underpin our Lines of Effort and drives our success. This foundation reflects three attributes:

Undersea warrior teams that are strong, resilient and adaptable

As the central theme of our Commander's Guidance in Part III, we must build and sustain high performance teams of elite individuals who are proud of their submarine heritage, who know their job, who know how their job supports the team, and who naturally back each other up. We must recognize the challenges of our profession and rally around those who need support. Unplanned personnel losses hurt our force, decrease our resilience and reduce flexibility. We have proven techniques for bringing Sailors aboard their first submarine, integrating them into our culture, and then guiding their professional development. Using these tools will help our people be successful. Similarly, partnering with our families, we can build the foundation of support for our Sailors that results in a healthy work/life balance necessary for sustained performance.

Undersea Warriors who combine expertise, discipline and initiative

As worldwide technological, political, and social developments create demand for a larger array of missions to execute from under the sea, we must evolve our manpower, training and equipment programs to keep pace. We must build and posture future generations of warfighters to succeed in a rapidly changing world.

Leaders at all levels who motivate, mentor, empower, decide and act

Each of us has an obligation to be a leader. Be it the CPO on the deckplate or the Force Commander at headquarters, our credibility as leaders is tied to our actions not our words. Our Sailors are smart and observant and will be grading our performance – a performance that demands a steady hand, fortitude, and courage. Never underestimate the positive impact you can have on your Sailors.

Successful commands build moral courage in their Officers, Chief Petty Officers and Sailors.

Building moral courage means helping each person:

- Know what is right
- Develop the character to do what is right

Successful commands also foster a workplace in which every Sailor understands his unique contribution to the team and understands that they are valued.

Line of Effort 1: Provide Ready Forces

We provide Undersea Forces that are ready to safely and effectively conduct the spectrum of peacetime and wartime missions. This requires a steady battle rhythm of training, certification, maintenance and deployments. It must be sustainable; it must not depend on material and manpower that shifts from one boat or surveillance asset to another. COMSUBLANT leads this Line of Effort. Our primary goals are to:

- Prepare undersea forces to safely and effectively conduct peacetime operations
- Prepare undersea forces to effectively conduct wartime operations on short notice.

Focus Areas for 2013

1.1 Enhance CO initiative.

Proactive leadership continues to be a focus area for training our officers and conducting our business. In 2013, we will support this effort through improved planning, execution, and assessment.

- Evidence of Improvement: Correlation between CO assessments and outside evaluations and inspections.
- Lead Parties: Commanders at all levels.

1.2 Improve operational decision-making skills.

Making sound decisions in complex, evolving scenarios requires study and practice ahead of need. Hard decisions are easier for leaders who surround themselves with people also practiced at making difficult decisions. We will train our watchstanders and teams to develop habitual skills in confronting uncertainty, complexity, and urgency. SLC, TYCOMs and ISICs will collaborate to establish standards, training curricula and assessment methodology.

- Evidence of Improvement: Assessments from Tactical Readiness Evaluation (TRE) teams, deployment certification teams and Operational Commanders, incident reports/near misses, and DEVRON 12 assessments of deployed missions.
- Lead Parties: CSL/CSP N7, Submarine Group and Squadron Commanders, and Submarine Commanding Officers.
- Collaboration with: SLC.

1.3 Improve situational awareness and defenses in EW and cyberspace (“Virtual Ship”).

We serve in the 21st century where the ability to conduct Information and Electronic Warfare is just as important as being able to put ordnance on target. Crews must improve ESM analysis. Support organizations must develop a more capable shipboard suite, revise our TTP for emerging threats, and protect our own cyber networks.

- Evidence of Improvement: Information Assurance assessments; Deployed mission performance evaluations; TRE results.
- Lead Parties: CSL/CSP N6/N7, CSDS-12, COs and their crews, Commander Undersea Systems (CUS).
- Collaboration with: Submarine Learning Center (SLC), Network On-Site Representatives (via ISIC), Fleet Cyber Command (FCC).

Line of Effort 2: Maximize Employment Effectiveness

We must employ our forces with purpose throughout the operating cycle – from forward surveillance and SSBN patrols to combat operations. COMSUBPAC leads this Line of Effort. Our primary goals are to:

- Optimally employ our undersea forces independently or as part of a team in support of our operational or warfighting responsibilities.
- Reliably and professionally accomplish the missions tasked by the operational commanders while effectively managing risk and stealth
- When ordered, go to war and execute the Combatant Commander's direction.
- Put ordnance on target when tasked and bring our crews home safely.

Focus Areas for 2013

2.1 Continue OPLAN and Theater Campaign Plan development. Emphasize emerging capabilities such as cyber, EW and unmanned systems, and our unique role in SOF support.

Undersea Forces should work throughout the operating cycle to identify and improve their ability to support theater and operational plans. TYCOM and CTFs should focus on existing plans and incorporation of emerging capabilities to improve the existing plans.

- Evidence of Improvement: TYCOMs and Submarine CTFs increased inclusion of cyber, EW, SOF and unmanned systems into Theater Campaign Plans and deployed operations; mission training links to operational plans; post-patrol/deployment reports and recommendations.
- Lead Parties: CSL/CSP N3/N5/N8/N9, CTF Commanders, CUS,
- Collaboration with: Fleet Cyber Command (FCC), NAVSPECWARCOM, N2N6F21

2.2 Continue warfighting capability demonstrations that emphasize coordination with Allies, FCC, Special Operations, and other Undersea Forces.

Remove operational and tactical seams by practicing coordination during pre-deployment periods, and while alert and forward deployed. Demonstrate new capabilities at sea and their applicability to undersea forces. When appropriate, quickly transition new capabilities to the Fleet.

- Evidence of Improvement: Development of a force wide plan approved by the TYCOMs that targets opportunities over the next two years; increased tactical experiments with FCC and Tenth Fleet; linkage of UUV and UAV demonstrations to warfighting capabilities; continued growth of Allied and SOF coordination; exchange billets in the Cyber/EW area.
- Lead Parties: CSL/CSP N1/N3/N7/N8, Group Commanders, Squadron Commodores, CUS.
- Collaboration with: FCC, PERS-42, Naval Special Warfare.

2.3 Develop Undersea Warfare Command doctrine and TTPs.

The Force requires integrated C2 for both manned and unmanned undersea systems and defined practices for effective coordination of mixed undersea forces with other forces.

- Evidence of Improvement: Further maturing of the Undersea Warfare Command concept and doctrine; exercises to develop TTP involving the coordination of undersea assets.
- Responsible Parties: CSL/CSP, Submarine CTF Staffs, CUS.
- Collaboration with: Navy Warfare Development Command (NWDC).

Line of Effort 3: Develop Future Force Capabilities

This line of effort addresses the future beyond the next five years. Future warfare will place increasing demands on Undersea Forces while facing likely reductions over the next 20 years.

OPNAV N97 leads this line of effort. Our primary goals are to:

- Define the future role of undersea forces in both operations and warfighting.
- Determine platform, systems, payload, people and posture requirements.
- Translate requirements into decisions, policy and funding.

Focus Areas for 2013

3.1 Refine needed capabilities through research, analysis, wargames and experimentation.

The efforts of industry, government, Fleet, NAVSEA and the Pentagon must be supported by objective and timely analysis and experimentation.

- Evidence of Improvement: Analysis supported by experimentation; operational concepts matured and agreed to so that analysis has a baseline accepted by OPNAV N8 and N9.
- Lead Parties: OPNAV N97, OPNAV N2/N6F2, CSL/CSP N7/N8, CSDS-5/12, CUS.
- Collaboration with: NAVSEA, Naval Undersea Warfare Center (NUWC), Office of Naval Research (ONR).

3.2 Increase undersea domain influence through off-board sensors, systems and infrastructure.

The emergence of off-board undersea systems will shift the sources of undersea domain influence. To retain our dominance, we must exploit the spectrum of off-board systems, such as Unmanned Undersea Vehicles (UUVs), Unmanned Aerial Vehicles (UAVs), Distributed Netted Systems (DNS) and undersea support infrastructures.

- Evidence of Improvement: UUVs, UAVs, DNS and infrastructure are integrated into undersea operations; a valid concept of operations governs the employment of these systems.
- Lead Parties: OPNAV N97, CSL/CSP N7/N8, CSDS-5/12, CSF Executive Director (ED), CUS
- Collaboration with: OPNAV N2/N6, NUWC, NWDC.

3.3 Fortify investments in SSBN, SSN, SSN Virginia Payload Module (VPM) and payloads.

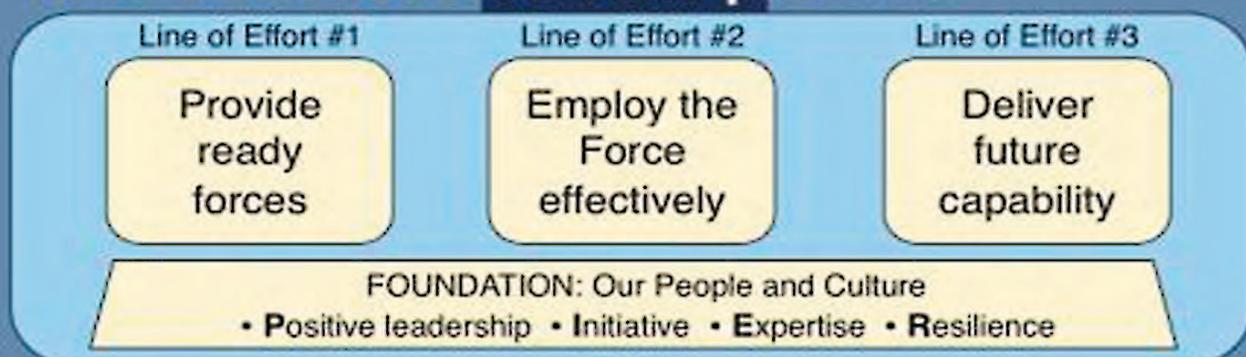
Program cost-efficiency must be exceptional. We must retain funding for SSBN recapitalization, VIRGINIA Payload Module (VPM) and SSN shortfall mitigation (added hulls, life extensions). Future payloads (Large UUVs, UAVs, heavyweight torpedo, future strike and anti-ship missiles) must remain on track. We must implement a system for EMS sensors and analysis equipment that mirrors our success in acoustic rapid commercial off-the-shelf insertion (ARCI).

- Evidence of Improvement: Integrated Undersea Future Strategy and Unmanned Undersea System Strategy requirements funded.
- Lead Parties: OPNAV N97, CSL/CSP N8, PEO SUBS.

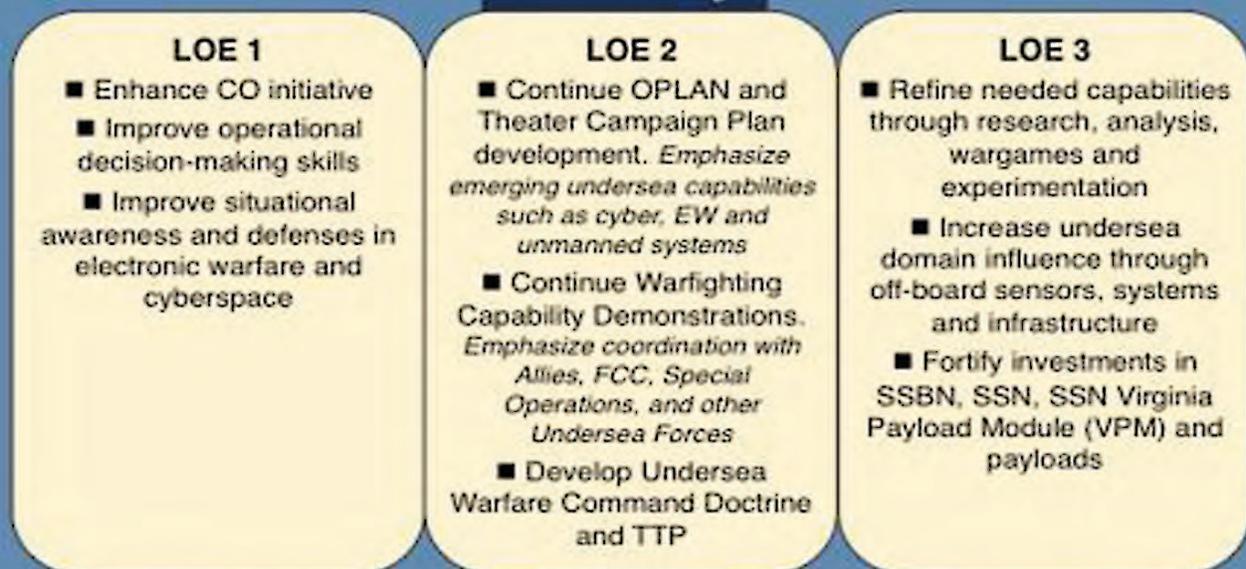
Our PROMISE to our country



How we DELIVER on our promise



Our FOCUS AREAS this year



US Submarine Forces: Our promise and how we deliver on it

Figure 1: Our promise and how we deliver on it

Part III

Commander's Intent and Guidance

Commander's Intent

We are the undersea arm of the United States Navy, an elite force charged by the Nation to leverage our access in the undersea domain. Therefore, every day, we must do our part to:

- Deter conflict
 - We are the survivable leg of the strategic nuclear triad [Inter-continental ballistic missiles, bombers, and submarines]
 - Along with our partners in the Air Force ICBM and Strategic Bomber forces, we serve as the primary deterrent to nuclear AND conventional war
 - Our conventional undersea capability outflanks adversary anti-access systems.
- Gather vital intelligence
 - We are uniquely able to gain undeniable access to areas of concern to obtain and decipher ground truth intelligence in support of diplomacy and planning
 - We are invisible, non-provocative, and enduring

And, we must always be ready to:

- Fight and win wars
 - Should diplomacy fail, we are uniquely and immediately capable of shifting to an offensive posture to deliver credible, decisive firepower from beneath the sea.
 - We relentlessly hunt and kill adversaries anywhere in the world

We live by the CNO's tenets:

- Warfighting First
- Operate Forward
- Be Ready

To achieve these, we work along three Lines of Effort:

- Providing Ready Forces
- Maximizing Employment Effectiveness
- Delivering Future Capabilities

These three lines of effort above are built on the Foundation of Strength provided by the culture, character and skill of our people:

- Individuals with expertise, discipline, and initiative
- Leaders who are motivating, capable, and decisive
- Families that are informed, supported, and supportive
- Teams that are strong, resilient, and adaptable

Commander's Guidance to Submarine Commanding Officers

As Commanding Officer of a nuclear-powered submarine, you uphold the highest standards of personal and professional conduct at all times. As the last of the independent maritime warriors you have more freedom of action – in peace and in war – than anyone else in the U.S. military. You are entrusted by our nation to take ship and crew to sea – without support – without communication – and then shoulder the burden of completing missions vital to the defense of our nation in the most hostile environments. On short notice, you must also be ready to shift to a posture of continuous communications – tightly coupled to the larger Navy, Joint or Interagency team – in order to contribute your unique capabilities to the larger fight. Our trust in you, along with the trust you enjoy from your crew and your fellow warriors, is contingent on you maintaining those high standards.

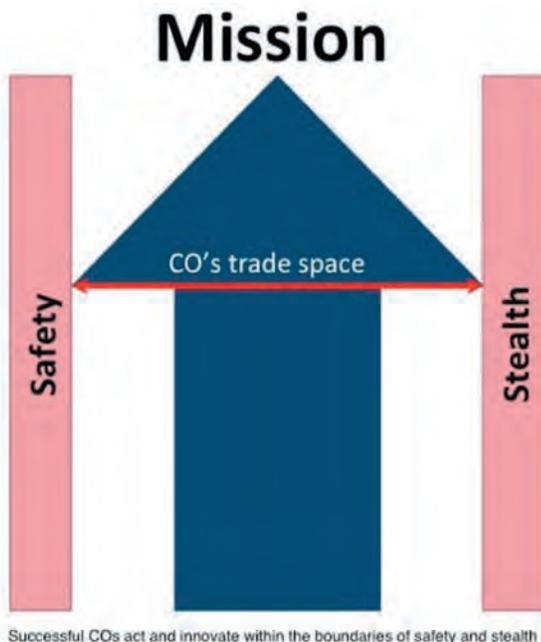


Figure 2: The CO's trade space - between safety and stealth

of how you want to project your leadership to your crew, understand how you are perceived, and then work to reconcile the difference.

- Train, mentor and develop your officers. Short of winning in war, nothing is more important. Build talent over time so it is available when you need it. Guide the development of your officers – push them beyond their comfort zone, but know when to tolerate their mistakes. Supervise them as you stretch the limits of their ability to fight the ship, recover and try again, until you are both satisfied with his or her performance. Require your officers to own and run their division, their department, their ship. Actual responsibility and accountability, with an increasing span of control over time, will prepare these officers for future success and eventual command.

- Build depth in your teams. Our sailors are the most talented in the world. Your goal should be to maximize each sailor's potential. Build a professional environment that makes being a submariner rewarding. Enthusiastically bring them aboard and lead their professional development. You have a small elite crew, know your sailors intimately and show them how they fit into our culture of pride, integrity and accountability and how elite teams uniquely depend upon the individual. Your officers and chiefs must share the weight of responsibility for developing and shepherding their sailors and know that we trust their judgment.

We provide the following guidance in order to help focus your efforts.

- Use your boat to help achieve national objectives. This is your primary responsibility. You must carry out this primary responsibility within strict boundaries of safety and stealth. These boundaries should only be crossed in time of war and to achieve specific, high priority, military objectives. Genuine success is possible only by maintaining proficiency in submarine skills such as navigation, contact management, damage control, ship control, communications, weapon employment, force protection and reactor plant operations. There are non-negotiable professional standards in each of these areas that you will be measured against. Your force commanders value balanced and consistent performance overall in lieu of short-lived performance in one area.

- Wear Command well. Positive leadership is important. It combines competence, energy, patience, and balance. It means constructively correcting what is wrong, but also noticing and reinforcing what is right. Have a clear vision, well thought out in advance, of what these basic tenets mean to you. Have a vision

of how you want to project your leadership to your crew, understand how you are perceived, and then work to reconcile the difference.

- Build depth in your families. Our families are the foundation of the Sailor support structure that is integral to safe, undistracted operations at sea. Building and nurturing family bonds is among the most critical aspects of your boat's mission effectiveness. The most important lever that you control affecting your families' quality of life is an efficient, predictable inport routine that supports a healthy work/life balance. This requires superb planning. Keep your families informed and involved by communicating your intent and the ship's future plans to the limits of your ability to discuss submarine operations.

- Implementation. The guidance that we provide you as Commanding Officer is based on the missions assigned to the Submarine Force, three decades of experience of each of the three Flag Officers signing this document, and significant feedback from the Submarine Force. However, it is general guidance by design because the myriad of implementation steps must be crafted by you, tailored to your ship, and adapted to the situation, talent and personalities of your command. You must lead your ship, assess your situation continuously, and adjust fires as needed.

**Commander's Guidance to those who support our Sailors – Major Commanders,
Commanders, Officers-in-Charge, Project Managers and Leaders who build, maintain, train,
operate and employ our Undersea Forces**

- Your primary responsibility is to support the Commanders at sea. The center of gravity of our Undersea Forces is the Submarine operating independently, forward, with confidence. Each of us ashore or in support roles must never forget the sailors on the deck plate who take their ships in harm's way. We must strive every day to ensure that the Sailor has the tools, resources, systems, guidance, training and education to be successful.

- Respect and support the Commanding Officer's authority and responsibility for his ship. This first principle will continue to be the cornerstone of our ability to succeed in undersea wartime and peacetime operations, and singularly depends on our ability to develop decentralized, autonomous commanders at sea. We must observe it, celebrate it, and defend it. With authority comes responsibility and also accountability. The support and guidance we provide from outside the ship must not undercut the Commanding Officer's authority or reduce his accountability.

- We are made better by an absolute commitment to collaboration, communications and coordination across, around and through organizational boundaries. These virtues must remain as integral parts of our fiber, and we must continue to build mechanisms into our processes to sustain and ensure all three.

- Remove distractions from our Forces afloat. The demands on our undersea warriors are high and will grow with the advent of new mission areas. We must never forget that our submarines are small, elite teams that rely heavily upon undistracted, individual performance.

- Implementation. Similar to our guidance to Commanding Officers above, we expect you to exercise initiative to ensure the principles of the DUSW are understood and exemplified in your organization's approach to your business.

Undersea Warfighting

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November 2012