

PANAMA CITY

DAM NECK

Naval Surface Warfare Center

DAHLGREN

D I V I S I O N

DAHLGREN



PANAMA CITY DAHLGREN DAM NECK

DCN: 3038

Overview

The Dahlgren Division is one of six divisions of the Naval Surface Warfare Center Enterprise. The Dahlgren Division is comprised of three sites: the Naval Surface Warfare Center Dahlgren Laboratory, Dahlgren, Va.; the Coastal Systems Station, Panama City, Fla., and the Combat Direction Systems Activity, Dam Neck, Va. Under the leadership of Captain Joseph L. McGettigan, the Dahlgren Division is a principal research and development, and test and evaluation facility for the United States Navy. The Division conducts analysis, systems engineering, research, test, evaluation, and integration of naval and joint warfare systems.

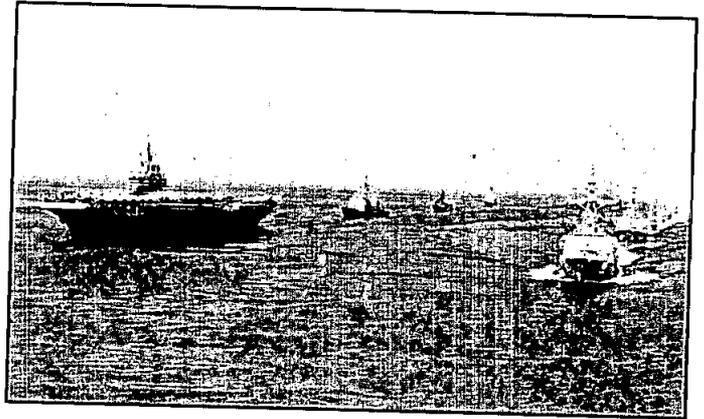
Our objective is to help make the Chief of Naval Operations Sea Power 21 vision a reality by helping sustain current readiness and by delivering future readiness. As a Division, we do this by:

- Understanding the technical dimensions of military problems—now and in the future
- Knowing who can competently solve those problems and organize teams to develop solutions
- Determining that responsible solutions have, in fact, been provided
- Increasing our value to the warfighter with effective and timely products
- Achieving superior technical capability and products
- Achieving excellence in organization and management
- Achieving excellence and efficiency in business management

As part of the Naval Surface Warfare Center Enterprise, we support six of the twelve Naval Sea Systems Command Product Areas: Surface Ship Combat Systems; Navy Strategic Weapon Systems; Ordnance; Littoral Warfare Systems; Homeland Defense and Force Protection; and, Force Level Warfare Systems.

We also hold 17 Technical Warrants and support 13 more:

- Chief Systems Engineer Amphibious and Auxiliary Ships Warfare Systems
- Chief Systems Engineer CV/CVN 68-77 Class Warfare Systems
- Chief Systems Engineer CVN 21 Class Warfare Systems
- Chief Systems Engineer DD(X) Class Warfare Systems
- Chief Systems Engineer DDG 51/CG 47 Class Warfare Systems
- Chief Systems Engineer LCS Class Warfare Systems
- Chief Systems Engineer MCM/MHC Class Warfare Systems
- Technical Area Expert Combat Systems ISE for MCM/MHC Class
- Technical Area Expert Mine Countermeasures
- Technical Area Expert Mines
- Technical Area Expert Radar, Infrared, Electro-Optical Sensors (except Submarine Systems)
- Technical Area Expert Surface Ship Combat and Weapons Control
- Technical Area Expert Surface Ship Electronic Warfare Systems
- Technical Area Expert Surface Ship Guns
- Technical Area Expert Surface Ship Launchers
- Technical Area Expert Surface Ship Missiles
- Technical Area Expert Unmanned Surface Vehicle Systems



Within the NAVSEA enterprise, our business focus is full spectrum science and engineering across the life-cycle of Navy ships and systems for today's Navy, tomorrow's Navy, and the Navy after Next.

To meet this technical challenge, we closely partner with the Naval Undersea Warfare Center (NUWC) to forge a formidable surface and sub-surface engineering team to provide seamless support across the spectrum of NAVSEA warfighting capabilities.

And beyond the NAVSEA enterprise, NSWCDD partners with NAVAIR, SPAWAR, and NAVSUP to provide a total Navy solution through world-class engineering support to the Navy's "Virtual SYSCOM."



NSWCDD/MP-98/33: 7/04

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For additional information, please contact:

NSWCDD Public Affairs

WWW.nswc.navy.mil

We are looking for scientists and engineers in different fields. For employment opportunities, please send your résumé to:

NSWCDD Professional Recruiting Program

Human Resources Department, Code XDPR

17320 Dahlgren Road

Dahlgren, VA 22448-5100

Telephone: 1-800-352-7967

E-mail: recruit@nswc.navy.mil

WWW.nswc.navy.mil/P/RECRUIT/

Naval Sea Systems
Command

NAVSEA

WARFARE CENTERS
DAHLGREN

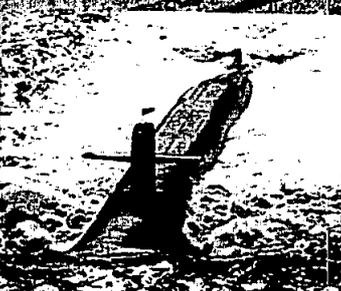
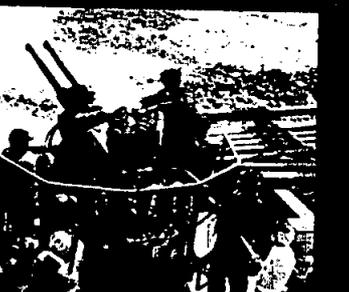
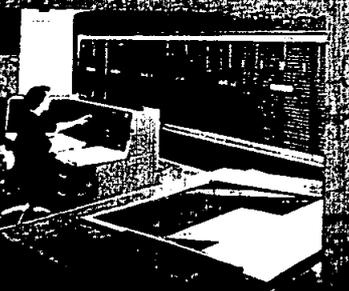
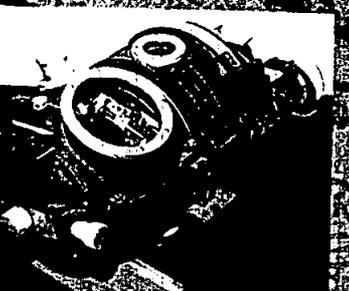


NAVAL SURFACE WARFARE CENTER

Dahlgren Laboratory

DAHLGREN PANAMA CITY DAM NECK

DCN: 3038



Overview

The Naval Surface Warfare Center Dahlgren Division has been a part of the Navy tradition since its establishment in 1918 as the chief proving ground for large-caliber guns. Named in honor of Rear Admiral John Adolphus Dahlgren, who is considered the father of modern naval ordnance, Dahlgren's 4,500-acre site was then and continues to be ideal for testing long-range naval guns and a major testing facility for naval gun ballistics.

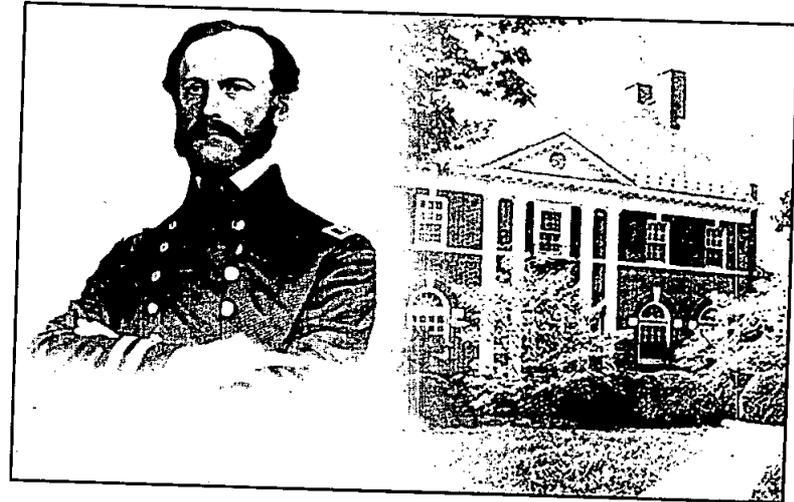
Capitalizing on expertise built upon the mathematical needs for ballistic plotting, scientists and engineers at Dahlgren expanded their work into computer systems. Based on the breadth and depth of the work they were able to accept and perform, Dahlgren became the leading systems source for national, theater, operational, and tactical-level systems, including: ballistic missiles, global positioning systems, the TOMAHAWK Missile system, the AEGIS Combat System, and most recently, the Electric Gun, and other warfare systems.

The Dahlgren Laboratory is the leading naval facility for scientific and technological research, development, testing, and evaluation in such diverse Naval Sea System Command Product Areas as Surface Ship Combat Systems, Ordnance, Strategic and Strike Systems, Force Level Warfare Systems, and Homeland Defense and Force Protection Systems.

Historical Highlights

The history of Dahlgren reveals a tradition of innovation and excellence, and a heritage rich in contributions to the Navy, the Department of Defense, and the Nation. Past milestones include:

- Development and testing of the Norden Bombsight, which helped win World War II
- First tests of radio-controlled aircraft conducted in 1923
- First calibration of bombs, beginning in 1923
- The establishment of Navy ordnance schools during World War II
- The location of the first Navy ordnance computer, the Mark II Aiken Relay Calculator
- The provision of scientific expertise that was tapped for the Manhattan Project during World War II for the development of the atomic bomb
- Home base for the POLARIS program mathematical specifications and computer programs
- The development and long-term support of the AEGIS computer system for operational AEGIS cruisers and destroyers



Current Programs at the Dahlgren Laboratory

The six departments at the NSWC Dahlgren Laboratory support the Navy and the Department of Defense in the following areas:

Systems Research and Technology Development Department—directs and conducts systems research and technology development and demonstration

Engagement Systems Department—provides safe, innovative, and cost-effective surface-launched gun, missile, and Marine Corps weapons systems

Joint Warfare Applications Department—provides leadership vision, and quality products as solutions for traditional and nontraditional missions

Strategic and Strike Systems Department—provides concept and requirements development, design, integration, and testing of the Submarine Launched Ballistic Missile (SLBM), Cruise Missiles, and Joint Unmanned Aerial Vehicle Systems

Combat Systems Department—provides technical leadership and systems engineering for Navy surface ships

Integrated Warfare Systems Department—provides a theater warfare context to evaluate warfighting concepts, technology, initiatives, and acquisition strategies



NSWCDD/MP-99/46: 7/04

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E-mail: recruit@nswc.navy.mil

Internet: www.nswc.navy.mil/P/RECRUIT

NDW Dahlgren Site Economic Impact

Annual Payroll

| | |
|---|-----------------|
| Total | \$242.7M |
| Fredericksburg <small>(includes Spotsylvania and Stafford)</small> | 99.6M |
| King George | \$4.9M |
| Westmoreland <small>(includes Colonial Beach)</small> | \$4.5M |
| Maryland | 20.6M |



Employment Levels FY'05

| | |
|--------------------|-------------|
| Civilian Total | 4031 |
| Military | 453 |
| Total | 3028 |
| Badged Contractors | 4016 |

*Figures include NDWA, NSWCDC, JWAC, NNSOC, and CSCS/ATRC

Contracting Efforts FY'03

| | |
|---------------------------------|----------------------|
| Total Contracting Effort | \$490 Million |
| Virginia Contracts | \$308 Million |
| Maryland Contracts | \$24.6 Million |





BRAC Commission Visit

NSWC Dahlgren 26 May 2005

Welcome

Command Brief

Captain Joseph L. McGettigan, USN

Commander, NSWCDD

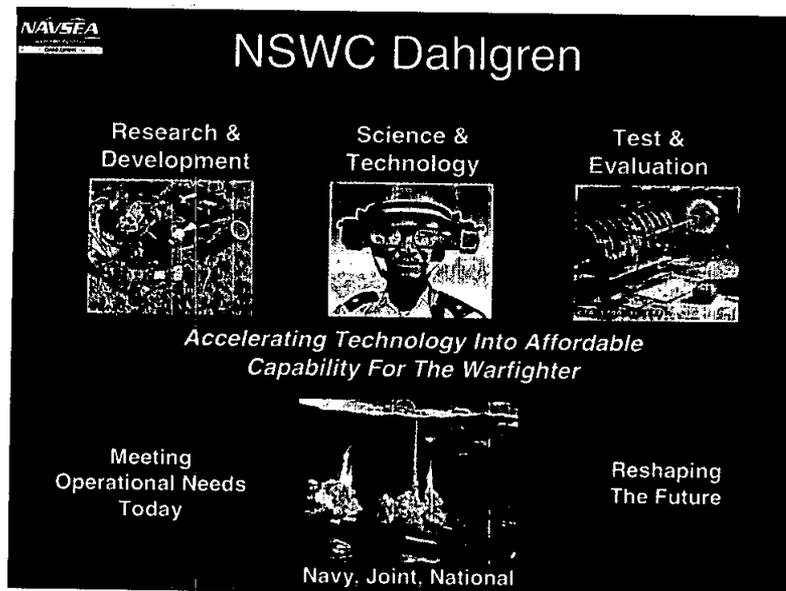
BRAC Data Analysis

Mr. Jon Sweigart

NDW West Area Dahlgren Capability

Mr. Jeff Johnson

Questions



Earlier, we described our impact in two broad areas:

- Reshaping the Future, and
- Meeting Operational Needs Today

Now we will show what we mean by this.

Today, we will begin with how we help the Navy and the Nation to make the sweeping changes needed to ensure national security.

After that, we will show how we also help our operational forces even as they are deployed on a global scale, and on our own homeland.

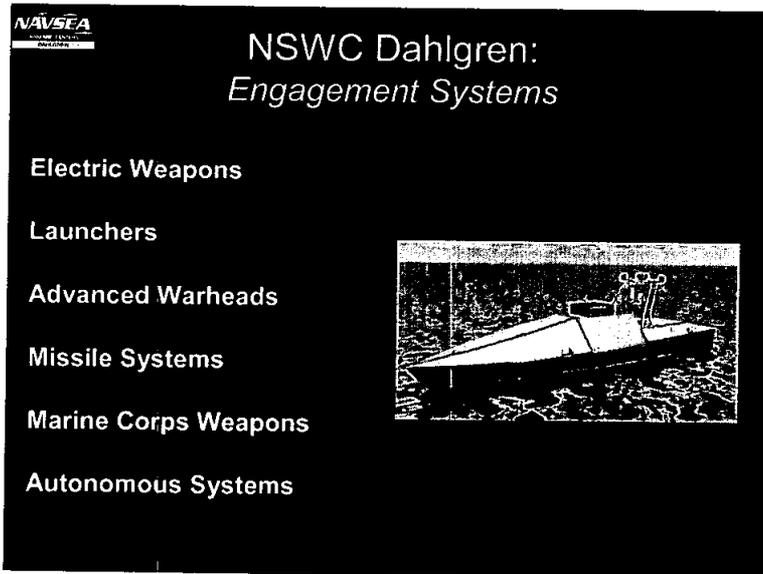


The Navy is now several years into a plan to create a new family of warships with revolutionary new warfighting capabilities.

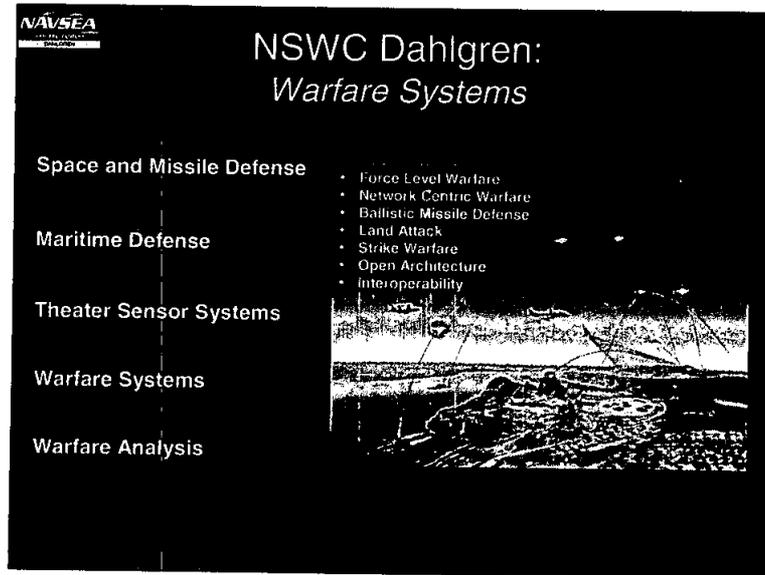
NSWC Dahlgren plays a leadership role in working with industry to bring these new capabilities into reality.

When this new family of warships enter service, we will have addressed every aspect of their ability to successfully operate in joint and coalition operations.

In fact before they can enter service, we will certify many of their systems as safe, effective, and ready for deployment.



- We are developing a new generation of systems that will be used to engage our adversaries.
- Our Scientists and Engineers are creating new weapon systems that will harness the power of electric warships, including:
 - High Powered Microwaves that squirt pulses of energy to disable enemy electronics.
 - Speed-of-light-weapons, lasers, for surgical strikes, and shooting down missiles
 - Electromagnetic launched weapons, able to hit targets 200 miles away at Mach 5 terminal velocity
- Our contributions in Engagement Systems extend beyond Naval platforms, and include:
 - *Advanced Munitions* that are highly precise and more effective.
 - *Advanced and autonomous weapons and sensors.* These systems will enable new missions for Navy, Marine Corps, and Special Forces.

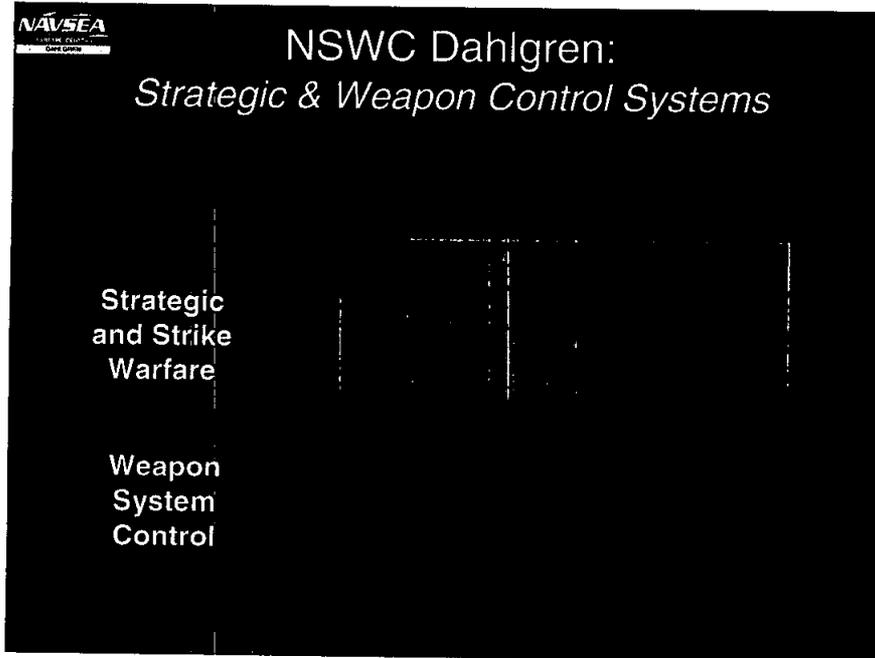


NSWC Dahlgren also leads in preparing the Navy and Joint Forces with warfare systems designed to ensure that we continue to keep the fight uneven with our technical edge.

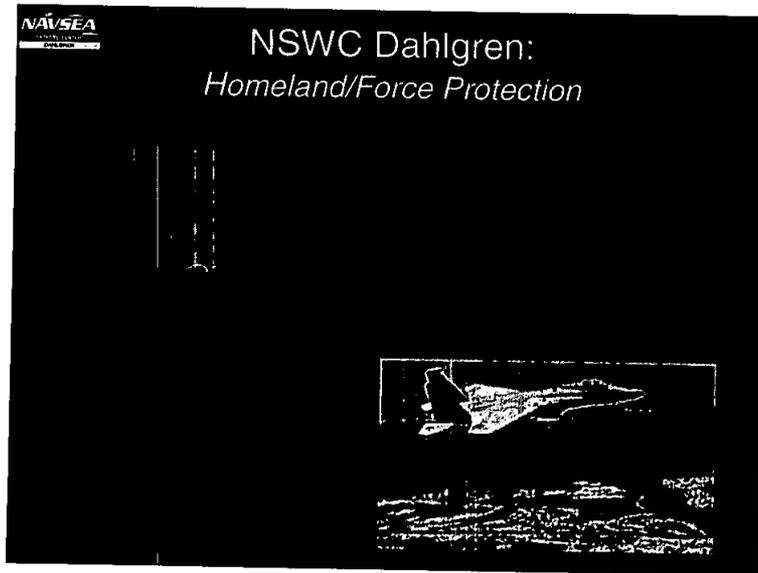
As systems increase in capability, they also tend to increase in complexity. Our job here is to harness the latest in warfare technologies, and at the same time minimize the complexity for the warfighter.

Initiatives in this area support the concept of “Net-Centric” warfare, and keeping these systems interoperable across the spectrum of Navy, Joint, and even coalition forces.

We also develop concepts that will guide how the Navy will fulfill missions involved in Force Level Warfare, Missile Defense, Strike Warfare, and Land Attack.



- We also ensure that the Navy is able to provide a strategic deterrent missile system that is safe, credible, and effective.
- Our roles include:
 - Systems leadership for Navy strategic and strike warfare systems.
 - Systems Engineering for Submarine Launched Ballistic Missiles, Cruise Missiles, and Joint Unmanned Vehicle Control Systems.
 - Integrated Control for Sea Strike Weapons
 - Technical leadership and systems engineering in specialty areas such as,
 - mission planning,
 - high performance computer programs,
 - weapons control,
 - hypersonic weapons,
 - reentry body technology and
 - integrated ship strike capability.



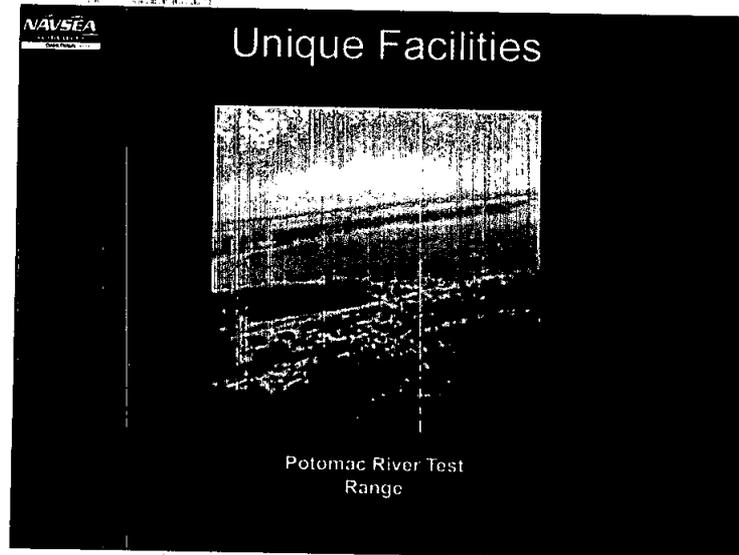
Earlier, we talked about the broad spectrum of military operations, and the new types of threats now facing our nation, even our own homeland.

Many of our technical competencies which were originally applied only to Navy requirements are now also being applied to areas of Homeland and Force Protection.

Examples of our leadership in these areas include:

- Critical Infrastructure Protection (transportation, utilities, information)
- Chemical Biological Sensing and Defense
- Mission Assurance
- Measured Response Options
- Naval Operations Other-Than-War Technologies
- Non-Kinetic and Non-Lethal Weapons
- Special Technology Countermeasures
- Targeting & Vulnerability Analyses
- Collateral Damage Estimation Tools & Analyses

It is worth noting that NSWC Dahlgren was leading the application of technology in these areas prior to 09/11/2001

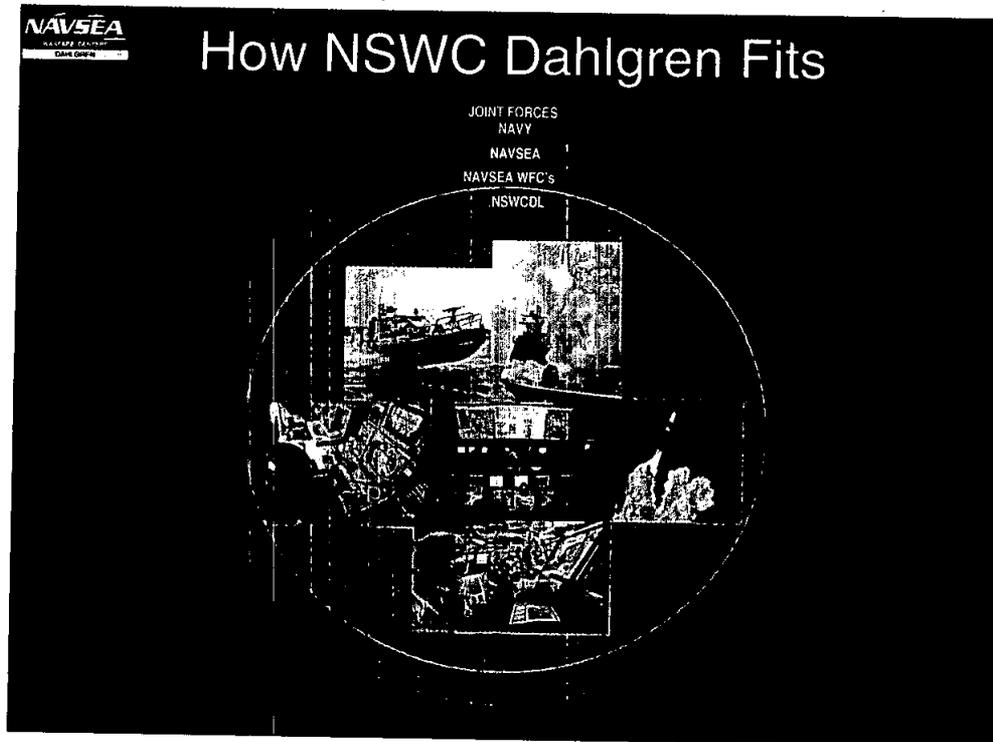


NSWC Dahlgren has 4000 acres of real estate and special facilities that provide the equivalent of a “ship on shore” where new concepts of warfare can be developed and tested in a littoral environment.

These facilities have connectivity with the Fleet and other national assets to allow global Joint military exercises.

Dahlgren’s involvement in Major Navy programs like Aegis, Tomahawk, DD(X) include experiments ranging from single elements, e.g. a warhead fuze all the way up to end-to-end systems testing and integration.

Dahlgren’s special facilities --along with its proximity to the Fleet, the Pentagon, Quantico, and other key military facilities -- provide a unique opportunity for all of these communities to come together at a single site and work as a national team to build new tools for the warfighter.



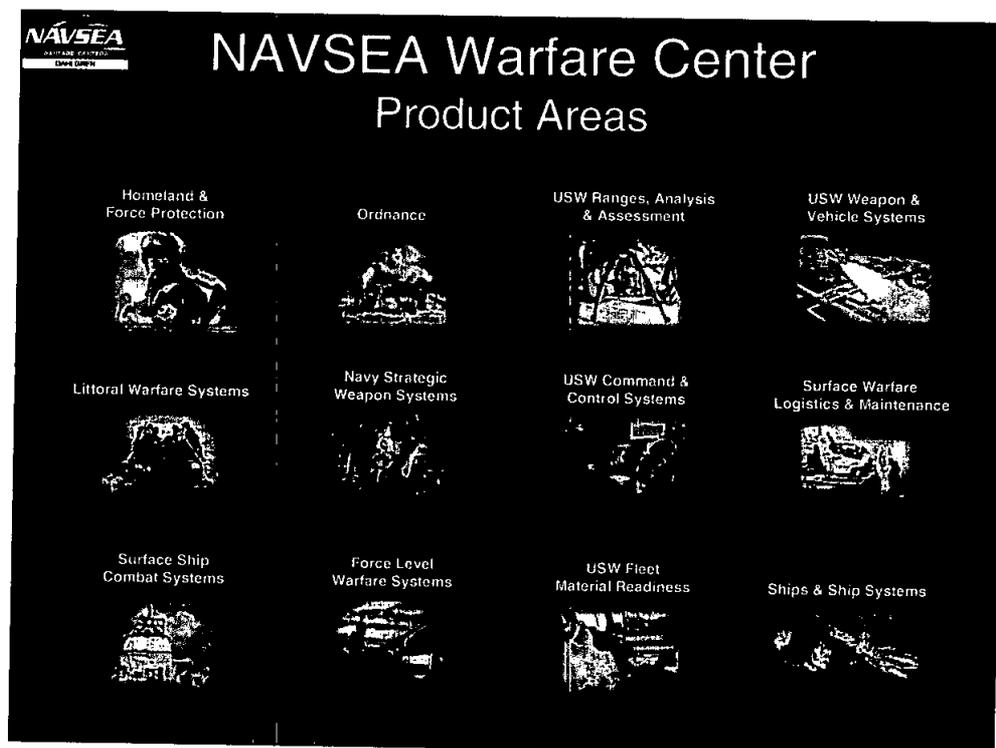
Starting at the Top, the Navy and Marine Corps are partnered with the Army and Air Force, ➡

Within the Navy, Dahlgren is focused on Surface Warfare ➡

Within the Surface Navy, Naval Sea Systems Command (NAVSEA) manages Naval shipyards, Engineering activities, Warfare Center Enterprises, and Command business and operations ➡

Within the Warfare Center Enterprise, the warfare centers are aligned by product areas including products like Ships, Surface Warfare, Ordnance, Underwater Command and Control Systems, et, etc. ➡

Within the Warfare Centers, Dahlgren Division is the largest. At the Dahlgren Site, there are 6 operational departments, focused on Combat Systems, Strategic and Weapon Control Systems, Engagement Systems, Integrated Warfare Systems, Joint Warfare Applications, and Systems Research and Technology



The Warfare Center's business base has been aligned around **12 Product Areas**, shown here.

The warfare center sites are focused on meeting the warfighter needs in each of these product areas.

NSWC Dahlgren works in close collaboration with the other sites of the Warfare Center to ensure that warfighter needs are met.

In some of these product areas we provide leadership, but our expertise is always immediately available to help across the full spectrum of warfighting need, regardless of product area.



NSWC Dahlgren:

We understand that our most precious asset is our intellectual capital -- the genius of our people.



Intellectual Capital -- "The Genius Of Our People"

- **Brain Trust Developed Over 85+ Years:**
 - Founded in Math and Sciences
 - Experienced in S&T, R&D, T&E
 - Experienced in developing the tools of war
- **Connected to Warfighter:**
 - **Understanding of Technical Dimensions of Warfighter needs**
 - **Knowledge of where to find solutions**
(government/industry/academia)
 - **Ability to know when solution has been found**
- **Peer to Industry:**
 - **Doing what industry will not do, cannot do, and should not do**
- **Integrity:**
 - **To certify systems as safe, effective, ready for combat**
 - **To manage the acquisition process**

NSWC Dahlgren represents a legacy of over 85 years as a brain trust for the Navy and the Nation:

Founded in mathematics and sciences

Still practicing its core competencies: S&T, R&D, T&E

Experienced in developing the tools of war (full spectrum) ➡

Dahlgren is connected to the warfighter

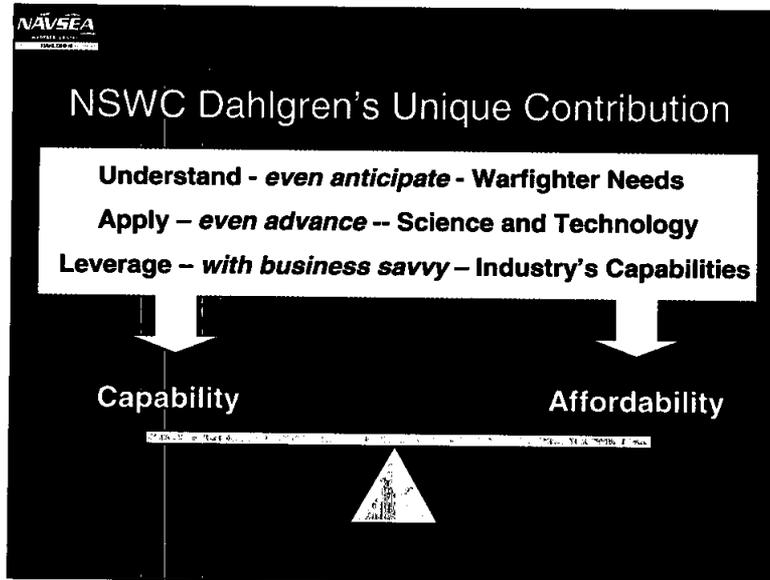
Understanding the warfighter's needs

Knowing of where to find solutions

With the ability to know when a solution has been found ➡

Dahlgren works with industry as a technical peer. There are some things that industry can't do won't do or shouldn't do. Dahlgren fills this gap. ➡

In addition to the many technical competencies mentioned, NSWC Dahlgren is also a crown jewel because of integrity. This integrity is used by the Navy to certify Systems as safe, effective, and ready for combat; and to serve as an honest broker in managing the acquisition process.



- NSWC Dahlgren helps the Navy deal with both of these two number one priorities -- **capability and affordability**. ➡

- Our tight connectivity with the warfighter allows us to understand -- even anticipate -- warfighters' needs.

- We apply, and if necessary, we even advance Science and Technology to meet warfighter needs.

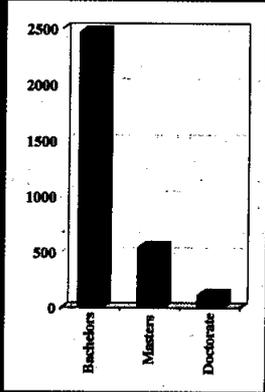
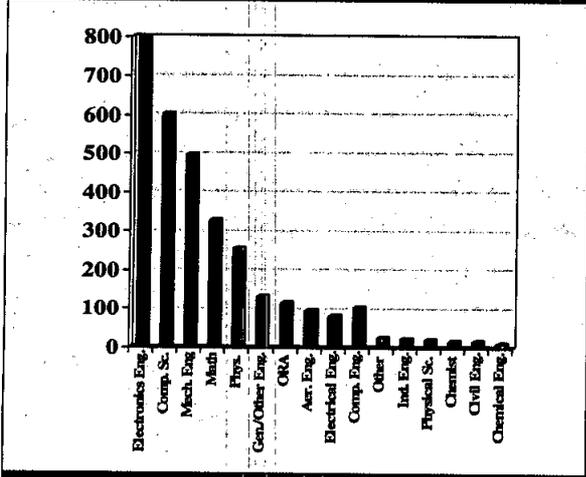
- We also know what we're good at, and we know we can't do it all. We know where – in government, industry, or academia -- to find solutions. To effectively leverage industry's capability for the warfighter, we have developed both the technical competence as well as business savvy to partner with industry as their peer. This allows us to rapidly get the right technical solution – and, at the same time, negotiate a **fair value** for Navy investments in new capability.

- All of this allows us to make major contributions to both of these number one priorities: **capability and affordability**



NSWC Dahlgren:

We have the breadth and depth required to apply technology across the broad spectrum of current military needs



The **second** reason for NSWC Dahlgren’s status as a “crown jewel”:

We have both the breadth and depth required to apply technology across the broad spectrum of current military needs.

We have professionals in key disciplines of Engineering and Computational Sciences, as well as Mathematics and Physical Sciences. We also have people in unique technical disciplines such as: biomedical engineers, engineering psychologists, molecular biologists, economists,(more)

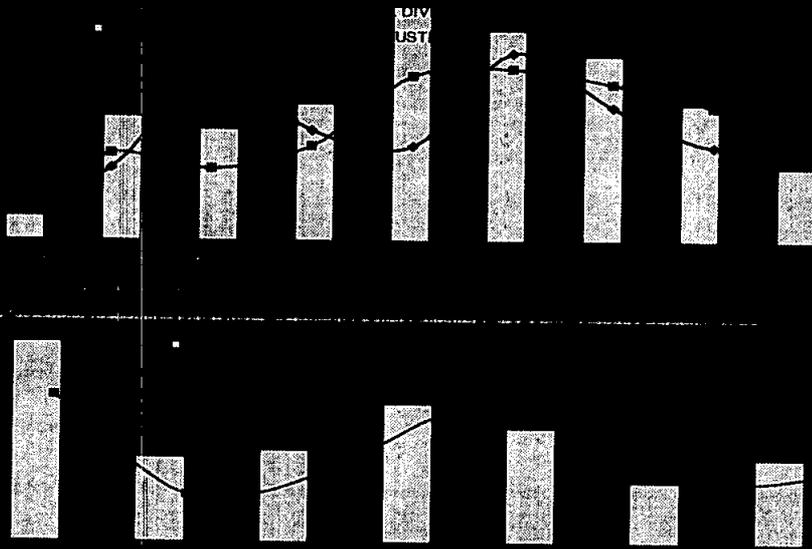
We make substantial investments in finding, developing, nurturing, and retaining talent to sustain our technical excellence.

Many of our new hires from academic institutions across the country decide to stay at Dahlgren for their entire career.

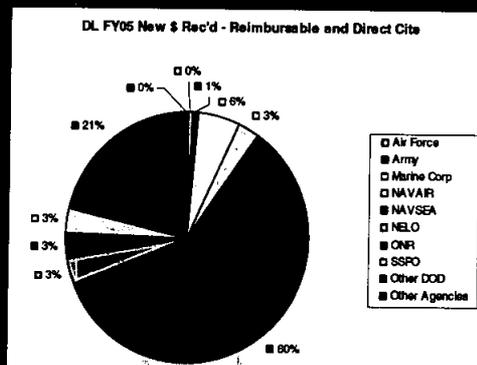
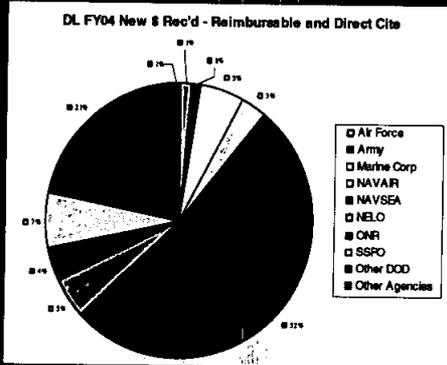
Warfare Center Demographics

Warfare Center Demographics Age 18 to 44 - 44%

Age 45 to 60+ - 56%



DL FY04 vs FY05 New \$ Rec'd By Major Sponsor





NSWC Dahlgren: *Our Current Impact*

We accelerate technology into affordable capability for the warfighter, across the spectrum of military operations:

Chemical and Biological Defense

Critical Infrastructure Protection

Ballistic Missile Defense

New Surface Ship Combat Systems

Improved Force Protection

Reduced Ship Manning via
Human Systems Integration

"Fair Value" for Combat Capability
via Open Architecture



Dahlgren's technical capability is having major impacts, the **most recent** include:

- Our Chemical Biological Defense technology is being used to protect key military assets around the globe and here at home
- Our Infrastructure Assurance technology is minimizing our nation's vulnerability to attacks on critical infrastructure targets
- Our Missile Defense technology is a key element of the sea based ballistic missile defense, which will be the initial national capability for defending the nation against this threat
- Our Weapons Control technology is helping to create a new strike capability – Tactical tomahawk, which allows new and critical flexibility for the warfighter
- Our Force Protection expertise is creating new technology to rapidly upgrade the protection of our troops operating in USMC Ground vehicles

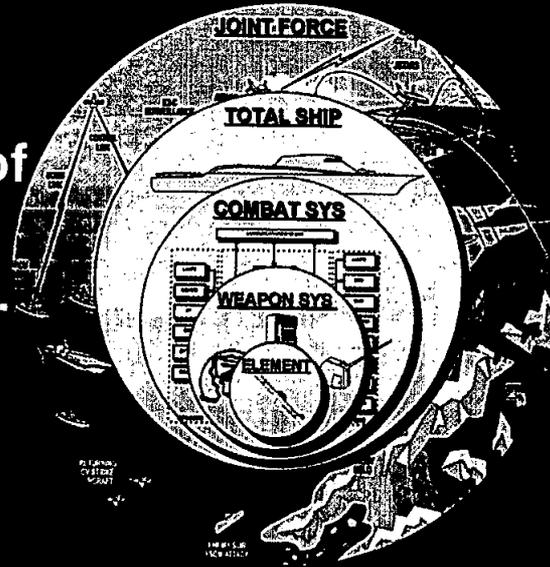
Naval Surface Warfare Specialty Site Designation

Spectrum of efforts is broad, but our focus is providing integrated capability at the appropriate Navy, Joint, and National level.

- *“During the other large scale movements of W&A capabilities noted above, Weapon System Integration was specifically addressed to preserve the synergies between large highly integrated control system developments (Weapon Systems Integration) and the weapon system developments themselves. A specialty site for Naval Surface Warfare was identified at Dahlgren, VA, that was unique to the services and a centroid for Navy surface ship developments. A satellite unit from the Naval Surface Warfare Center, Port Hueneme, San Diego Detachment will be relocated to Dahlgren.” (Vol 1, Part 2, Page 380)*



**System
Engineering of
Integrated
Capabilities...**



NAVSEA
NAVAL CENTER
DAYS, DIMEN

Key Attributes/Combat System Development at NSWC Dahlgren

- Weapons Systems Integration establishes and maintains the Fire Control loop between disparate parts to act as an integrated whole (Combat System).
- “The Fire Control Loop” is the automated part of system control from Detection through Engagement of a Weapon in an operational use of deadly force.
- Computer control (millisecond response) and guaranteed action (Determinism) are foundational characteristics of the Fire Control Loop.

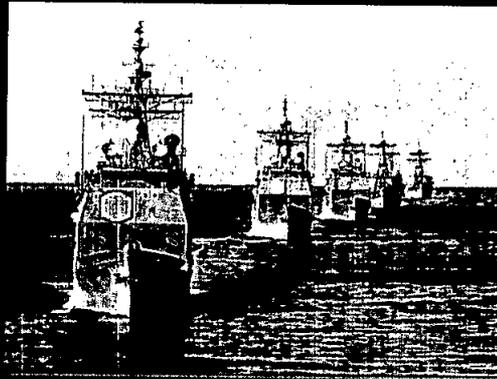
We Certify the Fire Control Loop (Combat Systems)



What is Aegis?



- Two classes of guided missile surface combatants
 - CG 47 cruisers – 24 ships
 - DDG 51 destroyers – 50+ ships
- U.S. Navy's most advanced and capable ship combat system
 - Anti-Air Warfare
 - Anti-Submarine Warfare
 - Strike / Land Attack
 - Sea Based Missile Defense
- Highly automated, rapid reaction real-time weapon system
 - SPY-1 phased array radar
 - Doctrine driven automation
 - Vertical Launch System
 - Standard Missile – 2
 - ~ 5 million SLOC



Cornerstones: Reaction Time ... Firepower ... ECM and Environmental Resistance ... Continuous Availability ... Coverage



Dahlgren Roles (R, DA, T&E)



Sensors and Comms

Incoming Interface



Control

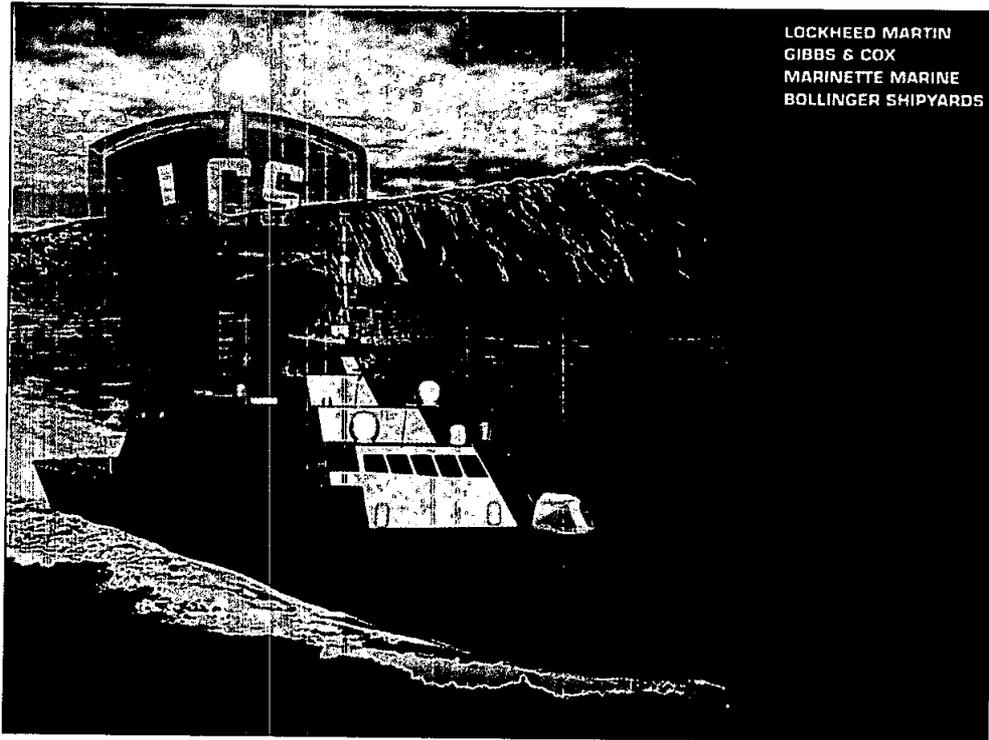


Weapon and CM

Outgoing Interface



Dahlgren Roles
Other Warfare Centers



LOCKHEED MARTIN
GIBBS & COX
MARINETTE MARINE
BOLLINGER SHIPYARDS



**WARFARE ANALYSIS
SYSTEMS ENGINEERING**

PLAN SENSE CONTROL ACT

SYSTEMS AND COMPONENTS

CENTERS OF EXCELLENCE

SCIENCE AND TECHNOLOGY



BRAC Report Assessment

26 May 2005

Developing an Understanding of the BRAC Report

- Report Itself
 - Including NSWC Dahlgren Specialty Site Designation
- JCSG Scenarios
- Dahlgren Certified Responses to the Scenarios
- Resolution of “Inextricable”

— Example: “In addition, when specific Weapons & Armaments FTEs, equipment and facilities are an **inextricable** part of a specific effort performed by your activity, identify those FTEs, equipment and facilities and provide justification for those areas of conflict in #USN0047.”



Naval Surface Warfare Specialty Site Designation

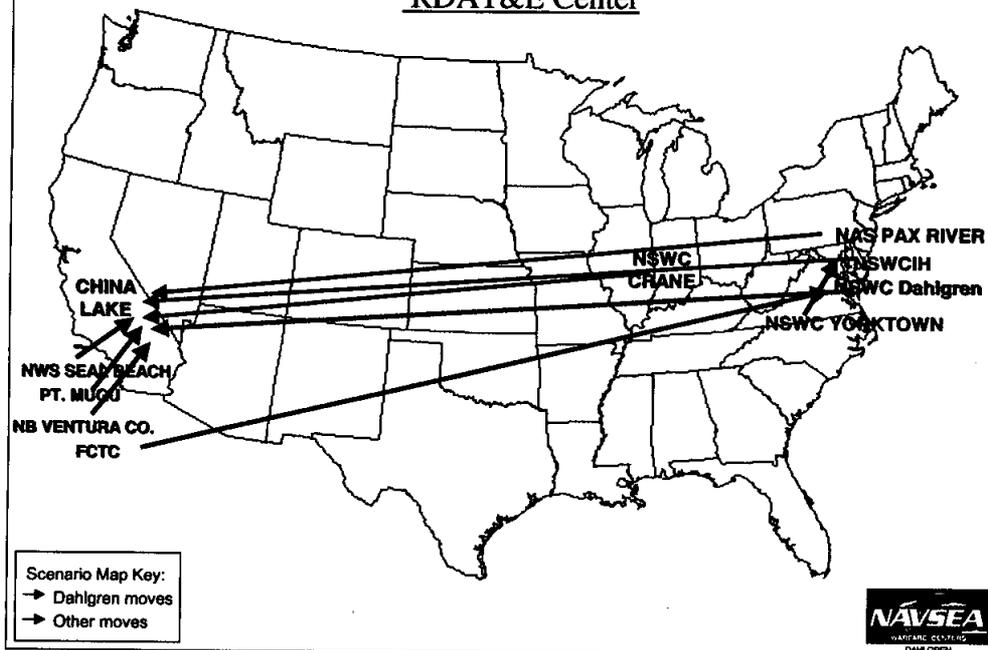
- *“During the other large scale movements of W&A capabilities noted above, Weapon System Integration was specifically addressed to preserve the synergies between large highly integrated control system developments (Weapon Systems Integration) and the weapon system developments themselves. A specialty site for Naval Surface Warfare was identified at Dahlgren, VA, that was unique to the services and a centroid for Navy surface ship developments. A satellite unit from the Naval Surface Warfare Center, Port Hueneme, San Diego Detachment will be relocated to Dahlgren.” (Vol 1, Part 2, Page 380)*

Summary of BRAC Report Realignment Actions

| Scenario | Civilians Out | Civilians In |
|---|---------------|--------------|
| Weapons and Armaments to China Lake | 173 | |
| Guns and Ammo to Picatinny Arsenal | 83 | |
| Maritime C4ISR to Pt Loma, San Diego | 116 | |
| Pt. Hueneme San Diego Detachment to DL | | 40 |
| Maritime Sensors from Pt Loma San Diego | | 108 |
| Maritime Sensors from Charleston | | 21 |
| Chem Bio to Edgewood Arsenal | 131 | |
| Total | 503 | 169 |



**TECH 15: Naval Integrated Weapons and Armaments
RDAT&E Center**



Weapons and Armaments to China Lake

- **BRAC Report:** Realign Naval Surface Warfare Center Dahlgren, VA, by relocating all Weapons & Armaments Research, Development & Acquisition, and Test & Evaluation, except guns/ammo and weapon systems integration to Naval Air Weapons Station China Lake, CA.
- **JCSG Scenario:**
 - Action 12: Realign NAVSURFWARCENDIV_DAHLGREN_VA (N00178) W&A RDAT&E (except guns/ammo and weapon systems integration) and relocate to China Lake (N60530)
 - Action 13: Realign NAVSURFWARCENDIV_DAHLGREN_VA (N00178) W&A RDAT&E (except guns/ammo and weapon systems integration) In Service Engineering and relocate to China Lake (N60530)
 - Action 14: Realign NAVSURFWARCENDIV_DAHLGREN_VA (N00178) W&A RDAT&E (except guns/ammo and weapon systems integration) Sustainment and relocate to China Lake (N60530)

| Scenario | Civilians Out | Civilians In |
|-------------------------------------|------------------|-----------------|
| Weapons and Armaments to China Lake | 173 | |



Weapons and Armaments to China Lake

Certified BRAC Scenario Data

- Question 47 – *“System RDAT&E work that is “Inextricable” from WSI:*
- *“Naval shipborne warfare systems are specifically designed to be fully embedded within the form of a ship’s hull design and interoperable with the warfare systems of other ships and aircraft that comprise naval battle groups. The elements of the detect-to-engage sequence (e.g., detection, classification, targeting, weapons initiation, launcher control, weapons control and command & control) are physically and functionally integrated and not separable as independent components. Our response identifies (and severs for realignment/relocation) the work associated with that portion of combat systems equipment RDAT&E that is fully separable from the support for the integrated and assured interoperability of all elements of naval shipborne warfare systems. Details are provided as an attachment in DONBITS.”*



DONBITS Attachment

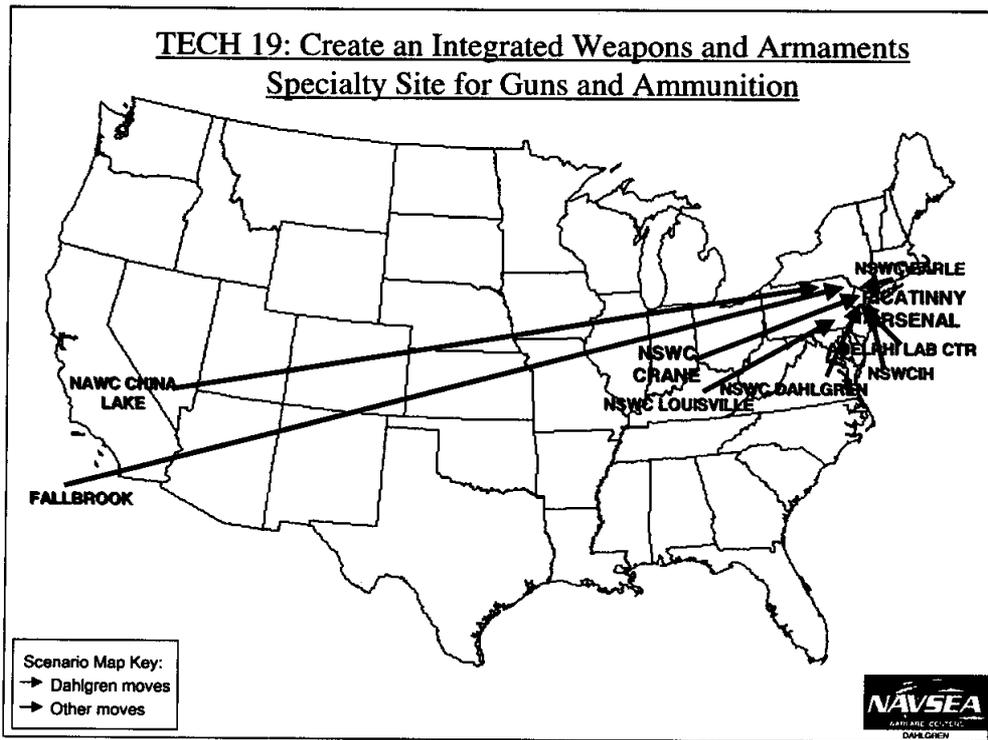
| | |
|---|--|
| VLS - TDA - non WSI efforts | Ref Q 47: VLS is inextricable (integrated) with the WSI portions of VLS and the combat system. |
| RDA CHENG Support (Systems Engr Policy & Processes) | Ref Q 47: RDA CHENG efforts are inextricable (integrated) with shipborne combat systems engineering |
| SBIR (Small Bus Innovative Research Mgmt) - Mgmt and execution of NAVSEA/PEOs SBIR programs | Ref Q 47: NAVSEA/PEOs SBIR is inextricable (integrated) with shipborne combat systems research and technology projects |

The three inextricable functions/program areas are: VLS, RDA CHENG Support, and Small Business Innovative Research Management. They equate to a total of 58 workyears.

| Scenario | Civilians Out | Civilians In | Revised Civilians Out |
|-------------------------------------|---------------|--------------|-----------------------|
| Weapons and Armaments to China Lake | 173 | | 115 |

Clarification Requested on Status of "Inextricable" efforts.

**TECH 19: Create an Integrated Weapons and Armaments
Specialty Site for Guns and Ammunition**



Guns and Ammo to Picatinny Arsenal

- BRAC Report: Realign Naval Surface Warfare Center Division Dahlgren, VA, by relocating gun and ammunition Research and Development & Acquisition to Picatinny Arsenal, NJ.

| Scenario | Civilians Out |
|------------------------------------|------------------|
| Guns and Ammo to Picatinny Arsenal | 83 |

- JCSG Scenario Definition: Definition of Guns & Ammunition: Includes all RDAT&E associated with small, medium and large caliber gun systems, and any barrel launched ballistic rounds/systems. Includes but is not limited to mortars, tank rounds and systems, artillery, Navy Gun Systems. Includes all work associated with gun systems, materials and propelling charges. Does not include guidance and control, and rocket motors. Does not include weapon systems integration.



Guns and Ammo to Picatinny Arsenal (continued)

- JCSG Scenario:
 - Action 3: Realign NAVSURFWARCENDIV_DAHLGREN_VA (N00178) Guns/ammo RDAT&E and relocate to Picatinny Arsenal (ARDEC (W4MKAA) and appropriate program offices)
 - Action 4: Realign NAVSURFWARCENDIV_DAHLGREN_VA (N00178) Guns/ammo RDAT&E In Service Engineering and relocate to Picatinny Arsenal (ARDEC (W4MKAA) and appropriate program offices)
 - Action 5: Realign NAVSURFWARCENDIV_DAHLGREN_VA (N00178) Guns/ammo RDAT&E Sustainment and relocate to Picatinny Arsenal (ARDEC (W4MKAA) and appropriate program offices)
 - Action 6: Realign NAVSURFWARCENDIV_DAHLGREN_VA (N00178) Guns/ammo RDAT&E Weapon Systems Integration and relocate to Picatinny Arsenal (ARDEC (W4MKAA) and appropriate program offices)

| Scenario | Civilians Out |
|------------------------------------|------------------|
| Guns and Ammo to Picatinny Arsenal | 173 |



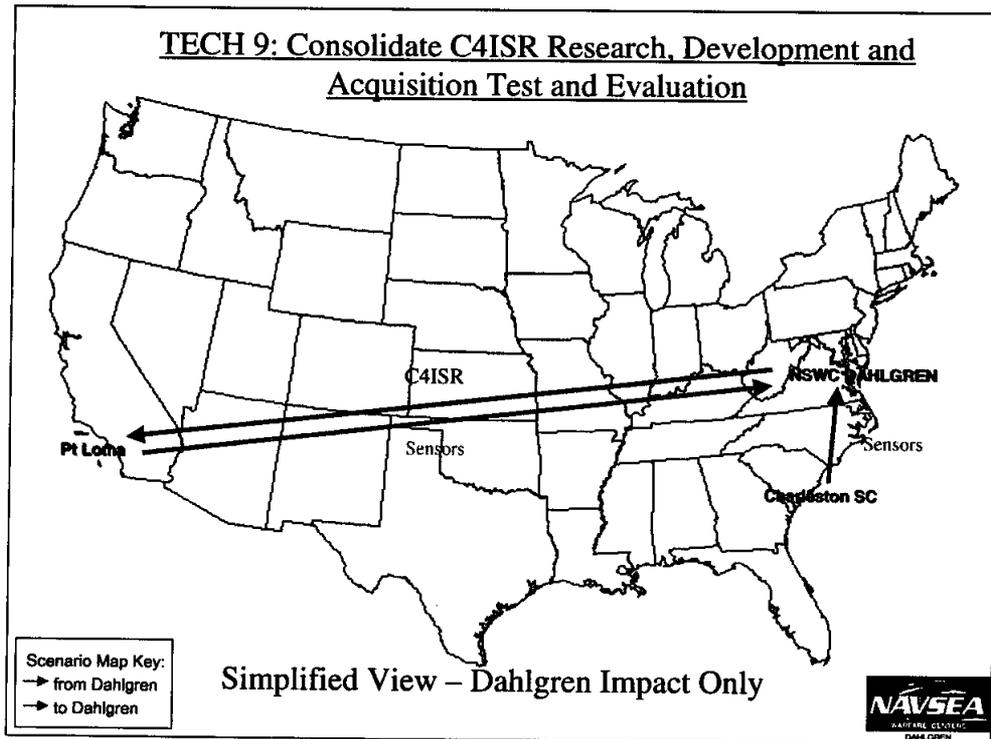
Guns and Ammo to Picatinny Arsenal
(continued)

- Discrepancy Data Call: Open Air Range data should not be included in this scenario data call. Please remove all items within your response associated with the Overwater Gun Range.

| Scenario | Civilians Out | Civilians In | Revised Civilians Out |
|------------------------------------|---------------|--------------|-----------------------|
| Guns and Ammo to Picatinny Arsenal | 173 | | 5 |

Clarification: Are the NSWC Dahlgren Guns and Ammo programs located at Picatinny Arsenal thus separated from the Open Air (Overwater Gun) Range and associated gun systems?

TECH 9: Consolidate C4ISR Research, Development and Acquisition Test and Evaluation



C4ISR to Pt Loma (San Diego)

- BRAC Report: Realign Naval Base Ventura County, CA, Naval Surface Warfare Center Division, Dahlgren, VA, and Naval Station Newport, RI, by relocating Maritime Information Systems Research, Development & Acquisition, and Test & Evaluation to Naval Submarine Base Point Loma, San Diego, CA,
- JCSG Scenario:
 - "Action # 4: Consolidate Maritime Information Systems RDAT&E functions at NAVSURFWARCENDIV_DAHGLREN_VA with SPAWARSCEN_SAN_DIEGO_CA."

| Scenario | Civilians Out |
|--------------------------------------|---------------|
| Maritime C4ISR to Pt Loma, San Diego | 116 |

C4ISR to San Diego

Certified BRAC Scenario Data

- *Question 47 -- "Maritime Information Systems RDATE work that is "Inextricable" from Warfare Systems*
- *Naval shipborne warfare systems are specifically designed to be fully embedded within the form of a ship's hull design and interoperable with the warfare systems of other ships and aircraft that comprise naval battle groups. The elements of the detect-to-engage sequence (e.g., detection, correlation & classification, targeting, weapons initiation, launcher control, weapons control and command & control) are physically and functionally integrated and not separable as independent components. Our response identifies (30 positions) (and severs for realignment/relocation) the work associated with that portion of Maritime Information Systems RDATE that is fully separable from the support for the integrated and assured interoperability of all elements of naval shipborne warfare systems. Our response also identifies the work that is inextricable (86 positions) (non-severable) from the support for the integrated and assured interoperability of all elements of naval shipborne warfare systems and the battle group interoperability work itself. This work is also entered in Questions 2 through 46. Details are provided as an attachment in DONBITS."*

| B. Projects Meeting the Criteria but Inextricable | Rationale for Inextricable |
|--|--|
| Navy/USMC Targeting and Planning Tech | Systems engineering and development of the Target Locating & Designation Handoff System (TLDHS) that includes a laser range finder and non magnetic compass. This work is inextricable with other Marine Corps and Mission Planning work. |
| Tomahawk/Strike Systems Mission Planning | Systems Engineering and developemnt efforts for the TOMAHAWK Mission Planning Systems which is inextricable with our efforts on the TOMAHAWK Weapon Control System. |
| TCN and SIAP | Both TCN and SIAP are inextricable parts of the current development efforts and future enhancements to the AEGIS, SSDS MK 2 and CEC efforts. TCN and SIAP are developing the next generation track formation and track management functions that are an integr |
| DEP | Distributed Engineering Plant (DEP): Engineering tool used to demonstrate and evaluate combat system interoperability and engagement capabilities across battle force platforms prior to fleet release and deployment. Dahlgren's DEP node contributes several |
| Battleforce Sys Engr/Requirements | Analysis and Systems Engineering efforts to define requirements for Battleforce Interoperability |





C4ISR to Pt Loma (San Diego)

- The "Rationale for Inextricable" for 86 of the 116 workyears supports the "specialty site" definition. Also the realignment of the "satellite unit from the Naval Surface Warfare Center, Port Huene, San Diego Detachment" with their platform software certification function to Dahlgren further supports the retention of these inextricable programs; especially DEP, TCN, and SIAP.

Both NSWC Dahlgren and Pt. Loma Request Clarification on the status of the identified "Inextricable" efforts.

Maritime Surface Sensors, EW, and Electronics from Pt. Loma and Charleston to Dahlgren

- BRAC Report:
 - Realign Naval Submarine Base Point Loma, San Diego, CA, as follows: relocate Surface Maritime Sensors, Electronic Warfare, and Electronics Research, Development & Acquisition, and Test & Evaluation of the Space Warfare Center to Naval Surface Warfare Center Division, Dahlgren, VA;
 - Realign Naval Weapons Station Charleston, SC, as follows: relocate Surface Maritime Sensors, Electronic Warfare, and Electronics Research, Development & Acquisition, and Test & Evaluation of the Space Warfare Center to Naval Surface Warfare Center Division, Dahlgren, VA;

| Scenario | Civilians Out | Civilians In |
|---|---------------|--------------|
| Maritime Sensors from Pt Loma San Diego | | 108 |
| Maritime Sensors from Charleston | | 21 |



Maritime Surface Sensors, EW, and Electronics from Pt. Loma and Charleston to Dahlgren

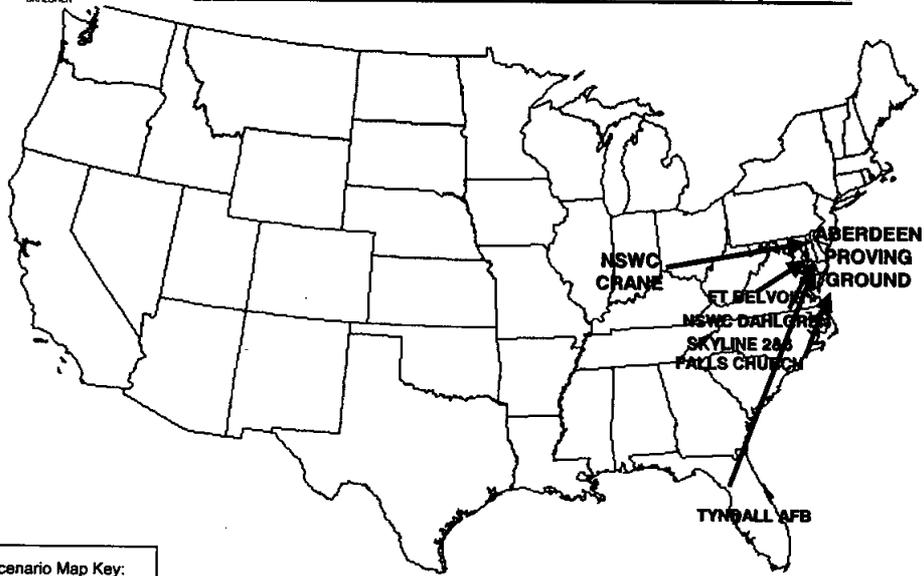
- JCSG Scenario Assumption: This scenario Consolidates Navy activities that perform Maritime (surface and above) Sensors, Electronic Warfare and Electronics RDT&E functions from:
 1. NRL_WASHINGTON-DC (DAT&E only, Research remains in place),
 2. NAVSURFWARCENDIV_CORONA_CA,
 3. NAVSURFWARCENDIV_CRANE_IN,
 4. SPAWARSYSCEN_SAN_DIEGO_CA,
 5. SPAWARSYSCEN_CHARLESTON_SC,
 6. CBTDIRSYSACT_DAM_NECK_VA, and
 7. NAVUNSEAWARCENDIV_NEWPORT_RI to
NAVSURFWARCENDIV_DAHLGREN_VA.
- San Diego and Charleston Represented 16% of total Scenario



**Request clarification on the intent of the these relocations to assess compatibility
with NSWC Dahlgren Sensor and EW R&D capabilities**



**MED 15 – Joint Centers of Excellence for Chemical, Biological,
and Medical Research and Development and Acquisition**



Scenario Map Key:
→ Dahlgren moves
→ Other moves

Locations Shown to Edgewood Chemical Biological Center
At Aberdeen Proving Ground



Chem Bio Defense to Edgewood

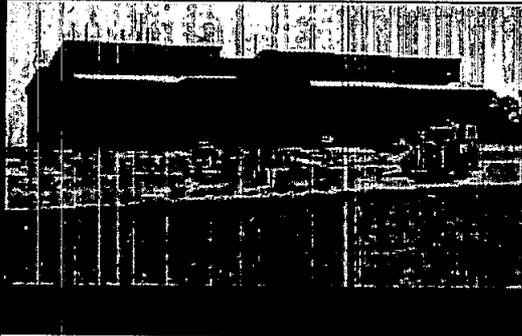
- BRAC Report: Realign Naval Surface Warfare Center, Dahlgren Division, VA, by relocating Non-medical Chemical Biological Defense Research and Development & Acquisition to Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD.
- JCSG Scenario:
 - "Action # 2: Consolidate the Chemical Biological Defense D&A function from NAVSURFWARREN DAHLGREN VA with other Navy functions being relocated to the Edgewood Chemical & Biological Defense, WID101 at the Aberdeen Proving Grounds."
 - "Action # 3: Consolidate the Non-Medical Research function from NAVSURFWARREN DAHLGREN VA with other Navy functions being relocated to the Edgewood Chemical & Biological Defense, WID101 at the Aberdeen Proving Grounds."
- JCSG Scenario Assumption:
 - Navy activities relocated to Aberdeen Proving Grounds are consolidated to one detachment of the largest Navy donor activity.

| Scenario | Civilians Out |
|------------------------------|---------------|
| Chem Bio to Edgewood Arsenal | 131 |



Chem Bio Defense to Edgewood

Request confirmation that relocated personnel from both Crane and Dahlgren will become a NSWC Dahlgren Detachment



Old or Backups



Scenario Data Call # TECH 008E

| GAINING ACTIVITY | DATA ELEMENT | TOTAL NUMBER | Action 1 NRL | Action 2 Corona | Action 3 Crane | Action 4 SSC SD | Action 5 SSC Char | Action 6 CDSA | Action 7 NUWC |
|------------------|--------------|--------------|-----------------|--------------------|-------------------|--------------------|----------------------|------------------|------------------|
| NSWC Dahlgren | | | | | | | | | |
| | OFFICERS | 3 | 2 | 1 | | | | | |
| | ENLISTED | 8 | 10 | | 8 | | | | |
| | CIVILIAN | 846 | 84 | 155 | 453 | 115 | 22 | 14 | 3 |
| | Contractors | 160 | 22 | 24 | 67 | 24 | 10 | 13 | |
| | | 1017 | 118 | 180 | 528 | 139 | 32 | 27 | 3 |