DCN 1485
62271

DATA CALL 1: GENERAL INSTALLATION INFORMATION

1. ACTIVITY: Follow example as provided in the table below (*delete the examples when providing your input*). If any of the questions have multiple responses, please provide all. If any of the information requested is subject to change between now and the end of Fiscal Year (FY) 1995 due to known redesignations, realignments/closures or other action, provide current and projected data and so annotate.

- Name

Official name	*NAVAL POSTGRADUATE SCHOOL, MONTEREY, CA*
Acronym(s) used in correspondence	NAVPGSCOL, Monterey
Commonly accepted short title(s)	PG SCHOOL, NAVPGSCOL, NPS, THE NAVY SCHOOL, NPGS

- Complete Mailing Address

Superintendent (00)
1 University Circle
Naval Postgraduate School
Monterey, CA 93943-5100

- PLAD: NAVPGSCOL, MONTEREY, CA

- PRIMARY UIC: 62271 (Plant Account UIC for Plant Account Holders)

Enter this number as the Activity identifier at the top of each Data Call response page.

• ALL OTHER UIC(s):	PURPOSE:
42091	PG SCH Professional Training
31405	Navy Students
48619	Family Service Center
66288	Navy Exchange
45210	NAVFACENGDIV -- ROICC
66795	Public Affairs
45933	PQ Mess Mgmt Spec
46319	Student EEAP

2. PLANT ACCOUNT HOLDER:

• Yes _X_ No _____ (check one)

3. ACTIVITY TYPE: Choose most appropriate type that describes your activity and completely answer all questions.

• HOST COMMAND: A host command is an activity that provides facilities for its own functions and the functions of other (tenant) activities. A host has accountability for Class 1 (land), and/or Class 2 (buildings, structures, and utilities) property, regardless of occupancy. It can also be a tenant at other host activities.

• Yes _X_ No _____ (check one)

• TENANT COMMAND: A tenant command is an activity or unit that occupies facilities for which another activity (i.e., the host) has accountability. A tenant may have several hosts, although one is usually designated its primary host. If answer is "Yes," provide best known information for your primary host only.

• Yes _____ No _X_ (check one)

• Primary Host (current) UIC: _____

• Primary Host (as of 01 Oct 1995) UIC: _____

• Primary Host (as of 01 Oct 2001) UIC: _____

• INDEPENDENT ACTIVITY: For the purposes of this Data Call, this is the "catch-all" designator, and is defined as any activity not previously identified as a host or a tenant. The activity may occupy owned or leased space. Government Owned/Contractor Operated facilities should be included in this designation if not covered elsewhere.

• Yes _____ No _X_ (check one)

4. SPECIAL AREAS: List all Special Areas. Special Areas are defined as Class 1/Class 2 property for which your command has responsibility that is not located on or contiguous to main complex.

Name	Location	UIC
RESEARCH AREA	MONTEREY, CA	N62271
LA MESA VILLAGE (HOUSING)	MONTEREY, CA	N62271
ANNEX AREA	MONTEREY, CA	N62271
ASTRO - AERO AREA	MONTEREY, CA	N62271
NAVAL FACILITY PT. SUR*	BIG SUR, CA	N62271
PT. SUR HOUSING**	BIG SUR, CA	N62271
PT. SUR ARRAY	BIG SUR, CA	N62271

* Terminal Building only
** in the process of being excessed

5. DETACHMENTS: If your activity has detachments at other locations, please list them in the table below.

Name	UIC	Location	Host name	Host UIC
N/A	N/A	N/A	N/A	N/A

6. BRAC IMPACT: Were you affected by previous Base Closure and Realignment decisions (BRAC-88, -91, and/or -93)? If so, please provide a brief narrative.

Yes, BRAC-91 and BRAC-93 decisions both had effects on NAVPGSCOL and tenant commands.

** The BRAC-91 decision to close Fort Ord, but to retain some buildings and housing units as the Defense Language Institute Presidio of Monterey Annex, allowed NAVPGSCOL to obtain assignment rights to 600 housing units (an increase of 470 units). This has reduced the backlog of personnel awaiting government quarters to zero. In addition, foreign national students are now able to rent government quarters, a significant factor in our ability to attract additional international students to NAVPGSCOL. The decision to retain the Fort Ord PX

QUESTION 7
PART A - NPS MISSION - INTRODUCTION

* The NPS primary mission is to provide "for the advanced instruction and training of commissioned officers of the regular Navy and Marine Corps and the reserve components thereof in the practical and theoretical duties of commissioned officers" (U.S. Title 10, 1947).

* "The NPS exists for the sole purpose of increasing the combat effectiveness of the Navy and Marine Corps. It accomplishes this by providing post-baccalaureate degree and nondegree programs in a variety of subspecialty areas not available through other educational institutions" (SECNAVINST 1524.2A, 27 March 1989).

* "In support of the foregoing, and to sustain academic excellence, to foster and encourage a program of relevant and meritorious research" (OPNAVINST 5450.210B).

* The NPS graduate education mission is closely controlled by an integrated structure which manages all phases of graduate education from the "spaces" (billets) to the "faces" (people).

GRADUATE EDUCATION ROLE	PARTICIPANTS
BILLET IDENTIFICATION	
Billet Subspecialty Requirement	Commands & Subspecialty Advisors
BILLET REVIEW	
Billet Validation	Bureau of Personnel (BUPERS)
Billet Review	Subspecialty Review Boards (BUPERS)
SUBSPECIALTY CONTENT	
Educational Skill Requirements	Subspecialty Advisors
EDUCATIONAL DESIGN	
Course Layout	Naval Postgraduate School
Degree Requirements	Naval Postgraduate School
Degree Award	Naval Postgraduate School
SUBSPECIALTY REVIEW	
Degree	Naval Postgraduate School
Educational Skill Requirement	Subspecialty Advisors
OFFICER SUBSPECIALTY DESIGNATION	
Recommendation	NPS Curricula Office
Award	Bureau of Personnel
COMMUNITY MANAGEMENT	
Control Student Input to Grad Ed	Bureau of Personnel
Health of Community	Subspecialty Advisors
RESOURCE SPONSOR/FUNDING	
Resources for Grad Ed	Chief of Naval Operations
POLICY/GUIDANCE	
Setting Policy & Guidance	Graduate Education Review Board
Execution	Bureau of Personnel

Continuing the missions of NPS from OPNAVINST 5450.210B:

* Educate officers of the U.S. Navy for validated subspecialty billets, using curricula at NPS and civilian universities.

Further continuing the NPS missions from OPNAVINST 5450.210B:

* Educate other U.S. and allied military officers and civilians, consistent with needs and resources.

* Conduct program administration, management and resource control for all fully funded graduate education.

* Coordinate subspecialty curricula reviews with subspecialty sponsors.

* Recommend to the CNO program content and educational resources to meet curricular requirements.

* Maintain liaison with the other services' graduate education program managers.

* Supervise, administer, control and monitor all officers enrolled in fully funded graduate education.

* Plan, produce, conduct, and administer continuing education for U.S. military officers.

* Provide special transition courses from nontechnical undergraduate degrees to technical graduate program.

* Provide courses to update educational skills for officers many years from undergraduate degrees.

* Operate the Defense Resource Management Institute.

* Provide services to and obtain support from tenants:
  Defense Manpower Data Center
  Defense Institute for Training Resources Analyses
  Defense Personnel Security Research and Education Center
  Navy Reserve Units
  Army Training & Doctrine Command, Monterey
  NOAA Center for Ocean Analysis & Prediction
  Fleet Numerical Meteorology and Oceanography Center

Further continuing the NPS missions from OPNAVINST 5450.210B:

* Coordinate and approve Navy student officer research.

* Maintain a strong, relevant, and viable faculty research effort to support student, Navy, and DoD research requirements.

* Recruit and maintain a faculty fully competent to support the advanced programs of study and capable of applying their expertise in support of the Naval Service. Faculty are organized into departments which serve the curricula listed above.

QUESTION 7
PART A: NPS MISSION DESCRIPTIONS

The School of Marine Engineering was established at Annapolis in 1909 to help solve a fleet problem created by the introduction of technology--the technology of steam propulsion. In 1912 it was renamed the Postgraduate Department of the Naval Academy. Instruction in the new technology of the era: ordnance and gunnery, electrical engineering, radio telegraphy, naval construction, and civil engineering courses, was added to the existing marine engineering program.

The period from 1909 through the end of World War II saw an explosion of change in the way the Navy fights and the weapons available. The requirement for officers capable of leading in the increasingly technically sophisticated post- War environment culminated in 1947 in Title 10, U.S. Code:

> "Be it enacted by the Senate and House of Representatives that the Secretary of the Navy is hereby authorized and directed to establish the United States Naval Postgraduate School for the advanced instruction and training of commissioned officers of the Regular Navy and Marine Corps and the reserve components thereof in the practical and theoretical duties of commissioned officers... NPS is authorized, upon due accreditation...to confer bachelors of science, masters, or doctors degrees...on qualified graduates."

During 1951-52, in order to provide space and focus for high quality graduate level education, NPS moved from Annapolis to Monterey, at the site of World War II Navy flight and electronics training. The accreditation of NPS, including masters degrees, was accomplished with the addition of faculty and laboratories supporting new technologies such as computer science. Until the mid '60s, the postgraduate program was usually three years long; two years preparation at NPS and a third year at a civilian university. To reduce costs, the Navy consolidated the curricula at NPS and eliminated the third year.

Today the challenges of leading the profession of arms in the complex modern world is even greater. Substantial changes in postgraduate education of officers continue with the shift to "Jointness" and technologically-driven information warfare. To meet these challenges, NPS provides the Navy a symbiotic relationship with academia in which a flag officer, reporting directly to the Chief of Naval Operations, balances the changing requirements of military careers, technological opportunity, and the quantitative personnel needs of the Services.

OPNAVINST 5450.210B states that the NPS mission is to:

> "Enhance the combat effectiveness of the Navy and Marine Corps by conducting and directing advanced education of commissioned officers, and provide such other technical and professional instruction as may be prescribed to meet the needs of the Naval Service. In support of the foregoing, and to sustain academic excellence, foster and encourage a program of relevant and meritorious research."

Today NPS educates junior officers of all Services in graduate-level scientific, engineering, managerial, political-military, and intelligence career specialties required for the preparation

for and conduct of modern warfare. This education must be both up-to-date technically and relevant to the complex decisions officers face in the information age. Therefore the admirals and generals responsible for the operational performance of their officer communities bi-annually review and approve specialized educational requirements.

NPS meets these educational requirements through curricula that transition officers with diverse undergraduate backgrounds to the level of graduate education in the relevant degree programs. As the culminating demonstration of their ability, each officer-student completes a research thesis applicable to a problem in their new specialty field. Graduating officers are permanently identified for duty in the specialized career positions as a required portion of their careers. This unusual integration of the academic and the military provides the means for the officer corps to meet the sophisticated career challenges of the next century.

Military officer graduate education needs are changing rapidly with the changes in roles and missions of the services, changing congressional requirements and changes in military technology and operations. At NPS, significant changes in a curriculum, up to and including implementing a complete new curriculum, take only about one year. Recent examples are:

* implementing an Acquisition curriculum for the Army in response to the Defense Acquisition Workforce Improvement Act (DAWIA)

* creating a Special Operations Low Intensity Conflict curriculum for the Joint U.S. Special Operations Command

* combining Telecommunications Management curricula and Computer Systems Management into a single Information Systems Management curriculum in response to the needs of the Space and Electronic Warfare Directorate

* revising the Anti-Submarine Warfare curriculum to an Undersea Warfare curriculum in response to "From the Sea" drawing on new emphasis on the coastal environment

* combining five science curricula into a Combat Systems curriculum in response to the need for more efficient utilization of officer sub-specialties

* restructuring of Oceanography and Meteorology courses to better focus on coastal and littoral problems in response to From the Sea

* creating a Total Ship Systems Engineering curriculum in response to NAVSEA's need for officers who understand the merging of ship systems and combat systems into a fighting platform

* implementing a Resources Planning and Management for International Defense curriculum in response to changing DoD missions and requests by other nations

Virtually all NPS curricula are tied to research through required student theses. The NPS research program has three purposes:

1) to provide militarily relevant research programs for student theses,

2) to keep faculty at the cutting edge of their disciplines and military technology and to bring that material into the classroom, and

3) to provide products for the Department of Defense.

Evidence of the first two is found in the curricular material that follows which includes relevant course material and theses. The quality of the material produced is demonstrated by the fact that the total research program is approximately $25M with 70% being from reimbursable funding which is obtained through a competitive research proposal process within the national security community. Some examples of the relevance and impact of NPS research are:

* The Army's Training and Doctrine Command has a contingent at NPS to utilize the expertise of NPS faculty and students and the combination has "changed the way the Army fights".
* An NPS professor's product was used to help plan flight incursion paths during Desert Storm.
* Numerical weather forecasting had its beginnings at NPS, leading to the establishment of the Fleet Numerical Oceanographic and Meteorology Center at NPS.
* The Defense Management Data Center came to Monterey because of NPS resources and potential student and faculty research interactions.
* A NPS faculty member's model is used each year as an input to develop the Air Force's munitions restocking plan.

The role of the NPS research program in guiding future educational and career trends is discussed in the response to question 8.

The academic program at NPS is organized into two main sections: Curricular Offices and Academic Departments. The Curricular Offices manage the students' programs, insuring that they meet Navy sponsor requirements. These offices interact continually with the sponsors and conduct flag level reviews of their programs biennially at NPS. Academic Departments develop and provide courses for the curricula and provide research support for student theses. Since there are 37 curricula and only 15 departments, the typical department supports several curricula. The material below first describes one or more curricula and then the department that predominately conducts those curricula. Since NPS has over 100 laboratories and in one year produces some 1200 course sections, 800 theses and 125 work-years of research, the laboratories, courses, theses, and research listed below are a sample of those most closely associated with military needs. Note that the specific career designation

codes are shown for each of the Navy, Marine Corps, Army, Air Force specialties for each curricula. Education for over 70 different career specializations is provided by NPS.

In addition to the over 900 NPS graduate degrees per year, the Aviation Safety program produces 700 graduates and the Defense Resources Management Institute instructs almost 1000 persons per year. Thus in any year, over 2500 persons are returned to Defense establishments world wide with significant educational preparation for their careers.

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UNDERSEA WARFARE CURRICULUM (525)

SPONSORING ORGANIZATION:

* Director, Submarine Warfare Division, Chief of Naval Operations
* Director, Expeditionary Warfare Division, Chief of Naval Operations

OBJECTIVE FOR NAVY SUB-SPECIALTY CODE 44P:

* Educate warfighters in the technical disciplines related to antisubmarine warfare, mine warfare, submarine warfare, and strategic surveillance.

DESCRIPTION:

* Interdisciplinary coursework includes operations research, electrical engineering, physics, and oceanography

MILITARY/CLASSIFIED COURSES:

* Search, Detection and Localization Models (SECRET)
* Undersea Warfare Sensors (SECRET)
* Physics of Underwater Weapons (SECRET)
* Operational Acoustic Forecasting (SECRET)
* Underwater Acoustics
* Remote Sensing and Atmospheric Effects on Warfare
* Ocean Acoustic Tomography
* Sonar Systems Engineering
* Tactical Decision Aids
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " Scattering of Underwater Sound from a Porous Solid Sphere"
* " SIMAS Real World Comparison and Sensitivity Analysis"
* " Neural Network Acoustic Transient Signal Classification"
* " Infrared Detection of Submarine Wakes Using Tactical Airborne Sensors"
* " Shallow Water ASW: A Proposed Systems Concept"
* " Evaluation of Under Ice Submarine Tactics"
* " Surface Ship Torpedo Defense: Selected Anti-Torpedo Employment Tactics"

ANNUAL STUDENT INPUT: 14

* USN 12, DOD Civilian 1, International 1

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UNDERSEA WARFARE ACADEMIC GROUP

The Undersea Warfare (USW) Academic Group consists of an interdisciplinary group of faculty from Operations Research, Oceanography, Electrical and Computer Engineering, Mathematics, and Physics departments. The USW faculty provide graduate level instruction in antisubmarine warfare, submarine warfare, mine warfare, torpedo defense, and acoustic surveillance. The USW academic group also monitors all USW-related research conducted at NPS, which includes the U.S.'s leading academic underwater acoustics.

CURRICULA SUPPORTED:

* Undersea Warfare

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Antisubmarine Warfare
* Submarine Warfare
* Mine Field Planning
* Mine Countermeasures
* Acoustic Surveillance
* Torpedo Defense

FACULTY:

* Interdisciplinary group of 9 from various departments: 8 Secret, 1 Top Secret clearances
* 12 years average service at NPS

LABORATORIES/SPECIALIZED RESOURCES:

* Point Sur Acoustic Array
* Acoustic Scattering Tanks
* Acoustic Transducer Design Laboratory
* Coastal Ocean Acoustics Laboratory
* Naval Weapons Effectiveness Simulation
* Patrol Aircraft vs Diesel Submarine Simulation
* Tactical Decision Aids
* Coastal Warfare Laboratory

RESEARCH: $0.4 Million Reimbursable Funding in 1993

* NUWC (Naval Undersea Warfare Center)
  - Sonar Transducer Array Design
* ONR (Office of Naval Research)
  - Barents Sea Tomography
* NAVSEA (Naval Sea Systems Command)
  - Recursive Ray Acoustics
* Naval Research Program Office
  - Detection of Ocean Anomalies
* Scripps Oceanographic Institute, UCSD
  - Pacific Acoustic Path Variability Study

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ELECTRONIC WARFARE SYSTEMS ENGINEERING CURRICULUM (595)

SPONSORING ORGANIZATION:

* Space and Electronic Warfare Directorate, Chief of Naval Operations

OBJECTIVE FOR NAVY CODE 46P & USMC MOS 9634:

* Educate warfighters in the technical and operational aspects of electronic warfare (EW) and information war.

DESCRIPTION:

* Inter-disciplinary coursework including electrical engineering, physics, operations research, and meteorology
* Five-week experience tour at military electronic warfare labs and units defining a thesis problem

MILITARY/CLASSIFIED COURSES:

* Meteorology for Electronic Warfare
* Operations Research for Electronic Warfare
* Microwave Devices and Radar (SECRET)
* Electronic Warfare Systems (SECRET)
* Electro-optic Systems and Countermeasures (SECRET)
* Electronic Warfare Computer Applications
* Communications & Countermeasures
* Space & Electronic Warfare (TOP SECRET)
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " Combating Inherent Vulnerabilities of EW Algorithms"
* " Soft-kill Techniques against Anti-ship Missiles"
* " Patriot Missile Systems and Exploitation by EW"
* " Analysis of Theater Ballistic Missile Defense"

ANNUAL STUDENT INPUT: 23

* USN URL: 8 USN Crypto: 2 USMC: 2 International: 9

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ELECTRONIC WARFARE ACADEMIC GROUP

The Electronic Warfare Academic Group consists of interdisciplinary faculty from Physics, Operations Research, Electrical and Computer Engineering, Mathematics and Meteorology. It directs theses in all aspects of electronic warfare. A thesis project jammer was instrumental in the seizure of the Achille Lauro terrorists after the hijacking.

PRINCIPAL CURRICULA SUPPORTED:

* Electronic Warfare (US officers)
* Electronic Warfare (International officers)

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Radar including stealth
* Electronic warfare systems
* Electro-optical systems and countermeasures
* Communications & countermeasures
* Information Warfare
* EW simulation & modeling
* Signals intelligence

FACULTY:

* 14 including 1 military, 14 Top Secret Clearances
* 19 years average service at NPS
* Chair of EW from industry or laboratories

LABORATORIES/SPECIALIZED RESOURCES

* Systems technology laboratory (Classified)
* Systems technology laboratory (Unclassified)
* Decision-making Evaluation Facility for Tactical Teams
* Secure Compartmented Information Facility (SCIF)
* Search, tracking and anti-personnel radars
* EW receivers, jammers and HARPOON seeker
* Signals Intelligence Laboratory (Classified)
* Captured equipment analysis facility
* Real-time target identification & classification array
* Integrated many-on-many EW simulator

RESEARCH: $0.3 Million

* NPS
  - Infrared search/track designator
  - Electro-magnetic propagation in coastal regions
  - Field cancellation using a counter-EMF approach
* OSD Net Assessment
  - Information War

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JOINT COMMAND, CONTROL, AND COMMUNICATIONS CURRICULUM (365)

SPONSORING ORGANIZATION:

* Director for C4 Systems (J6), Joint Staff

OBJECTIVE FOR NAVY CODE 45P ,USMC MOS 9658, & AFSC 13B36:

* Provide a comprehensive technical understanding in the field of C3 systems for officers of all services

DESCRIPTION:

* Interdisciplinary curriculum with course work in four major core areas (computers and information systems, communications and sensors, operations analysis, and command and control systems)
* One week tour of major command centers in Washington, DC, and at one joint command
* Seven emphasis areas: Computer Science; Information Systems; Communications Engineering; Operations Analysis; Operational Intelligence; Strategic Planning; Systems Acquisition

MILITARY/CLASSIFIED COURSES:

* Introduction to C3 (SECRET)
* Combat Modeling for Command and Control
* C3 systems Architecture and Engineering (TOP SECRET)
* Military C3 Networks (SECRET)
* Simulation and Wargaming (SECRET)
* C3 Systems Evaluation (SECRET)
* Policies and Problems in C3 (SECRET)
* Space and Airborne Sensing Systems
* Defense Systems Acquisition
* Communications System Analysis
* Joint and Maritime Strategic Planning (SECRET)
* Software Engineering to Government Standards

REPRESENTATIVE THESES:

* " Combat Analysis for Command, Control, and Communications: A Primer"
* " A Framework for Evaluating Evolutionary Upgrade Paths of C3 Systems"
* " MILSATCOM Decision Support System Requirements Analysis and User Interface Design"
* " Navy C3 in a Sociological Context: Why Forward Presence Matters"
* " An Assessment of the Marine Tactical Command and Control System"
* " Multilevel Security Within the Army Tactical C2 System"

ANNUAL STUDENT INPUT: 25

* USN 12, USAF 5, USA 4, USMC 3, DoD Civilian 1

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COMMAND, CONTROL, AND COMMUNICATIONS ACADEMIC GROUP

The Command, Control, and Communications Academic Group consists of a small number of full-time C3 faculty plus faculty interested in C3 from the Computer Science, Electrical and Computer Engineering, Meteorology, Operations Research, Physics, and Systems Management departments. The C3 Academic Group is responsible for the content and coordination of courses taught in other departments in the areas of Communications and Sensors, Operations Analysis, and Computer and Information Systems. The C3 faculty guide the students in their thesis projects and conduct research in the support of C3 systems, C3 modeling, and C3 policy.

PRINCIPAL CURRICULA SUPPORTED:

* Joint Command, Control, and Communications
* Space Systems Operations

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Combat modeling for command and control
* C3 mission and organization studies
* C3 systems architecture and systems engineering
* C3 systems evaluation and experimentation
* High band-width networks for mobile communications

FACULTY:

* Interdisciplinary group of 20 from various departments, 5 with Secret and 15 with Top Secret clearances
* 11 years average service at NPS

LABORATORIES/SPECIALIZED RESOURCES:

* Special Compartmented Information Facility (SCIF)
* Systems Technology Laboratory
* Secure Systems Technology Laboratory

RESEARCH: $0.4 million reimbursable funding in 1993 includes

* N-6 (Director, Space and Electronic Warfare)
  - Systems Technology Lab
  - Secure Systems Technology Lab
* OPTEVFOR (Commander, Operational Test and Evaluation Force)
  - UFO Satellite System Evaluation
* NDU (National Defense University)
  - Case Studies in Military Decision Making
* ONR (Office of Naval Research)
  - Computer-Aided Prototyping System
  - High Speed Networks

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SPACE SYSTEMS ENGINEERING CURRICULUM (591)

SPONSORING ORGANIZATION:

* Navy Space Systems Division, Chief of Naval Operations
* Commander, Space and Naval Warfare Systems Command

OBJECTIVE FOR NAVY CODE 77P, USMC MOS 9666, & USA MOS 21:

* Provide line officers with the physical and technical principles governing the military utilization of space systems

DESCRIPTION:

* Interdisciplinary curriculum with course work in three major core areas: computers and information systems; communications and sensors; and space sciences and systems
* Six week experience tour in a government design and engineering laboratory defining a thesis problem
* Six emphasis areas leading to separate degrees: Computer Science; Physics; Mathematics; Astronautical Engineering; Electrical and Computer Engineering; Mechanical Engineering

MILITARY/CLASSIFIED COURSES:

* Military Applications of Space (TOP SECRET)
* Remote Sensing
* Defense Systems Acquisition
* Joint and Maritime Strategic Planning (SECRET)
* Microprocessors for Space
* Spacecraft Dynamics
* Spacecraft Design I & II

REPRESENTATIVE THESES:

* " An Expert System for Processing Uncorrelated Satellite Tracks"
* " Dual-Beam Multiple Wavelength Light Transmittance Measurement for Particle Sizing in Rocket Exhaust Plumes"
* " Analysis of Radiation Damaged and Annealed Gallium Arsenide and Indium Phosphide Solar Cells Using Deep Level Transient Spectroscopy"
* " Parametric Analysis of the Aerobang Orbital Plane Change Maneuver"
* " Ionospheric Photoelectronics Measured at Geosynchronous Orbit"
* " Thruster Optimization and Performance Evaluation on the Flexible Spacecraft Simulator"

ANNUAL STUDENT INPUT: 27

* USN 21, USA 2, USMC 1, DoD Civilian 3

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SPACE SYSTEMS OPERATIONS CURRICULUM (366)

SPONSORING ORGANIZATIONS:
* Navy Space Systems Division
* Naval Space Command

OBJECTIVE FOR NAVY CODE 76P, USMC MOS 9620 & USA MOS 21:
* Provide warfighters with the physical and operational principles governing the military utilization of space systems

DESCRIPTION:
* Interdisciplinary curriculum with course work in four major core areas (computers and information systems, communications and sensors, operations analysis, and space sciences and systems)
* Six week experience tour in a military analysis organization defining a thesis problem
* Eight emphasis areas: Computer Science; Information Systems; Space Sciences; Communications Engineering; Operations Analysis; Operational Intelligence; Strategic Planning; Systems Acquisition

MILITARY/CLASSIFIED COURSES:
* Introduction to Space (SECRET)
* C3 Missions and Organizations (SECRET)
* Military Applications of Space (TOP SECRET)
* Simulation and Wargaming (SECRET)
* Decisions and Space Systems (TOP SECRET)
* Military Operations in Space (TOP SECRET)
* Remote Sensing
* Spacecraft Systems
* Communications System Analysis
* Defense Systems Acquisition
* Joint and Maritime Strategic Planning (SECRET)
* Software Engineering to Government Standards

REPRESENTATIVE THESES:
* " SEW Implementation in Battle Group Operations"
* " Imagery Dissemination in Support of Naval Operations"
* " Techniques for Collection of Spread Spectrum Signals"
* " Air Defense Lethality: Counter-space Operations and Technologies"
* " Battle Group Utilization of National Systems"
* " Satellite Cuing for Theater Ballistic Missile Defense"
* " Use of GPS to Support the National Tracking Center"

ANNUAL STUDENT INPUT: 23
* USN 19, USA 2, USMC 2

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SPACE SYSTEMS ACADEMIC GROUP

The Space Systems Academic Group (SSAG) is an interdisciplinary association providing direction and guidance for graduate-level instruction in Space Systems Engineering and Space Systems Operations. In addition to a small number of full-time faculty, the SSAG relies on faculty and facilities support from the Departments of Aeronautical and Astronautical Engineering, Computer Science, Electrical and Computer Engineering, Mathematics, Mechanical Engineering, Meteorology, Oceanography, Operations Research, Physics, and Systems Management. In developing this expertise and providing support to student theses, the group has built a military satellite laboratory.

PRINCIPAL CURRICULA SUPPORTED:

* Space Systems Engineering
* Space Systems Operations

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Military applications of space
* Remote sensing
* Command and Control Warfare
* Small satellite design
* Cryocoolers and thermoacoustic refrigerators
* Thin-film ferroelectric memories

FACULTY:

* Interdisciplinary group of 21 from various departments, 7 with Secret and 13 with Top Secret clearances
* 9 years average service at NPS
* 2 AIAA fellows and 5 AIAA technical committee members

LABORATORIES/SPECIALIZED RESOURCES:

* Spacecraft Integration and Testing Lab
* Radiation Effects and Solar Simulation Lab
* Satellite Ground Station
* Precision Fabrication Facility
* Space Systems Computing Facility (SCIF)
* FLTSATCOM Satellite Lab
* Spacecraft Attitude Dynamics and Control Lab
* Spacecraft Environmental Simulation and Testing Lab

RESEARCH: $0.65 million reimbursable funding in 1993 includes

* SPAWAR (Space and Naval Warfare Systems Command)
  - Spacecraft Technology
  - Computer Memory Technology in Space
  - Acoustics in Space
* SAF (Secretary of the Air Force)
  - Space Systems Academic Group Research
* ONR (Office of Naval Research)
  - Ferroelectrics

62271

DEFENSE SYSTEMS MANAGEMENT FOR USMC AND ALLIED OFFICERS (817 & 817I)

SPONSORING ORGANIZATION:

* Defense Security Assistance Agency
* Marine Corp Headquarters, Programs and Requirements

OBJECTIVE FOR USMC MOS 9652

* Provide USMC officers, selected officers and civilian employees in defense agencies of allied countries with an advanced education in the fundamental concepts, methods, and analytical techniques necessary for effective defense systems management

DESCRIPTION:

* Courses in four subject areas in the fundamentals of management: financial management, economic analysis, quantitative methods and management and strategy
* Specializations in logistics, financial, human resources, leadership and organization, or manpower and personnel analysis

MILITARY/CLASSIFIED COURSES:

* Financial Management in the Armed Forces
* Systems Acquisition and Project Management
* Cost Estimation
* Management Systems and Strategy
* Total Quality Leadership in the Military
* Joint Maritime Strategic Planning (SECRET) (USMC only)

REPRESENTATIVE THESES:

* " Comparative Analysis of Operational Test and Evaluation between the U.S. Navy and the Royal Australian Navy"
* " The Suitability of Award Fee Contracting for the Israeli Ministry of Defense"
* " Recruitment of Quality Soldiers for the Pakistan Army"
* " Changing NATO: A Strategic Decision for Turkey in the 1990s"
* " Applicability of Total Quality Methods to the Hellenic Navy"
* " Cost Benefit Analysis of USMC Combined Arms Regiments Vehicles Options"

ANNUAL STUDENT INPUT: 6 USMC and 10 International Officer Students from: Australia, Japan, Germany, Indonesia, Taiwan, Colombia, Greece, Turkey, Venezuela, Israel, Brazil, Peru, Korea, Argentina, Pakistan, Thailand

62271

INFORMATION TECHNOLOGY MANAGEMENT CURRICULUM (370)

SPONSORING ORGANIZATION:

* Naval Computer and Telecommunications Command

OBJECTIVE FOR NAVY CODE 87P, USMC MOS 9648, & USA MOS 53:

* Educate officers for designation as information technology management subspecialists -- experts in information systems engineering and management ashore and afloat
* Provide information technology management to officers from other services and countries

DESCRIPTION:

* Interdisciplinary integration of economics, financial management, statistics, operations research, computer science, information technology, telecommunications systems, communications engineering, and management disciplines into an intellectual framework for the efficient and effective engineering and management of information technology, systems, and activities

MILITARY/CLASSIFIED COURSES:

* Ada
* Economic Evaluation of Information Systems
* Communications Systems (SECRET)
* Navy Telecommunications Systems (SECRET)
* Telecommunications Networks
* Financial Management in the Armed Forces
* Automated Data Processing Acquisition
* Computer Security
* Information Resources Management in DoN/DoD
* Software Engineering to Government Standards
* Data Center Management Within DoD
* Military Applications of Knowledge-Based Systems and AI
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " Multimedia in Military Education and Training"
* " Requirements for Prehostility C2 Warfare Target Sets"
* " Tactical Route Planning Using A Genetic Algorithm"
* " MK92 Fire Control System Expert System Maintenance Advisor"
* " Bureau of Medicine and Surgery Executive Information System"

ANNUAL STUDENT INPUT: 77

* 60 USN, 9 USMC, 2 USA, 2 USCG, 4 Internationals

62271

TRANSPORTATION LOGISTICS MANAGEMENT CURRICULUM (813)

SPONSORING ORGANIZATION:

* Naval Supply Systems Command

OBJECTIVE FOR NAVY SUB-SPECIALTY CODE 1304P:

* Provide high quality, militarily-relevant graduate education in transportation management to selected Navy Supply Corps officers
* Prepare these officers for successful tours as transportation professionals in support of Navy and Defense Logistics Agency supply missions

DESCRIPTION:

* Emphasis on commercial and defense transportation systems, Naval fleet logistics support, material and physical distribution management, acquisition of weapon systems, program management, contract management, and budgeting and financial controls for providing transportation resources, for the movement of Navy and DLA material

MILITARY/CLASSIFIED COURSES:

* Domestic Transportation Management
* International Transportation Management
* Defense Transportation Systems (SECRET)
* Introduction to Naval Logistics
* Logistics in Naval Warfare
* Material Logistics
* Inventory Management
* Materials Handling Systems Design
* Financial Management in the Armed Forces
* Systems Acquisition and Project Management
* Contract Management
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " Safety in Petroleum Movement: Is Enough Being Done to Protect the Environment?"
* " Analysis of NISTARS Shipping Policy"
* " Role of the Inland Waterways System During Mobilization"
* " Analysis of the Navy's Use of Rail Transportation"
* " The Feasibility of Radio Frequency Identification in Logistics Applications"
* " Quicktrans and Alternative Commercial Transportation"
* " Transportation Pricing Policy for Foreign Military Sales"
* " Analysis of Military Cost Cutting Initiatives Identified During the Defense Management Review Process"
* " Containerization of Unit Equipment During Surge Deployments"

ANNUAL STUDENT INPUT: 4 USN

62271

TRANSPORTATION MANAGEMENT CURRICULUM (814)

SPONSORING ORGANIZATION:

* Navy Military Sealift Command

OBJECTIVE FOR NAVY SUB-SPECIALTY CODE 35P & USA MOS 90:

* Provide high quality, militarily-relevant graduate education in transportation management to selected Navy line and Army officers
* Prepare officers for successful tours as transportation professionals within the Navy's Military Sealift Command and the Army's Transportation Corps

DESCRIPTION:

* Emphasis on commercial and defense transportation systems, Naval fleet logistics support, production management, civilian personnel management, program management for acquisition of CLF ships, contract management, and budgeting for providing CLF ships and to obtain transportation resources for contingencies

MILITARY/CLASSIFIED COURSES:

* Domestic Transportation Management
* International Transportation Management
* Defense Transportation Systems (SECRET)
* Material Logistics
* Materials Handling Systems Design
* Financial Management in the Armed Forces
* Systems Acquisition and Project Management
* Contract Management
* Personnel Management Processes
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " An Analysis of the Navy Organic Airlift System"
* " Strategic Sealift: Decisions Today to Ensure Tomorrow"
* " Analysis of Alternatives for Obtaining Roll On/Roll Off Vessels for Surge Sealift Requirements"
* " Joint Operation Planning and Execution"
* " Double-Stack Containers: Changing Intermodalism"
* " Ammunition Containerization: A Review of Current Efforts"
* " An Analysis of the Mobility Requirements Study"
* " Ocean Venture: An Assessment of Maritime Prepositioning"
* " Logistics Over the Shore Instream Offload Exercise"
* " Evaluating the Trade-Offs Inherent in Strategic Sealift for Lifting DoD's Outsize Cargo"

AVERAGE STUDENT INPUT: 5

* 4 USN, 1 USA

62271

SYSTEMS INVENTORY MANAGEMENT (819)

SPONSORING ORGANIZATION:

* Naval Supply Systems Command

OBJECTIVE FOR NAVY SUB-SPECIALTY CODE 1302P:

* Provide selected Navy Supply Corps officers with skills in Navy inventory and supply management
* Prepare these officers for successful tours as supply system professions in both the Navy and Defense Logistics Agency (DLA)

DESCRIPTION:

* Emphasis on inventory models and their use in the management of inventories of spare and repair parts by the Navy and Defense Logistics Agency
* Integrated logistics support, material and physical distribution management, contract management, and budgeting and financial controls for providing supply and other logistics support for weapon systems

MILITARY/CLASSIFIED COURSES:

* Inventory Models
* Seminar in Supply Systems
* Material Logistics
* Financial Management in the Armed Forces
* Simulation Modeling for Managerial Decision Making
* Contract Management
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " Allocating the Increased Operational Costs in Retail Prices at the Defense Electronics Supply Center as a Result of Defense Management Report Decision 901"
* " A Regression Analysis for Unit Costing at NAVSUP Activities"
* " An Expert System for Managing Storage Space Constraints Aboard United States Naval Vessels"
* " Special Tooling Disposition for Aircraft Entering Post Production Support"
* " Wholesale Level Reorder Point and Reorder Quantity"
* " An Analysis of Specific Cognizance Symbol Material in the Advanced Traceability and Control (ATAC) Program
* " A Model for Evaluating Vector Proposals for Price and Lead Time"
* " DLA Stock Location Policy - A Case Study of High Priority"

AVERAGE STUDENT INPUT: 6 USN

62271

MATERIAL LOGISTICS SUPPORT MANAGEMENT (827)

SPONSORING ORGANIZATION:

* Naval Air Systems Command

OBJECTIVE FOR NAVY CODE 32P, USMC MOS 9662 & Army MOS 90:

* Provide high quality, military-relevant graduate education in logistics support management to selected Navy and other service officers
* Prepare these officers for successful tours as logistics support professionals

DESCRIPTION:

* Emphasis on integrated logistics support, material and physical distribution management, management of production systems, acquisition of weapon systems, program management, contract management, and budgeting and financial controls for providing logistics support for weapon systems

MILITARY/CLASSIFIED COURSES:

* Logistics Engineering
* Material Logistics
* Production Management
* Financial Management in the Armed Forces
* Systems Acquisition and Project Management
* Contract Management
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " Analysis of Consolidation of Intermediate Level Maintenance for Atlantic Fleet T700-GE-401 Engines"
* " Just-In-Time Inventory Management: Application and Recommendations for Naval Hospital, Oakland"
* " A Supply Allocation and Optimization Model for the U.S. Marine Corps Intermediate Supply Level"
* " Consolidating Naval and Air Force Aviation Depots"
* " Spreadsheet Techniques for Logistics Decision Support"
* " The Costs and Benefits in Improving the J-52 Fuel"
* " Analysis of the Costs and Benefits in Improving the J-52 Flue Pump Main Gear Spline Drive Under the Aircraft Engine Component Improvement Program (CIP)"

ANNUAL STUDENT INPUT: 25

* USN 19, USMC 4, USA 2

62271

ACQUISITION AND CONTRACT MANAGEMENT (815)

SPONSORING ORGANIZATION:

* Deputy to Assistant Secretary of the Navy (Research, Development and Acquisition) for acquisition policy, integrity and accountability

OBJECTIVE FOR NAVY CODE 1306P, USMC MOS 9656 & USA MOS 97:

* Provide military officers and government civilians an advanced education the fundamental concepts, methodologies, and analytical techniques necessary for management of contracting in defense acquisition work force

DESCRIPTION:

* Core courses which provide the fundamental disciplines critical to developing the skills for managing in today's environment
* Acquisition and contracting courses which provide a solid theoretical and practical foundation for managing the Department of Defense (DOD) acquisition process
* Formulation and execution of acquisition policies, strategies, plans, and procedures; intimate knowledge of buying organizations and government procurement decision-making bodies; the system life cycle including requirements determination, funding, contracting, ownership, and deposal; methods of contracting; business philosophy, concepts and methodologies of private industry; contract types and their application; contract negotiations; and management of the field contracting, contract administration processes

MILITARY/CLASSIFIED COURSES:

* Contract Pricing and Negotiation
* Contract Administration
* Acquisition Management
* Contracting for Major Systems
* Seminar for Contracting Students
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " Policy Decisions for Strategic Shipyard Survival"
* " Identification of Early Warning Signal Prior to Contractor Default"
* " Mentor-Protege Program for Government Procurement"
* " Evaluation of DOD Contractor Risk Assessment Guide"
* " Spare Parts Non-Availability: Identification of Impediments to Spares Acquisition"
* " Should the Defense Fuel Supply Center Trade in the Futures Market?"

ANNUAL STUDENT INPUT: 40

* USN 21, USMC 9, USA 10

62271

SYSTEMS ACQUISITION MANAGEMENT (816)

SPONSORING ORGANIZATION:

* Military Deputy to Assistant Secretary of the Army (Research, Development and Acquisition)

OBJECTIVE FOR NAVY CODE A51P, USMC MOS 9657 & USA MOS 51:

* Provide military officers and Government civilians an advanced education in the fundamental concepts, methodologies, and analytical techniques necessary for the program management of major defense systems

DESCRIPTION:

* Core courses critical to developing the necessary skills for managing the acquisition of major defense systems
* Program management courses providing theoretical and practical foundation for managing the DoD acquisition process
* Acquisition management and program acquisition policy, private industry business concepts, design process for requirements determination, funding and budgeting, procurement and contracting, systems engineering, quality assurance, integrated logistics support, and disposal; program management concepts, functions, techniques and problems, tradeoff analysis; performance measurement; and systems effectiveness

MILITARY/CLASSIFIED COURSES:

* Systems Acquisition and Program Management
* Test and Evaluation
* Logistics Engineering
* Quality Assurance and Reliability Methods
* Principles of Systems Engineering
* Program Management Policy and Control
* Acquisition of Embedded Weapon Systems Software
* Financial Management in the Armed Forces
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " Software Reuse and the Army Program Development Process"
* " Modeling and Simulation on the Army Acquisition Process"
* " Avenger Air Defense System: An Examination of the Nondevelopmental Item Acquisition Strategy"
* " Team Performance in the Army Acquisition Project Office"
* " Implementing C/SCSC Concepts at Army Depots"
* " An Analysis for Preserving the Tank Industrial Base"
* " The Effects on Weapon Systems' Predictability of Suspending System Development"

ANNUAL STUDENT INPUT: 59

* USN 2, USMC 5, USA 50, International 2

62271

FINANCIAL MANAGEMENT CURRICULUM (837)

SPONSORING ORGANIZATION:

* Director, Office of Navy Budget and Reports

OBJECTIVE FOR NAVY CODE 31P & USMC MOS 9644:

* Educate financial managers for the Department of the Navy and other military and federal organizations.

DESCRIPTION:

* Education in four subject areas: fundamentals of management: financial management--financial accounting, managerial accounting, federal budget process; economic analysis; quantitative analysis; and management and strategy

MILITARY/CLASSIFIED COURSES:

* Financial management in the Armed Forces
* Cost management
* Systems acquisition and project management
* Internal control and auditing
* Management systems and strategy
* Total quality leadership in the military
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " A Cost and Operational Effectiveness Analysis of Alternative Anti-Surface Warfare Platforms"
* " Foreign Currency Fluctuation Allowances in the Department of Defense Acquisition Appropriations"
* " An Analysis of the Cost of Base Realignment Actions (COBRA) Model"
* " Budgeting and Investing in the Military Retirement Fund"
* " An Analysis of Obligation Patterns for the Department of Defense Operations and Maintenance Appropriations"
* " The Impact of the Establishment of the Defense Health Program"
* " Appropriation on the Planning, Programming and Budgeting System Within the Department of Defense"
* " Analysis of the Two-Tier Cost Structure for Aviation Jet Fuels on the Naval Reserve's C-9 Airlift Services Program"

AVERAGE STUDENT INPUT: 42

* USN 36, USMC 3, USCG 1, International 2

62271

MANPOWER, PERSONNEL AND TRAINING ANALYSIS (MPTA) (847)

SPONSORING ORGANIZATION:

* Chief of Naval Personnel

OBJECTIVE FOR NAVY CODE 33P & USMC MOS 9640:

* Prepare officers for leadership roles dealing with the Department of the Navy (DoN) and the Department of Defense (DoD) manpower, personnel, and training (MPT) policy development, management and analyses.
* Develop an understanding of MPT concepts and functional areas, the ability to apply management principles within an MPT context, the ability to use quantitative techniques and military data bases in evaluating MPT plans and policies
* Develop an understanding of the military's budgetary processes, and the ability to plan, develop, apply and assess studies supporting the Navy's MPT system.

DESCRIPTION:

* Courses in financial management, economic analysis, quantitative analysis and management and strategy
* Courses in manpower modeling, personnel models, personnel selection and evaluation, and manpower data analysis

MILITARY/CLASSIFIED COURSES:

* Manpower Economics
* Multivariate Manpower Analysis
* Personnel Processes
* Manpower and Personnel Models
* Manpower/personnel Policy Analysis
* Seminar in MPTA issues
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " A Multivariate Analysis of the Effects of the VSI/SSB Separation Bonus Program on Navy Enlisted Personnel"
* " An Analysis of the Navy's PCS Planning Process and Move Forecasting Model"
* " An Analysis of the Propensity for Nontraditional Occupations Among Civilian and Navy Women"
* " The Impact of Force Reductions on Promotions in the Navy Medical Service Corps"
* " An Analysis of Navy Recruiting Command's Officer Goaling Models"
* " AFQT Score Forecasting Models for Regional Estimation of Qualified Military Available Population"
* " An Analysis of the Relative Productivity of Naval Officers from Different Accession Sources"

AVERAGE STUDENT INPUT: 23

* USN 15, USMC 3, International 5

62271

SYSTEMS MANAGEMENT DEPARTMENT

The Department of Systems Management provides defense-oriented graduate-level instruction in the foundation disciplines of management and economics as well as the broad range of specialty management disciplines, including acquisition and contracting, public budgeting, information systems, logistics, manpower analysis, and transportation. A high-quality faculty split their time between teaching officer-students and conducting basic and applied research for sponsors for all four services, and OSD. In its efforts to increase its service to DoD, the department has established the Institute for Defense Education and Analysis (IDEA) through a formal partnership with the Defense Business Management University (DBMU). IDEA has established close partner-like relationships with several defense organizations aimed at applying the department's instructional and research expertise to its partners' specialized needs.

PRINCIPAL CURRICULA SUPPORTED:

* Acquisition & Contract Management
* Defense Systems Analysis
* Financial Management
* Information Technology Management
* Manpower, Personnel, & Training Analysis
* Material Logistics Support Management
* Resource Planning and Management for International Defense
* Systems Acquisition Management
* Systems Inventory Management
* Transportation Logistics Management
* Joint Command, Control, and Communications

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Defense acquisition and contracting policies
* Defense budgeting and financial reporting
* Defense logistics systems design and evaluation
* Defense telecommunications systems
* Defense transportation systems effectiveness
* Information system design in the military
* Military manpower planning and analysis
* Military recruiting and enlistment
* Strategic sealift contingencies & mobilization

FACULTY:

* 71 including 10 military, 35 with Secret and 4 with Top Secret clearances
* 9 years average service at NPS
* 1993 productivity: 280 theses, 7 books, 61 professional papers, 37 technical reports, 74 conference presentations

62271

LABORATORIES/SPECIALIZED RESOURCES:

* Multi-Media Computer Lab
* Computer Metrics Research Lab
* Video-Studio Classrooms
* Acquisition & Contracting Management Library
* Total Quality Management Resource Center
* Defense Manpower Data Center Databases and Expertise
* Defense Institute for Training Resources Analyses Data and Expertise
* Personnel Security Research Center Data and Staff Expertise

RESEARCH: $4 million reimbursable funded in 1993 includes

* BUMED (Navy Bureau of Medicine and Surgery)
  - Navy Executive Management Education Program
* (NDU) National Defense University
  - Coalition Command and Control
  - Interoperability
* U.S. Coast Guard
  - Integrated Modeling Environment
  - Fleet Mix Planning
* BUPERS (Navy Bureau of Personnel)
  - Military Personnel Training and Analysis
  - DoD Drug Demand Reduction Programs
* U.S. Space Command
  - Military Satellite Requirements Database
* OSD/Net Assessment
  -Potential Military Rivals: Technological, Economic, and Operational Considerations
* NAVSEA (Naval Sea Systems Command)
  - Ship Maintenance and Repair
* NOSC (Naval Ocean Systems Center)
  -Military Decision Making

62271

AREA STUDIES CURRICULA (681-684)

SPONSORING ORGANIZATION:

* Deputy Chief of Naval Operations; Plans, Policy & Operations

OBJECTIVE FOR NAVY CODES 21-24P, USMC MOS 9676 & USA MOS 48:

* Educate unrestricted line officers in U.S. foreign policy objectives and the role of military power in achieving them.
* Specialize in one of four regional areas, developing expertise in security issues and policy relevant to that area.

DESCRIPTION:

* Initial focus on history, culture and religion of specific region or country. Advanced study addresses intricacies of economic, political, and military structures and institutions of specific countries
* Tailored programs in all world regions except for Sub- Saharan Africa
* Programs may include study in language of the area at Defense Language Institute

MILITARY/CLASSIFIED COURSES:

* Joint and Maritime Strategic Planning (SECRET)
* Military and Politics in Developing World
* International Naval Power and Policy
* Congress in U.S. National Security Policy
* International Terrorism
* Advanced Seminars on Security Issues in Specific Regions

REPRESENTATIVE THESES:

* " Conventional Arms Export Controls in Central Europe"
* " An Alternative American Foreign Policy for Ukraine"
* " Islamic Resurgence in Ataturk's Turkey: An Analysis of Political and Social Elements"

AVERAGE STUDENT INPUT: 63

* USN 32, USMC 2, USA 26, International 2

62271

STRATEGIC PLANNING, INTERNATIONAL ORGANIZATIONS AND NEGOTIATIONS CURRICULUM (688)

SPONSORING ORGANIZATION:

* Deputy Chief of Naval Operations; Plans, Policy & Operations

OBJECTIVE FOR NAVY SUB-SPECIALTY CODE 28P & USA MOS 48:

* Educate unrestricted line officers in both general and nuclear strategic planning, and international organizations and negotiations.
* Focus on the evolutionary history of the planning process, strategies for national security, maritime strategy, and management/planning systems as they relate to international organizations and challenges as they relate to the future security environment

DESCRIPTION:

* Courses include general and nuclear strategic planning; international negotiations; interdisciplinary study with area studies, intelligence, operations research, and systems management
* Strong emphasis on methodology, gaming and simulation, and integration of area studies with U.S. national security decision-making processes
* An eight quarter program culminating in thoroughly researched theses on key issues in U.S. security policy

MILITARY/CLASSIFIED COURSES:

* Joint and Maritime Strategic Planning (SECRET)
* Role of Congress in U.S. National Security Policy
* Principles of Joint Operational Intelligence (TOP SECRET)
* Nuclear Strategy and National Security (SECRET)
* International Naval Power and Policy
* Seminar in Nuclear Strategy (SECRET)
* Seminar in Strategic Planning (SECRET)
* Seminar in Intelligence and Threat Analysis (SECRET)
* Forecasting & Gaming Methods for Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " Adaptive Force Packaging (AJFP): A Critical Analysis"
* " Sealift and the U.S. Merchant Marine: Vulnerabilities and Implications for Defense"
* " The Navy and Jointness: No Longer Reluctant Partners?"
* " Toward A New Strategic Framework: A Unified Command Plan for the New World Order"
* " The 1993 Chemical Weapons Convention, A Model for the New Non-Proliferation Treaty?"

ANNUAL STUDENT INPUT: 18

* USN 16, USA 1, International 1

62271

SPECIAL OPERATIONS AND LOW INTENSITY CONFLICT CURRICULUM (699)

SPONSORING ORGANIZATION:

* U.S. Special Operations Command, Naval Special Warfare Command

OBJECTIVE FOR NAVY CODE 29P, USMC MOS 9676, USA MOS 39 & AFSC 14N3B:

* Educate unrestricted line officers in the conflict spectrum below general conventional war
* Focus on international terrorism, the theory and practice of social revolution, ethnic conflict, the political roles of military power, and the political role of military establishments in the developing world

DESCRIPTION:

* Core courses to promote exposure to literature and analysis dealing with all aspects of revolution, terrorism, and special operations
* Series of courses dealing with insurrections and revolutions in Asia, Latin America, and the Middle East
* Wide-ranging and active speakers program bringing scholars and practitioners together with students

MILITARY/CLASSIFIED COURSES:

* Joint and Maritime Strategic Planning (SECRET)
* Colloquium in Contemporary Special Operations (TOP SECRET)
* Military and Politics in Developing World
* Role of Congress in U.S. National Security Policy
* International Terrorism
* Deterrence, Compellence and Crisis Management
* Regional Seminars in Low Intensity Conflict: Middle East; Latin America; or Asia

REPRESENTATIVE THESES:

* " Theory of Special Operations"
* " International and Regional Trends in Maritime Piracy"
* " On the Run: The Inherent Disadvantages of Underground Organizations"
* " Political Ethnicity: A Paradigm for Conflict Analysis"

ANNUAL STUDENT INPUT: 22

* USN 7, USMC 2, USA 10, USAF 2, Civilian 1

62271

INTELLIGENCE CURRICULUM (825)

SPONSORING ORGANIZATION:
* Director of Naval Intelligence

OBJECTIVE FOR NAVY CODE 17P:
* Educate officers in the academic disciplines that support joint intelligence

DESCRIPTION:
* Three Specializations:
  - Scientific and Technical Intelligence
  - Regional Intelligence (with Defense Language Institute)
  - Operational Intelligence

MILITARY/CLASSIFIED COURSES:
* Joint and Maritime Strategic Planning (SECRET)
* Principles of Joint Operational Intelligence (TOP SECRET)
* Nuclear Strategy (SECRET)
* Human Intelligence (SECRET)
* Foreign Intelligence Services (SECRET)
* Seminar in Joint Intel Support to Crisis Operations (TOP SECRET)
* Seminar in Intelligence and Threat Analysis
* Seminar in Security Assistance and Arms Transfer

REPRESENTATIVE THESES:
* " The U.S. Navy and Jointness: Reluctant Partners?"
* " Naval Arms Control: A Post Cold War Reappraisal"
* " Deterring Nuclear-Armed Third World Dictators"
* " Responding to Third World Air Defense Systems"
* " Multi-Spectral Imagery as a Tool for Naval Operations"
* " The Technology Revolution at Sea"
* " Ukraine: Independent Weapons Capability Rising"
* " A Critical Appraisal of Target Development"

ANNUAL STUDENT INPUT: 12 USN

62271

RESOURCE PLANNING AND MANAGEMENT FOR INTERNATIONAL DEFENSE (820)

SPONSORING ORGANIZATION:

* Defense Security Assistance Agency

OBJECTIVE:

* Provide selected officers and civilian employees in defense agencies of allied countries with advanced education in the fundamental concepts, methods, and analytical techniques necessary for effective defense resource planning and management

DESCRIPTION:

* Interdisciplinary program in the management of financial, material and human resources, economic analysis, domestic and international political institutions, civil military relations, and the role of international law

MILITARY/CLASSIFIED COURSES:

* Public Policy and Budgeting
* American National Security Policy
* Military and Politics in the Developing World
* Role of Congress in U.S. National Security Policy
* Seminar on Regional Security Planning Problems
* Strategic Management

REPRESENTATIVE THESES:

* " The Future of the Turkey-Iran Relationship"
* " Poland in NATO: A Case Study of Foreign Policy-Making"
* " Prospects for Unification of North African Countries"
* " Improving Mexican Relations Regarding Drug Trafficking"
* " Appraisal of U.S. Security Assistance to Turkey: 20 Years"
* " Human Resource Planning the Public Sector in Zimbabwe"
* " The Changing Civil-Military Relationship in Bangladesh"
* " The Somalia Expedition: The Study of U.N. Decision- making Process"

ANNUAL STUDENT INPUT: 20 International officer students from:
Indonesia, Chili, Philippines, Poland, Turkey, Tunisia, Senegal, Nigeria, Uruguay, Mexico, Korea, Thailand, Botswana, Zimbabwe

62271

NATIONAL SECURITY AFFAIRS DEPARTMENT

The Department of National Security Affairs offers tailored, interdisciplinary and intensive graduate-level education in strategic planning, area studies, intelligence, special operations & low intensity conflict, and resource planning and management for international defense. Thesis topics are supervised by faculty actively engaged in research on similar policy relevant issues. The students enrolled in the programs come from the four services, civilian agencies, and twenty foreign countries.

PRINCIPAL CURRICULA SUPPORTED:

* Strategic Planning, International Organizations and Negotiations
* Area Studies
* Intelligence
* Special Operations & Low Intensity Conflict
* Resource Planning and Management for International Defense

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Political/Military Affairs in the United States and Abroad
* Technical, Operational, and Human Intelligence
* Terrorism and Political Violence
* International Security Relations
* Civil/Military Relations in New Democracies

FACULTY:

* 27 including 2 military: 10 Secret, 12 Top Secret clearances
* 1993 productivity: 7 theses, 61 journal articles, 28 chapters in books, 1 book, 1 edited book

LABORATORIES/SPECIALIZED RESOURCES:

* Classified War Games
* Classified Data Bases
* Extensive National Security and Defense Data Bases

RESEARCH: $0.6 million reimbursable funding in 1993 includes

* OSD/Net Assessment
  - Analytical Trends in the Military-Technical Revolution
* OSD/Regional Security
  - Iberian Defense Policies
* Naval Security Group
  - Military Doctrines in the Post-Soviet Security Environment
  - Domestic Sources of Iranian Security Policy
* Army Research Institute
  - Peace Support Operations
* Office of Naval Intelligence
  - Violence at Sea Database
* U.S. Special Operations Command
  - Special Operations/Low Intensity Conflict

62271

OPERATIONS ANALYSIS CURRICULUM (360)

SPONSORING ORGANIZATIONS:

* Director Assessment Division, OPNAV
* Deputy GC for Combined Arms, TRADOC

OBJECTIVE FOR NAVY CODE 42P, USMC MOS 9650 & USA MOS 49:

* Provide the technical and managerial skills needed to create and sustain efficient, cost effective, and fully combat ready military organizations

DESCRIPTION:

* Core courses in mathematics, probability, statistics optimization, economics, computer programming, and human factors
* Six weeks experience tour in a military analysis organization defining a thesis problem
* Military Operations Research Courses in one of nine specializations -- Advanced Modeling; Artificial Intelligence; Human Factors; Inventory & Supply; Land Combat; Medical Services; Naval Warfare; Systems Analysis

MILITARY/CLASSIFIED COURSES:

* Search and Detection
* Test and Evaluation
* Tactical Decision Aids
* Wargaming Analysis (SECRET)
* Campaign Analysis (SECRET)
* Operations Research in Naval Warfare
* Logistics in Naval Warfare (SECRET)
* Joint and Maritime Strategic Planning (SECRET)
* Joint Warfare Analysis

REPRESENTATIVE THESES:

* " Optimizing Minefield Planning and Clearance"
* " A Naval Shipyard Optimal Drydock Loading Model"
* " HARM Effectiveness in Operation Desert Storm"
* " Improved Torpedo Evasion Guidance for Submarines"
* " Aircraft Identification Using Non-Cooperative Target Cognition System"
* " Decision Support Aid for Navy Enlisted Strength Planning"
* " An Optimization Model for Army Planning and Programming"

ANNUAL STUDENT INPUT: 68

* USN 35, USMC 8, USA 15, International 10

62271

OPERATIONAL LOGISTICS CURRICULUM (361)

SPONSORING ORGANIZATION:

* Deputy Chief of Naval Operations for Logistics

OBJECTIVE FOR NAVY SUB-SPECIALTY CODE 43P:

* Provide technical and managerial skills needed to perform quantitative analyses of Navy and Joint operational logistics problems

DESCRIPTION:

* Core courses in mathematics, probability, statistics, optimization, economics, computer programming, and human factors
* Six weeks experience tour in a military analysis organization defining a thesis problem
* Courses in Joint and Navy logistics deployment and sustainment

MILITARY/CLASSIFIED COURSES:

* Introduction to Naval Logistics
* Defense Transportation System (SECRET)
* Logistics in Naval Warfare (SECRET)
* Combat Models
* Operational Logistics Models (SECRET)
* Wargaming Analysis (SECRET)
* Campaign Analysis (SECRET)

REPRESENTATIVE THESES:

* " Battle Group Tactical Rearming"
* " Surge and Sustainment Simulation"
* " CINCPACFLT Force Sustainment Requirements"
* " Alternatives for Manning the Combat Logistics Ships"

ANNUAL STUDENT INPUT: 17 USN

62271

OPERATIONS RESEARCH DEPARTMENT

The Operations Research Department provides a carefully structured, graduate-level education in statistics and data analysis, probability, optimization, modeling and simulation, with emphasis on applications to military planning, doctrine, tactics, training, and procurement issues. The department has also developed and teaches graduate level courses in military operations research that cover such topics as search and detection, campaign analysis, combat modeling, test and evaluation, and cost and operational effectiveness analysis. Student thesis work is supervised by a faculty actively engaged in research on these topics, sponsored by various USN, USAF, USA, USMC, DOD, and NSF programs.

PRINCIPAL CURRICULA SUPPORTED:

* Operations Analysis
* Operational Logistics
* Undersea Warfare
* Joint Command Control and Communications

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Combat Models, Simulations, and War Games
* Campaign Planning and Analysis
* Battle Group Logistics and Supply
* Search and Detection Models
* Operational Test and Evaluation
* Cost and Operational Effectiveness Analysis
* Tactical Decision Aids

FACULTY:

* 44 with 11 military: 32 with Secret, 12 with Top Secret clearances
* 4 Institute of Mathematical Statistics Fellows, 3 American Statistical Association Fellows, 1 Military Operations Research Fellow, 1 American Association for Advancement of Science Fellow, 3 International Statistical Institute Elected Members, 1 Royal Statistical Society Elected Member, 1 Board of Directors of the Military Conflict Institute, 11 Journal Editors/Associate Editors
* 15 years average service at NPS
* 1993 productivity: 70 theses, 23 technical reports, 19 journal articles, 14 proceedings papers, 51 presentations

LABORATORIES/SPECIALIZED RESOURCES:

* Secure Warfare Analysis and Research Lab (WARLAB)
* Secure Theater Ballistic Missile Defense Lab
* Human Systems Integration Lab
* Optimization Lab
* Simulation and Modeling Lab
* US Army Training and Doctrine Center
* Joint Warfare Analysis Center
* Defense Institute for Training Resources and Analyses

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RESEARCH: $1.7 million reimbursable funding in 1993 includes

* AFOSR (Air Force Office of Scientific Research)
  - Optimization of Munitions Planning
* Army Base Realignment and Closure Office
  - Optimally Stationing Units to Bases
* Army Training and Doctrine Command
  - National Training Center Combat Analysis
* Army Training Command
  - Allocating Recruiting and Advertising Resources
* Joint Staff
  - Future Theater Level Model
* NSA (National Security Agency)
  - Optimization and Modeling
* BMDO (Ballistic Missile Defense Organization)
  - Theater and Defense Modeling
* Naval Surface Warfare Center
  - Effectiveness of Munitions

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APPLIED MATHEMATICS CURRICULUM (380)

SPONSORING ORGANIZATION:

* U.S. Naval Academy Department of Mathematics

OBJECTIVE FOR NAVY CODE 41P, USMC MOS 9670 & USA MOS 49:

* Educate selected officers to deal with the problems of fundamental and applied research and analysis in applied mathematics
* Prepare selected officers to instruct courses in mathematics at the undergraduate military service academies

DESCRIPTION:

* Core courses in analysis, differential equations, linear algebra, probability, statistics, and numerical analysis
* Six Specializations: Numerical Analysis and Scientific Computation, Operations Analysis, Applied (Physical) Analysis, Discrete Models, Intelligence, and Theoretical Analysis

MILITARY/CLASSIFIED COURSES:

* Joint and Maritime Strategic Planning (SECRET)
* Combat Modeling
* Undersea Warfare
* Satellite Orbit Prediction
* Electronic Warfare
* Cryptography

REPRESENTATIVE THESES:

* " Air Force Space Command Satellite Orbit Predictor"
* " Mathematical Model and Analysis of the Tactical Unmanned Ground Vehicle (TUGV) Using Computer Simulation"
* " Resonant Interaction of a Submarine's Wake With a Stratified Fluid"
* " Using Computers in Integral Calculus Instruction"
* " Theoretical Basis for State Vectors Comparison, Relative Position Display, and Relative Position/ Rendezvous Prediction (Used on Space Shuttle Discovery Mission Sts-51)"
* " Comparison of Orbit Propagators in R&D Goddard Trajectory Determination System"

ANNUAL STUDENT INPUT: 8

* 5 USN & USMC, 3 USA

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MATHEMATICS DEPARTMENT

The Department of Mathematics exists to serve all of the technical curricula at the Naval Postgraduate School. Courses offered range from calculus through graduate level mathematics courses supporting advanced students and Ph.D. minors from other curricula, as well as supporting our own curriculum. The faculty perform research in various applied disciplines and direct student theses in several curricula, as well as supporting our own curriculum.

PRINCIPAL CURRICULUM SUPPORTED:

* Applied Mathematics

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Combat Modeling
* Undersea Warfare
* Satellite Orbit Prediction
* Electronic Warfare
* Cryptography

FACULTY:

* 24: 13 with Secret and 1 with Top Secret clearances
* 11 years average experience at NPS
* 1 National Research Council Fellow
* 1993 productivity: 17 theses, 18 technical reports, 21 journal articles, 13 conference papers, 22 conference presentations

LABORATORIES/SPECIALIZED RESOURCES:

* Workstation Networks
* Parallel Processor
* Specialized Software
* U.S. Army Training and Doctrine Center

RESEARCH: $0.5 million reimbursable funded in 1993 includes

* ONR (Office of Naval Research)
  - Convection in Welding
* NAVSPACECOM (Naval Space Command)
  - Orbit Prediction on Parallel Computers
* NSWC (Naval Surface Weapons Center)
  - Tripping of Thin Walled Plating Stiffeners
* US Army Training and Doctrine Command
  - Javelin/TUGV Model-Test-Model, Audio Detection
* National Science Foundation
  - Multilinear Extensions of Games

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COMPUTER SCIENCE CURRICULUM (368)

SPONSORING ORGANIZATION:

* Naval Computer and Telecommunications Command

OBJECTIVE FOR NAVY CODE 91P, USMC MOS 9646 & USA MOS 53:

* Provide the officer with the technical knowledge and skills necessary to specify, evaluate, and manage computer system design for hardware, software, and firmware in applications ranging from data processing to tactical embedded systems

DESCRIPTION:

* Core disciplines of Computer Science
* Six track specializations -- Artificial Intelligence and Robotics; Computer Graphics and Visual Simulations; Database and Data Engineering; Software Engineering; Computer Systems and Architectures; Computer Security

MILITARY/CLASSIFIED COURSES:

* Software Development for Combat Systems
* Software Engineering to Government Standards
* Artificial Intelligence Techniques for Military Applications
* Software Engineering with Ada
* Computer Security
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " Extending Reusable Ada Code Retrieval Capabilities"
* " Software Safety Using Ada"
* " An Expert System to Model Aircraft Interaction with Ships and Submarines"
* " Wide Area Network Management for the U.S. Army"
* " Object-Oriented Implementation of the Army Field Artillery Tactical Data System"
* " A Real-Time U.S. Army Tactical Telephone Network Management System"
* " NPSNET: Environmental Effects for a Real-Time Virtual World Battlefield Simulation"

ANNUAL STUDENT INPUT: 56

* USN 27, USA 10, USMC 7, NOAA 1, DoD Civ 1, International 10

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COMPUTER SCIENCE DEPARTMENT

The Computer Science Department provides graduate-level education and research in fundamental principles of computing and in critical technologies in support of DoD missions: virtual reality, real-time embedded systems software, networking and high-performance computing, military robotics, database systems, and artificial intelligence.

PRINCIPAL CURRICULA SUPPORTED:

* Computer Science
* Information Technology Management
* Joint Command, Control, and Communications

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Applications of Expert Systems to Military Operations
* Autonomous Underwater Vehicle Software
* High-Speed Network Protocols for C3I Applications
* Object-Oriented Databases
* Parallel Processing of Terrain Databases
* Real-Time Embedded Ada Rapid Prototyping Software
* Virtual Worlds and Distributed Interactive Simulation

FACULTY:

* 29 including 6 military: 2 Secret clearances
* 6 years average service at NPS
* 1 Presidential Young Investigator
* 1993 productivity: 1 Ph.D. dissertation, 15 theses, 6 technical reports, 15 journal articles, 49 conference papers, 91 conference and workshop presentations

LABORATORIES/SPECIALIZED RESOURCES:

* Artificial Intelligence and Robotic Lab
* Computer Graphics and Video Lab
* Computer Systems and Security Lab
* Microcomputer Systems Lab
* Software Engineering Lab
* Visual Database and Interface Lab
* U.S. Army Training and Doctrine Center

RESEARCH: $2.2 million reimbursable funding in 1993 includes

* ARO (Army Research Office)
  - Rapid Prototyping of Real-Time Software
* ARPA (Advanced Research Projects Agency)
  - Virtual World Simulation
* NAWC (Naval Air Warfare Center)
  - Software Safety Analysis
* NRDC (Naval Research and Development Center, NCCOSC)
  - Autonomous Underwater Vehicle
* NSF (National Science Foundation)
  - Software Merging/Versioning

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METEOROLOGY CURRICULUM (372)

SPONSORING ORGANIZATION:

* Oceanographer of the Navy

OBJECTIVE FOR NAVY SUB-SPECIALTY CODE 48P:

* Provide an understanding of the science of meteorology.
* Develop the technical expertise in meteorological and oceanographic data and models to support military operations.

DESCRIPTION:

* Six core courses in dynamic, numerical, physicla and synoptic meteorology
* At least nine hours of graduate level meteorology electives

REPRESENTATIVE THESES:

* " An Analysis of Mesoscale Convective Systems Observed During the 1992 Tropical Cyclone Motion Field Experiment"
* " An Investigation of the Ground-Based High Resolution Interferometer Sounder in a Coastal Marine Environment"
* " Multispectral Analysis of Maritime Clouds at Night in the Presence of Atmospheric Water Vapor"

ANNUAL STUDENT INPUT: 2 International Students

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AIR-OCEAN SCIENCE CURRICULUM (373)

SPONSORING ORGANIZATION:

* Oceanographer of the Navy

OBJECTIVE FOR NAVY SUB-SPECIALTY CODE 47P:

* Provide a sound understanding of the science of meteorology and oceanography
* Develop the technical expertise in meteorological and oceanographic data and models in support of military operations

DESCRIPTION:

* Approximate balance of meteorology/oceanography courses
* Nine core courses in dynamic, numerical, physical and synoptic meteorology and oceanography

MILITARY/CLASSIFIED COURSES:

* Polar meteorology/oceanography
* Operational acoustic forecasting (SECRET)
* Remote sensing of the atmosphere and ocean
* Ocean acoustic prediction
* Atmospheric factors in radar and optical propagation
* Russian oceanography (SECRET)
* Advanced applications of overhead systems (TOP SECRET)

REPRESENTATIVE THESES:

* " Comparison of Modeled and Observed Ocean Mixed Layer Behavior in a Sea Breeze Influenced Coastal Region"
* " Arctic Cyclones and Marginal Ice Zone Variability"
* " Automated Satellite Image Navigation"

ANNUAL STUDENT INPUT: 18 USN Restricted Line

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OPERATIONAL OCEANOGRAPHY CURRICULUM (374)

SPONSORING ORGANIZATION:

* Oceanographer of the Navy

OBJECTIVE FOR NAVY SUB-SPECIALTY CODE 49P:

* Provide a sound understanding of the science of physical oceanography and acoustics.
* Develop the technical expertise in oceanographic and acoustic data and models to support all aspects of Naval warfare.

DESCRIPTION:

* Eight graduate oceanography courses
* Four core courses in dynamic, numerical, physical oceanography
* At least four elective graduate level oceanography courses

MILITARY/CLASSIFIED COURSES:

* Polar meteorology/oceanography
* Operational acoustic forecasting (SECRET)
* Remote sensing of the atmosphere and ocean
* Ocean acoustic prediction
* Atmospheric factors in radar and optical propagation
* Russian oceanography (SECRET)
* Advanced applications of overhead systems (TOP SECRET)

REPRESENTATIVE THESES:

* " Variability of the California Current System Off Point Sur From April 1988 to December 1990"
* " Numerical Study of Seasonal Wind Forcing Effects on the California Current System"
* " Simulation of Acoustic Multipath Arrival Structure in the Barents Sea"

AVERAGE STUDENT INPUT: 8 USN

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PHYSICAL OCEANOGRAPHY CURRICULUM (440)

SPONSORING ORGANIZATION:

* Oceanographer of the Navy (096)

OBJECTIVE FOR NAVY SUB-SPECIALTY CODE 49P:

* Provide a sound understanding of the science of physical oceanography and acoustics
* Develop the technical expertise to provide and use oceanographic and acoustic data and models in support of all aspects of at sea operations and undersea warfare, such as counter-mine warfare and coastal undersea warfare

DESCRIPTION:

* Eight graduate oceanography courses
* Four core courses in dynamic, numerical, physical oceanography
* At least four elective graduate level oceanography courses
* Significant research/educational experience at sea

MILITARY/CLASSIFIED COURSES:

* Polar meteorology/oceanography
* Operational acoustic forecasting (SECRET)
* Remote sensing of the atmosphere and ocean
* Ocean acoustic prediction
* Atmospheric factors in radar and optical propagation
* Russian oceanography (SECRET)
* Advanced applications of overhead systems (TOP SECRET)

REPRESENTATIVE THESES:

* " Ambient Sound in the Ocean Induced by Heavy Precipitation and the Subsequent Predictability of Rainfall Rate"
* " Velocity Field in the Northeast Atlantic From Satellite- Tracked Drifting Buoy"
* " Tidal Dynamics and Mixing Over Severe Topography"

ANNUAL STUDENT INPUT: 2 per year (international and Coast Guard, NOAA)

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METEOROLOGY DEPARTMENT

The Meteorology Department provides graduate-level instruction in the science of meteorology and its application in support of military operations. To maintain expertise and provide support to student theses, the faculty perform research in the Navy relevant areas of synoptic and dynamic meteorology, remote sensing, numerical modeling, boundary layer meteorology and environmental effects.

Over 30 years ago, NPS was responsible for the establishment and flourishing of a Navy operational command on its campus. In 1959, the Naval Oceanographic Command (formerly the Naval Weather Command) moved its numerical prediction unit from Suitland, Maryland, where it was part of a joint National (civilian), Navy and Air Force Weather Services organization, to Monterey as a new operational command: the Fleet Numerical Weather Central (now called the FNMOC). The move to Monterey was prompted by the special requirements of the Navy because of its ocean operations which were not adequately met in the joint civilian-military center. The Navy chose to move FNMOC to Monterey to take advantage of the presence of the Naval Postgraduate School with its large assembly of science faculty who are intimately familiar with Navy operational problems in meteorology and oceanography. For similar reasons, the Navy Environmental Prediction Research Facility (NEPRF, now the Marine Meteorology Division of NRL, or NRL-West) moved to Monterey in 1971 from Norfolk, Virginia, a further augmentation of meteorological and oceanographic scientists in Monterey, making it the center of Naval environmental science.

The consequences of these moves are the substantial involvement of NPS faculty in research projects at NRL-west and enhancement of operational capabilities at FNMOC. Furthermore, personnel from the latter two organizations are able to take advanced courses at NPS, and officer-students at NPS can engage in thesis research on "real-life" applications relating environmental parameters to Naval operations. Approximately 200 theses of NPS graduates have dealt with FNMOC and NRL applications. In addition, numerous research projects have been completed by the faculty that addressed special Navy operational needs based on data available from the two organizations and interactions with their personnel.

PRINCIPAL CURRICULA SUPPORTED:

* Meteorology
* Air-Ocean Sciences
* Operational Oceanography
* Space Systems
* Electronic Warfare
* Joint Command Control & Communications

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MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Satellite remote sensing
* Navy vertical aerosol model
* Navy Forecast Models Development and Verification
* Environmental effects on sensor & communication propagation
* Tactical Environmental Support
* Coastal Meteorology
* Navy Forecasters Handbooks & correspondence courses

FACULTY:

* 18 including 1 military: 8 Secret, 1 Top Secret Clearances
* 13 years average experience at NPS
* 3 American Meteorological Society Fellows
* Productivity: 24 MS theses, 2 PhD dissertations, 22 journal articles, 1 book, 4 tech reports, 50 conference presentations

LABORATORIES/SPECIALIZED RESOURCES:

* Classified tactical lab with ship-based facilities
* Interactive digital environmental analysis laboratory
* Marine atmospheric measurements laboratory
* Synoptic analysis & forecasting laboratory
* Real-time global weather data, analyses and forecasts
* Real-time Navy data, analyses & forecast products
* Co-located:Fleet Numerical Meteorology & Oceanography Center
* University Center for Atmospheric Research (UCAR)

RESEARCH: $1.5 million reimbursable funding in 1993 includes:

* Naval Oceanographic Office & ONR
  - Synoptic meteorology
* Office of Naval Research (ONR) & NASA
  - Remote Sensing
* NSF (National Science Foundation), ONR & NRL
  - Numerical modeling
* NSF, Naval Research Lab (NRL) & ONR
  - Tropical meteorology
* NRL, ONR, Navy Space & Warfare Command.
  - Environmental effects

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OCEANOGRAPHY DEPARTMENT

The Oceanography Department is the premier academic center for Naval oceanography. This means that our expertise in ocean science is actively sought by both the Naval community and the civilian community. This also means that military officers from the U.S. and allied nations actively seek admission to our curricula. Our primary goal is to be an internationally recognized center in ocean analysis and prediction. Such recognition is achieved by high quality, Navy-relevant curricula in physical oceanography and by the high quality of our research. Educational goals include: 1) our graduates must be able to effectively fill all oceanographic assignments that they may encounter during their careers because our educational programs will permit them to confidently use their knowledge to better manage naval operations in the marine environment; and 2) our physical oceanography curricula will be distinguished in the navy relevant areas of air-sea interaction, ocean acoustics, coastal and nearshore processes, numerical modeling and polar oceanography. Students are actively involved from problem definition and data analysis to presentation of results at national meetings and papers published in scholastic journals. The Department of the Navy (DoN) seeks faculty expertise in the furtherance of Naval oceanography and its application to Naval operations. Faculty participate on panels and committees that influence the future direction of oceanographic research.

CURRICULA:

* Air-Ocean Science
* Operational Oceanography
* Oceanography (International Students)

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Coastal Ocean Radar
* Mine Burial and Drift
* Global Positioning System
* Shallow Water Bottom Reverberation
* Source Location Using Inverse Methods
* Ambient Noise Tactical Prediction Model in Ice-Covered Waters
* Submarine Observations of Convection
* Arctic Underice Roughness Database
* Shallow Water Bottom Sediment Acoustic Propagation Studies
* Bottom Sediment Transport Studies
* Surf Forecasting
* Target Classification for Shallow Water Based on Broadband Active Sonar

FACULTY:

* 20 including 1 military, 12 with Secret and 2 with Top Secret clearances
* 7.35 Years Average Experience at NPS
* 20 Masters Theses and 3 Ph.D. Dissertations, 30 Journal articles, 1 book, over 100 conference presentations, and strong working relationships with biological, chemical and geological oceanographers at Moss Landing Marine Lab, Hopkins Marine Station/Stanford, Monterey Bay Aquarium Research Institute and University of California at Santa Cruz

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LABORATORIES/SPECIALIZED RESOURCES

* Research Vessel (shared)
* Pt. Sur Sosus Array
* Joint Tactical Microcomputer Lab (classified)
* Tactical Environmental Support System (Classified)
* Interactive Digital Environmental Analysis (IDEA) Lab
* Moored Equipment Lab
* University Center for Atmospheric Research (UCAR)/ National Center for Atmospheric Research (NCAR)
* Naval Research Lab-West (NRL)/Fleet Numerical Meteorology and Oceanography Center (FNMOC)

RESEARCH: $2.2 million reimbursable funding in 1993

* ONR (Office of Naval Research)
  - Eddy and Front Studies
* NSF (National Science Foundation)
  - Modeling Studies
* Arctic Submarine Laboratory
  - Arctic Ocean Characteristics
* Navy Oceanographic Office
  - Littoral Conditions and Predictability

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COMBAT SYSTEMS SCIENCES AND TECHNOLOGY CURRICULUM (533)

SPONSORING ORGANIZATIONS:

* Naval Sea Systems Command
* Space and Naval Warfare Systems Command

OBJECTIVE FOR NAVY CODE 66P, USMC MOS 9626 & USA MOS 51:

* Produce graduates who can apply broad technical, scientific and engineering principles in combat systems development, evaluation, operation and design
* Provide broad based education to line offices involved in the articulation and formulation of technical requirements of combat systems

DESCRIPTION:

* Four specializations: Electromagnetic sensor systems; Nuclear, conventional, and directed energy weapons; Underwater acoustic systems; Engineering related to combat systems

MILITARY/CLASSIFIED COURSES:

* Physics of underwater weapons (SECRET)
* Particle beam and high energy laser weapon physics (SECRET)
* Physics of nuclear explosions (SECRET)
* The physics of unconventional weapons and weapons effects
* Advanced concepts in target surveillance and engagement
* Physics of high velocity impact phenomena in solids
* Weapons lethality and survivability
* Explosives and explosions
* Naval combat system elements
* Combat system integration
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " A study of the diffraction behavior and resolution criteria for pattern recognition for a proposed multiplexed imaging technique"
* " High gain, high power free electron lasers"
* " A design, fabrication and test of a precision positioning servo drive for a multiplexed imaging system"
* " Recursive ray acoustics for three-dimensional sound speed profiles"
* " Ocean bottom simulation using fractal geometry"

ANNUAL STUDENT INPUT: 38

* USN 26, USMC 1, USA 1, International 10

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PHYSICS DEPARTMENT

The Department of Physics has been a leader in introducing courses and curricula involving the applications of current technology to combat systems and the applications of science to problems of military interest. The Department offers courses, conducts research, and directs student theses in such areas as underwater detection and tracking, target detection and signature measurements, infrared countermeasures, combat systems design, combat systems simulation, directed energy weapons systems, electro-optic devices, and the influence of the atmosphere and near space environment on military systems. Historically, the Department has maintained the flexibility to move into new technological areas as they appear.

PRINCIPAL CURRICULA SUPPORTED:

* Combat systems science and technology
* Undersea warfare
* Space systems operations
* Space systems engineering
* Electronic warfare systems engineering
* Intelligence

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Combat modeling and simulation
* Directed energy weapon technology
* Target acquisition, surveillance and engagement
* Thermal imaging systems
* Physics of nuclear explosions
* Underwater acoustics
* Weapons and effects
* Explosions and explosives
* Space systems applications

FACULTY:

* 35 including 2 military, 25 with Secret, 3 with Top Secret clearances
* 13 years average experience at NPS
* 4 Fellows of Acoustical Society of America, 1 of American Physical Society
* 1992 productivity: 51 theses, 12 technical reports, 2 book chapters, 29 journal articles, 56 conference presentations

LABORATORIES/SPECIALIZED RESOURCES

* Linear electron accelerator
* Flash X-ray facility
* Large anechoic chamber facility
* Sonar laboratory
* Wave tank facility
* Combat systems simulation laboratory
* High energy laser laboratory

RESEARCH: $3.9 million reimbursable funding in 1993 includes:

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* Naval Sea Systems Command
  - fiber optic hydrophone
* Office of Naval Research
  - thermoacoustic refrigeration
  - weapon simulation models
* OSD Director of Net Assessment
  - information warfare
* USAF Space Systems Div
  - airborne dispersion of toxins
* USAF Rome Laboratory
  - electro-optic wide area surveillance

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AERONAUTICAL ENGINEERING CURRICULUM (610)

SPONSORING ORGANIZATION:

* Naval Air Systems Command

OBJECTIVE FOR NAVY CODE 71P, USMC MOS 9620 & USA MOS 51:

* Prepare Naval officers to serve as technical managers dealing with aircraft and related weapons systems
* Prepare officers to serve in aircraft design, acquisition, test, operation and maintenance positions

DESCRIPTION:

* Broad graduate level coverage of the five major disciplines in Aerospace Engineering: Aerodynamics, Structures, Propulsion, Flight Dynamics/Controls and Systems Design, coupled with computer, laboratory and research experience

MILITARY/CLASSIFIED COURSES:

* Air Defense Lethality
* Laser/Particle Beam Technologies
* Aircraft combat survivability (SECRET)
* Tactical missile propulsion
* Introduction to avionics
* V/STOL aircraft technology
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " Aircraft Vulnerability to Directed Energy Weapons"
* " Service Life Prediction of Composite Structures Through Fiber Testing"
* " F-14 Overland Survivability Enhancement Through Fuel System Vulnerability Reduction"
* " Improvements to the Advanced Low Altitude Radar Model"
* " Fatigue Life Program using Strain-Life Methods"
* " Control Vane Guidance for a Ducted-Fan Unmanned Aerial Vehicle"

ANNUAL STUDENT INPUT: 31

* USN 21, USMC 2, USA 2, DoD Civilian 3, International 3

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AERONAUTICAL ENGINEERING, AVIONICS CURRICULUM (611)

SPONSORING ORGANIZATION:
* Naval Air Systems Command

OBJECTIVE FOR NAVY CODE 72P, USMC MOS 9620 & USA MOS 51:
* Prepare Naval officers to serve as technical managers dealing with aircraft avionics systems through all phases of design, acquisition, test, operations and maintenance

DESCRIPTION:
* Broad graduate level coverage of four major disciplines in Aerospace Engineering: Avionics, Aerodynamics, Flight Dynamics/Controls and Systems Design, coupled with computer, laboratory and research experience

MILITARY/CLASSIFIED COURSES:
* Air Defense Lethality
* Laser/Particle Beam Technologies
* Aircraft Combat Survivability (SECRET)
* Digital Avionics Systems
* Principles of Radar Systems (SECRET)
* Electronic Warfare Systems and Techniques (SECRET)
* Joint Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:
* " Airborne Countermeasures to Advanced Laser Beamrider Surface-to-Air Missiles"
* " Preliminary Design of a Water Cooled Avionics Cooling Rack"
* " Integration of Differential GPS and Inertial Navigation Using a Complementary Kalman Filter"
* " Applications of Neural Networks to Adaptive Control"
* " Antenna Gain, Loss and Pattern Degradation due to Transmission Through Dielectric Radomes"
* " Operation of a Potential Countermeasures Again Missile Systems Using Visual Imaging Systems"

ANNUAL STUDENT INPUT: 14
* USN 11, USCG 1, DoD Civilian 1, International 1

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AERONAUTICAL ENGINEERING/TEST PILOT SCHOOL CURRICULUM (612)

SPONSORING ORGANIZATION:

* Naval Air Systems Command

OBJECTIVE FOR NAVY CODE 71P & USA MOS 51:

* Prepare Naval officers to serve as technical managers and flight test engineers dealing with aircraft avionics systems through all phases of design, acquisition, test, operations and maintenance

DESCRIPTION:

* Broad graduate level coverage of the five major disciplines in Aerospace Engineering: Aerodynamics, Structures, Propulsion, Flight Dynamics/Controls and Systems Design, couples with completion of the U.S. Navy Test Pilot School Curriculum

MILITARY/CLASSIFIED COURSES:

* Air Defense Lethality
* Laser/Particle Beam Technologies
* Aircraft Combat Survivability (SECRET)
* Flight Test Engineering
* Principles of Radar Systems (SECRET)
* Electronic Warfare Systems and Techniques (SECRET)
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* A thesis is not a requirement of this program which includes time spent at the Test Pilot School at Patuxent River.

ANNUAL STUDENT INPUT: 11

* USN 10, USA 1

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AERONAUTICS AND ASTRONAUTICS DEPARTMENT

The Department of Aeronautics and Astronautics provides advanced education in Aeronautics Engineering, Astronautical Engineering and Avionics Engineering. The Department is fully staffed with full-time faculty representing the different technical specialties. Additional support is provided by the Departments of Mathematics, Physics, Mechanical Engineering and Electrical and Computer Engineering. In order to develop and maintain their expertise, as well as to provide support for student thesis research, faculty members perform research in their disciplines for all military services and NASA.

PRINCIPAL CURRICULA SUPPORTED:

* Aeronautical engineering
* Aeronautical engineering - avionics option
* NPS/Test Pilot School cooperative program
* Space systems engineering

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Aerodynamics
* Structures, including survivability
* Propulsion
* Flight dynamics/controls/avionics
* Systems design (aircraft, helicopter, missile, spacecraft)

FACULTY:

* 21 including 1 military: 11 Secret and 1 Top Secret clearances
* 13 years average service at NPS
* 13 have industry or government laboratory experience
* 1993 productivity: 69 theses, 2 book chapters, 23 journal articles, 58 conference papers, 15 presentations, 1 patent, 1 disclosure
* 3 AIAA Fellows and 6 AIAA Technical Committee Members

LABORATORIES/SPECIALIZED RESOURCES

* Navy/NASA joint institute
* Composites laboratory
* Propulsion laboratory
* FLTSATCOM (including a satellite)
* Survivability (SECRET)
* Unmanned aerial vehicle laboratory

RESEARCH: $1.222 million reimbursable funded includes:

* NAVAIR (Naval Air Systems Command)
* Naval Air Warfare Center, Aircraft Division
* Naval Air Warfare Center, Weapons Division
* Space and Naval Warfare Systems Command
* National Aeronautics and Space Administration (NASA)

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ELECTRONICS SYSTEMS ENGINEERING CURRICULUM (590)

SPONSORING ORGANIZATION:

* Space and Naval Warfare Systems Command

OBJECTIVE FOR NAVY CODE 55P, USMC MOS 9624 & USA MOS 51:

* Provide operationally relevant and electronics engineering knowledge of electrical and computer engineering as found in modern military systems

DESCRIPTION:

* Six specializations: Communication systems; Computer systems; electromagnetic systems, guidance, navigation, and control systems; power systems; signal processing

MILITARY/CLASSIFIED COURSES:

* Principles of Radar Systems (SECRET)
* Microwave devices and radar
* Navigation, Missile, & Avionics Systems (SECRET)
* High Frequency Techniques (SECRET)
* Signal intelligence systems
* Electro-optic Systems & Countermeasures (SECRET)
* Fiber optic systems
* Defense systems engineering
* Modeling and simulation for control systems
* Sonar systems engineering
* Radar cross section
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " A Computer Analysis of a Conical Monopole for use at Naval High Frequency Direction Finding Sites"
* " Design and Evaluation of the Electrical Power System for the PANSAT Satellite"
* " Improvement of Miss Distance of Missiles with Imaging Seekers by Utilizing Dynamic Image Processing"
* " Ultra-wideband Radar Transient Detection Using Time-Frequency and Wavelet Transforms"
* " Radar Cross Section Reduction of Indirect-Fire Projectiles"
* " Design and Testing of an Uninterruptable Power Supply for the Marine Corps AN/MRC-14 UHF Radio"

ANNUAL STUDENT INPUT: 61

* USN 30, USMC 6; USA 2; USCG 1; DOD Civ 2, International 20

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ELECTRICAL AND COMPUTER ENGINEERING DEPARTMENT

The Department seeks to provide NPS students with the highest quality and most DoD-relevant graduate education available in electrical and computer engineering. This discipline spans a broad swath of leading-edge technology which impacts most facets of DoD's warfighting capability, ranging from secure voice and computer communication networks to advanced electronic warfare systems to the guidance of precision strike weapons. Six MSEE degree tracks cover these areas and others with degrees which are fully ABET-accredited.

PRINCIPAL CURRICULA SUPPORTED:

* Electronics Systems Engineering - ABET Certified
* Electronic Warfare (U.S. Officers)
* Electronic Warfare (International Officers)
* Space systems operations
* Undersea warfare
* Joint Command Control & Operations

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Radar including low observables
* Electronic warfare
* Signals intelligence
* Communications and countermeasures
* Electro-optical systems and counter-measure
* Radiation hardening of circuits
* Avionics and missile control
* Sonar and acoustic detection in noise

FACULTY:

* 46 faculty including 4 military, Clearances: 30 Secret
* 11 years average service at NPS
* 5 IEEE fellows, ASME fellow
* 1993 productivity: 113 theses, 20 technical reports, 1 book, 27 journal articles, 16 conference papers, 4 presentations

LABORATORIES/SPECIALIZED RESOURCES

* Operational military radar systems
* Electronic warfare and electro-optic systems
* Missile guidance and control laboratory
* Special signals and antennas laboratory
* Foreign systems exploitation laboratory
* Image processing laboratory
* Special secure computing laboratory

RESEARCH: $4.5 million reimbursable funding in 1993 includes:

* ONR (Office of Naval Research) - wavelet time-frequency analysis
* NRL (Naval Research Laboratory)
* Army CECOM (Communications Electronics Command)
* AFEWC (Air Force Electronic Warfare Center) - wideband antennas
* DIA (Defense Intelligence Agency) - advanced signal processing

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NAVAL ENGINEERING CURRICULUM (570)

SPONSORING ORGANIZATION:

* Naval Sea Systems Command

OBJECTIVE FOR NAVY SUB-SPECIALTY CODE 54P:

* Provide the technical skills needed to design, maintain, and operate modern warships and Naval systems

DESCRIPTION:

* Core disciplines of Naval Engineering
* Five specializations: Structural mechanics; Dynamic systems and controls; Materials science; Thermal-fluid sciences; Ship systems design and engineering
* Total Ship Systems Engineering Program for selected students

MILITARY/CLASSIFIED COURSES:

* Naval Combat Systems Elements (SECRET)
* Ship Design Integration (SECRET)
* Total Ship Systems Engineering (SECRET)
* Marine Gas Turbines
* Shipboard Vibrations and Noise
* Naval Ship Shock Design and Analysis
* Surface Ship Survivability
* Joint and Maritime Strategic Planning (SECRET)

REPRESENTATIVE THESES:

* " Analysis, Approach, and Assessment of Vibration Criteria in Shipboard Machinery Condition Monitoring and Diagnostics"
* " The Effects of Shipboard Steering Machinery Dynamics on Rudder Roll Stabilization Systems"
* " Three Dimensional Pursuit Guidance and Control of Submersible Vehicles"
* " The Response and Failure Mechanism of Circular Metal and Composite Plates Subjected to Underwater Shock Loadings"
* " Application of VAX/VMS Graphics for Solving Preliminary Ship Design Projects"
* " Definition, Development, and Design of Large Missile Carrier"

ANNUAL STUDENT INPUT: 47

* USN 37, USCG 4, International 6

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MECHANICAL ENGINEERING DEPARTMENT

The Department provides a broad based graduate education in the fields of Mechanical Engineering. This imparts the relevant skills necessary for the design, acquisition, maintenance and overhaul of modern war ships and Naval systems. The interconnectedness of the fundamental areas of fluid mechanics, thermal sciences, propulsion, controls, structural mechanics, dynamical systems, materials engineering, systems engineering, and design is stressed throughout the program. The uniqueness of the program is achieved by using the focus of the Naval vessel and Naval systems to provide a context for the teaching and demonstration of the required engineering principles. This focus and relevance of the program has provided the high quality which has assured the continuing ABET accreditation of the program.

CURRICULA SUPPORTED:

* Naval Engineering
* Combat Systems
* Space Systems Engineering

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Total Ship Systems Engineering
* Ship Shock and Vibrations, Survivability
* Robotics and Autonomous Underwater Vehicles
* Marine Propulsion
* Naval Hydrodynamics
* Electronics Cooling
* Composite Materials
* High Strength Low Alloy Steels

FACULTY:

* 21 including 1 military, 13 with Secret clearances
* 9 years average service at NPS
* 5 ASME fellows, 1 AIAA fellow, 1 Mechanical Engr. fellow
* 1993 productivity: 49 theses, 8 technical reports, 3 books edited, 4 book chapters, 38 technical journal articles, 32 conference and workshop presentations, 1 patent

LABORATORIES/SPECIALIZED RESOURCES:

* Computer Aided Ship Design Laboratory
* Shock and Vibration Laboratory
* Hydrodynamics Laboratory
* Robotics Laboratory
* Materials and Metals Procession Laboratory
* Autonomous Underwater Vehicle Facility
* Gas Turbine and Diesel Propulsion Laboratory

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RESEARCH: $1.2 million reimbursable funded in 1993 includes:

* NAWC (Naval Air Warfare Center)
  - Electronic Packaging
  - Aging of Aluminum Alloys
* NSWC (Naval Surface Warfare Center)
  - Liquid Cooling of Electronics
  - Superconducting Materials
  - Sensors for Auto Fouling Detections
* DNA (Defense Nuclear Agency)
  - Composite Materials
* ARPA (Advanced Research Projects Agency)
  - Naval Hydrodynamics
* ONR (Office of Naval Research
  - Vortex/Free Surface Interactions
* NAVSEA (Naval Systems Command)
  - Surface Ship Survivability
  - Shock and Vibration Effect Studies

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DEFENSE RESOURCES MANAGEMENT COURSE (DRMC)

SPONSORING ORGANIZATION:

* Policy Guidance Council chaired by the DoD Comptroller

OBJECTIVE:

* Apply the basic concepts and techniques of analytical decision making to the analysis of defense programs and policies and to the evolution and design of US defense management systems
* Emphasize the decision maker's broad perspective in allocating resources

DESCRIPTION:

* Course Duration - 4 weeks
* Frequency - 5/year
* Participants - US military officers of grades O-4 through O-6; Civilians of grades GS-11 through GS-15 or equivalent; Individuals participating in accelerated career development programs; and foreign officials of similar rank or grade.

ANNUAL STUDENT INPUT: 200 US and 50 foreign participants as described above

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INTERNATIONAL DEFENSE MANAGEMENT COURSE (IDMC)

SPONSORING ORGANIZATION:

* Policy Guidance Council chaired by the DoD Comptroller

OBJECTIVE:

* Apply the basic concepts and techniques of analytical decision making to the analysis of defense programs and policies of various nations and to the evolution and design of modern defense management systems
* Emphasize the comparative exchange of ideas among the participants

DESCRIPTION:

* Course Duration - 11 weeks
* Frequency - 2/year
* Participants - Foreign military officers of ranks Major/Lieutenant Commander and above and equivalent civilian officials.
* The first half of the course is similar to the DRMC but is expanded in scope and depth. In the second half of the course, the defense management concepts developed in the first half of the course are applied to financial, material (logistics) and human resources management systems and to management information systems.
* This course has been designated an Expanded IMET course by DSAA.

ANNUAL STUDENT INPUT: 100 foreign participants from 25-35 countries as described above

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SENIOR INTERNATIONAL DEFENSE MANAGEMENT COURSE (SIDMC)

SPONSORING ORGANIZATION:

* Policy Guidance Council chaired by the DoD Comptroller

OBJECTIVE:

* Similar to the IDMC, but the course is specifically designed for senior military managers and high level defense decision makers.

DESCRIPTION:

* Course Duration - 4 weeks
* Frequency - 1/year
* Participants - Military general/flag officers and equivalent civilian officials.
* This course has been designated an Expanded IMET course by DSAA.

ANNUAL STUDENT INPUT: 50 foreign participants from 25-35 countries as described above.

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MOBILE INTERNATIONAL DEFENSE MANAGEMENT COURSE (IDMC)

SPONSORING ORGANIZATION:

* Policy Guidance Council chaired by the DoD Comptroller

OBJECTIVE:

* Apply the basic concepts and techniques of analytical decision making to the analysis of defense programs and policies and to the evolution and design of modern defense management systems.
* Emphasize the application of these ideas the host country.

DESCRIPTION:

* Course Duration - 2 weeks
* Frequency - 8-10/year
* Participants - Military officers of ranks Major/Lieutenant Commander and above and equivalent civilian officials from the host country.
* The course is similar to other DRMI offerings but is customized to meet the needs of the host country.
* The course has played a leading role in the Expanded IMET Initiative. Since June 1991, the course has been presented in Argentina (4), Botswana, Bulgaria, Chile, Czech Republic, Ghana, Honduras (4), Hungary (2), Lithuania, Namibia, Poland, Senegal, Sri Lanka, and Zimbabwe. The numbers in parentheses indicate that the course has been conducted more than once. In the remainder of FY94, the course is scheduled to be presented in Ukraine, Colombia, Philippines, Romania, Czech Republic, El Salvador and Honduras.

ANNUAL STUDENT INPUT: 300-400 participants

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MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS

* Systems Analysis
* Measuring Cost and Effectiveness in Military Applications
* Planning, Programming and Budgeting System
* Military Manpower Issues
* Logistics
* Financial Management
* Unit Cost Resourcing
* Defense Business Operations Fund
* Total Quality Management
* Benchmarking

FACULTY

* 25 including 6 military, 9 with Secret, 1 with Top Secret clearances
* More than 7 years average experience at DRMI, more than 12 years average experience in DoD.

RESEARCH: $300,000 reimbursable funding

* Naval Aviation Engineering Support Unit
  - Benchmarks for Human Resource Management
* US Army Recruiting Command
  - Optimal Advertising Mix
  - Estimation of Elasticities for Bonuses and Educational Benefits
* DoD Comptroller (BMD)
  - Unit Cost Handbook for Executives
* Defense Business Management University
  - Business Management Education Delivery Model
* RAND Corporation
  - The Total Public Budget in the US Economy

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AVIATION SAFETY CURRICULA

SPONSORING ORGANIZATION:

* Naval Safety Center

OBJECTIVE:

* Aviation Safety Officer Course. Prepare the graduate to assist his or his Commanding Officer in conducting an aggressive mishap prevention program.
* Aviation Safety Command Course. Assist Commanding Officers in conducting an aggressive mishap prevention program and prepare for the duties of a senior member of a mishap investigation board.

DESCRIPTION:

* Aviation Safety Officer Course (ASO) is a twentyeight day course consisting of 161 classroom and laboratory hours, plus a two day field trip.
* Aviation Safety Command Course (ASC) is a five day course consisting of 32 classroom and laboratory hours addressing subjects including safety programs, safety psychology, aircraft systems, mishap investigation, mishap and incident reports and endorsements and aerospace medicine.

MILITARY/CLASSIFIED COURSES:

* Aerodynamics for Aircraft Accident Prevention and Investigation
* Aircraft Structural Analysis
* Management of Accident Prevention Programs
* Safety Information Management
* Safety Psychology and Physiology
* Management of Accident-Prevention Programs
* Technological Aspects of Accident-Prevention Programs

REPRESENTATIVE THESES (IN SUPPORT OF OTHER NPS CURRICULA):

* " Mutual Flow Interference Effects of Aircraft Flying in Formation"
* " Analysis of Aircrew Coordination Training Factors that Affect Shipboard Decision Making"
* " Development of Pre-Mishap Training Program"
* " MH-53E Aircraft 3-M Data, A Comparison USN/JMDF"
* " Consolidation of the HSL and HS Missions and Communities"

ANNUAL STUDENT INPUT: 709

USN 488, USMC 196, USCG 17, International 8

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AVIATION SAFETY DEPARTMENT

The Aviation Safety Department offers courses to mid-grade U.S. Navy and Marine Corps officers on conducting aggressive mishap prevention programs. Graduates of the Command Course are also prepared to perform the duties of a senior member of a mishap board. Department members provide extensive consultation to aviation and other operational units to safety procedures and the reporting of mishaps.

PRINCIPLE COURSES SUPPORTED:

* Aviation Safety Officer Course (146 hours)
* Aviation Safety Command Course (32 hours)

MILITARY/CLASSIFIED RESEARCH AND INSTRUCTION AREAS:

* Safety programs and mishap prevention techniques
* Mishap investigation and reporting
* Psychology
* Safety Law
* Aeromedical support

FACULTY:

* 11 including 9 military, 10 with Secret clearances
* 1993 productivity: 5 theses, 3 articles, 9 conference presentations, 2 overseas course presentations, over 500 consultations on safety to aviation and other operational units

LABORATORIES/SPECIALIZED RESOURCES:

* Aircraft Crash Laboratory for Mishap Investigation
* Broken/Damaged Parts Laboratory for Mishap Analysis

RESEARCH: $150 thousand reimbursable funding in 1993 includes:

* NAVAIR (Naval Air Systems Command)
  - Night Vision Training System Technology Study

CONCLUSIONS FROM NPS MISSION DESCRIPTIONS

* Graduate education in the Navy serves a different purpose than in the civilian world. The Navy does not promote anyone based on their NPS graduate education, nor does it pay them more. NPS graduate education serves the needs of the Navy.

* Navy officers often do not get their first choice of curricula because there is limited need for that particular sub-specialty at the moment. As a consequence, it is necessary for NPS to transition many officers to graduate education curricula that are different from their undergraduate major.

* NPS education is driven by the career or curricula requirements, not by the degree requirements, which are generally much shorter in required hours. The unique curricular officer structure of authority for the curricula and admission assures this.

* Of the curricula, almost half are totally different in objective and content compared to curricula at civilian schools: Undersea Warfare; Electronic Warfare; Space Operations and Space Engineering; Joint Command, Control and Communications; Material Logistics Support; Acquisition and Contract Management; Manpower, Personnel and Training; Special Operations; Resource Planning and Management for International Defense; Intelligence; Operational Logistics; Operational Oceanography; Systems Acquisition Management; Naval Engineering; and Combat Systems.

* Another large fraction of the curricula contain courses not available in civilian schools: Ada and Real-time Combat Systems in Computer Science, combat modeling courses in Operations Research, contracting for major systems in Acquisition Management, Financial Management in the Armed Forces, Russian Oceanography in Air-Ocean Sciences, Electro-optics Counter Measures in Electronics Systems Engineering, and Aircraft Survivability in Aeronautical Engineering.

* All curricula contain military emphasis through sponsored research topics and special laboratories, as well as classroom examples. NPS has over 30 classified courses and half a dozen classified laboratories.

* The overwhelming majority of NPS faculty are performing DoD sponsored research which leads to relevant thesis research. Much of this research could not be performed elsewhere. About half of NPS tenured faculty have clearances. NPS received about 25 million dollars in research grants in FY 1993 from a great variety of sources.

* The NPS faculty has excellent standing in their professions based on the number of Fellows of technical societies, hundreds of professional publications yearly and many awards from the academic community.

* NPS students have access to military-oriented seminar series, flag officers briefings, laboratories, and other events that contribute to their military perspective.

* NPS curricula are responsive to the Navy partly because of the responsibility of the curricular office, a rare combination of a serving officer reporting to the Director of Programs and a professor reporting to a department and Dean of Instruction.

QUESTION 7
PART B: PROJECTED MISSIONS FOR FY 2001

The mission of NPS will remain relevant in 2001, but the rate of technological change will make it necessary to continue graduate education throughout the officer's career. Technology also promises the ability to reduce the costs of graduate education at NPS. Among the projected missions:

Transition to being a DoD University:

* The NPS Board of Advisors recommended to the Secretary of the Navy study the transition to a DoD University under Navy sponsorship.

* NPS will further increase the enrollments of Army and Air Force students.

* NPS will provide Joint Professional Military Education, Phase I (JPME-I) equivalent education for selected curricula.

* NPS has begun providing Defense Acquisition Workforce Improvement Act (DAWIA) education to officers of the Army, Navy and Marine Corps. DAWIA education will be provided to an increasing number of students in acquisition-related programs.

* NPS will offer Joint Warfare Analysis programs sponsored by JCS and the Commanders in Chief.

* Drawing upon Fort Ord facilities, NPS will attract additional research and analysis organizations as tenants with compatible missions.

Prepare incoming officer students for graduate education through application of distance learning technologies:

* NPS has an uncommon admission policy which accepts officers to its curricula without regard to their prior undergraduate majors. This policy requires a significant amount of resources to prepare officer-students for graduate level technical education.

* To shorten students' stay at NPS, remedial functional courses will be delivered to the fleet and shore locations by means of distance education mode.

Assume leadership role in the design and delivery of DoD-unique executive and specialized education programs to provide NPS faculty's unique expertise to DoD commands:

* Because of the expertise acquired by NPS faculty through research and interaction with DoD organizations, NPS has been tasked by various Navy and DoD organizations (including Naval Air Systems Command, Navy Bureau of Medicine and Surgery, Defense Acquisition University, Defense Business Management

University, etc.) to design and deliver DoD unique courses on advanced management topics, such as systems engineering and weapon systems test and evaluation.

* NPS expects these to expand rapidly as DoD transitions to a smaller but more organizationally complex and technologically advanced force.

Develop advanced multi-purpose telecommunication network:

* With its rapidly expanding leadership role in the design and delivery of DoD-unique executive education programs, NPS must, and has the expertise to, develop an advanced telecommunication network. NPS is in the process of installing three portable videoconferencing systems.

* Current communication is through Integrated Service Digital Network (ISDN) lines, enabling NPS to conduct two-way-video teleconferencing with all DoD shore activities on the FTS2000 network. NPS also plans to establish a satellite uplink capability, which would enable NPS to reach the fleet for two- way video teleconferencing.

Develop advanced multimedia technology for instructional and military applications

* Multimedia technology is an effective tool to condense large amounts of information in different media into a single format that an end user can comprehend and easily use. Audio presentation, animation, full motion video, still graphics, and text can be combined into a single medium and easily accessed through nonlinear hypernavigation. Multimedia systems are particularly useful for military applications.

* With its DoD oriented programs, NPS has a unique mission to develop advanced multimedia technology for military application. For example, in developing war game simulations, multimedia enables the analyst to quickly and realistically build a war game scenario by using multimedia to simulate battle-field conditions.

* Current applications include the Army TRADOC war game "the Single Exercise Analysis System (SEAS)," which was developed at NPS by NPS faculty.

* Another example is a multimedia executive information system, which is particularly helpful to military commanders, especially battlefield commanders, who typically face a high personnel turnover rate or hastily assembled forces and must rely on a system to quickly access desired information.

* NPS is also actively developing course modules in multimedia format for its DoD executive education modules and its regular graduate courses. This would supplement the distance education program by providing instructional modules to individuals when video teleconferencing methods cannot be used.

Form an educational and research consortium:

* The Naval Postgraduate School benefits from its proximity to other educational institutions, including the University of California, Santa Cruz; the California State University of Monterey Bay; the Hopkins Marine Laboratory of Stanford University; the Monterey Institute of International Studies; and the Defense Language Institute.

* The Postgraduate School will be a member of an educational consortium formed by these schools. The School's participation in the consortium will be made possible initially by Paragraph 7047, Section 1073, of Title 10 of the U.S. Code. Section 1073 allows reciprocal enrollments between NPS and civilian universities in areas of study designated by the Secretary of the Navy.

* NPS students will be able to take, as needed, courses in areas such as marine biology, and soil mechanics, that are not offered at the School, while students from the other members of the consortium could take some of the unclassified militarily-relevant courses offered at NPS. Faculty and students from institutions belonging to the consortium will also be able to engage in cooperative research projects and share research infrastructure, such as research ships.

QUESTION 8
PART A - CURRENT UNIQUE MISSIONS

NPS has exclusively been given the mission of graduate education by the Congress and the Navy. Therefore, the missions above are all unique missions as can be seen by review of the descriptions under question 7. Only their highlights are summarized below.

The mission of NPS is to provide the graduate education necessary to equip the officer corps with the technical capability to supervise the most complex of mankind's disciplines:

1) the design, acquisition, test, operation and maintenance of the advanced weapons systems of the future, as well as the development of doctrine, strategy and tactics for their use.

2) the recruitment, training, support and management of all the personnel that provide the readiness of the military forces.

3) the planning, budgeting, financial control and analysis of these resources in peacetime and their command, control and communications in wartime.

4) the electronic warfare, undersea warfare, space operations, intelligence, special operations, telecommunications, environmental prediction, and computer support for most military operations.

Only NPS provides this specialized graduate education for the Navy.

The Nation must have a professional officer corps that can perform these increasingly complex tasks intelligently, competently, and with integrity and efficiency. It can afford no less because of the criticality of their performance to the Nation's safety. NPS is demonstrably the cost-effective way to educate the officer corps in the techniques necessary to deal with current and future military problems.

NPS is the proven means for rigorously providing operationally capable junior officers with the special skills for the technical leadership of all Services. NPS currently performs this function for almost all of the Navy and Marine Corps students. Roughly half of the Army's fully-funded graduate education program and about one-quarter of the Air Force graduate education not at AFIT is accomplished at NPS. The student body, faculty, and course content orientation is increasingly Joint. The almost 300 permanent faculty at NPS averages about 15 years of investment in scientific study of the military in all its aspects; and totals over 600 decades of expertise in the application of the highest levels of academic skill to the diagnosis of military problems and the teaching of problem-solving in relevant situations.

NPS has a unique structure for integrating academic and military administration through dual responsibilities of the academic department and the curricular office representing the sponsoring military command. This guarantees that the education remains responsive to the sponsor, who is also the employer of the graduate and, therefore, interested in the officers' early return to the fleet.

Because the Services educate for specific positions, it is necessary to transition many officers to graduate level fields different from their undergraduate major. Also, the officers are selected primarily for their operational proficiency, rather than previous academic performance. This would keep many officers from admission to top-ranked graduate schools. Academic programs to make the transition feasible would be long and expensive, even if available at civilian institutions.

NPS has special admissions and screening, plus unusual transition courses that guarantee that the officers time, the most valuable resource, is conserved -- for example, entry at almost any time of the year. NPS has comparable cost-per-hour of instruction for on-board officers as for those at civilian institutions. With efficiencies of scale and administration and support, NPS is the least costly way to meet the career education requirements and is far more focused and relevant to military careers than are civilian universities.

The uniqueness of NPS programs is due to the careful integration and efficient meshing of the following factors:

* Transition: Approximately 50% of the students at NPS pursue professionally oriented graduate education in a field that differs from, and is usually more technically -- and quantitatively -- demanding than, their undergraduate education. NPS curricula and courses are designed to transition students to new areas of study and knowledge.

* Refresher: Nearly all students arriving at NPS are military officers who have been on active duty for six to ten years. These officers need to refresh their study and basic skills, such as in calculus. NPS offers refresher courses to a majority of its new students.

* DoD Hardware, Software and Case Material: NPS utilizes a great deal of military equipment and software in its instruction and research. Students, through their thesis research, and faculty, through research, also develop software, hardware, and policy recommendations for military use. This focus greatly enhances the relevance of the education for the officers.

* Classified Material: Education relevant to the military often requires access to classified material. NPS supports access at levels through compartmented top secret.

* Field Access: As part of DoD, NPS has access to operational units, DoD officials, the support establishment and DoD laboratories. This allows student experience tours as part of a number of NPS curricula. It also allows faculty development in DoD topics.

* Officer Faculty: The NPS faculty is about seven percent military. These faculty occupy billets that have specific experience requirements, such as electronic warfare, acquisition, strategic planning, tactics and command, command, control and communications.

* Long-term Teaching Commitment: The preponderance of NPS faculty are civilian and hold a doctorate. Civilian faculty at NPS compete for academic tenure, and for academic rank (assistant, associate and full professor) as do faculty at civilian universities. Faculty at NPS are required to maintain currency in their academic discipline, but, unlike many of their counterparts at civilian institutions, they are also held to very high standards of instructional performance. NPS produces only a few Ph.D. degrees per year. Emphasis is on instruction at the professional masters degree level courses rather than doctoral research.

* Student Mix: NPS has students from all of the military services of the United States. Approximately one-third of the U.S. students are from services other than the Navy. Additionally, NPS has in its student body over 200 officers from approximately 40 other nations. Most classes at NPS, therefore, have a "joint" flavor.

* Accreditation: NPS is accredited by the Western Association of Colleges. The School's engineering programs are accredited by the Accrediting Board for Engineering and Technology. The management curricula are accredited by the National Association of Schools of Public Affairs and Administration. The NPS offers the degrees of Master of Arts, Master of Science, Engineer, the Doctor of Engineering and the Doctor of Philosophy.

The profession of arms is the most demanding in our civilization -- calling for the integration of leadership, tactics, technical understanding and personal control. Graduate education can reinforce all of these characteristics if it is focused and led by experienced officers and civilians. NPS provides the means to accomplish this today and an assured means for the future.

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QUESTION 8
PART B - PROJECTED UNIQUE MISSION IN 2001

It is through research that we can project the needs of the Navy in 2001. Research is an integral part of graduate education. At the Naval Postgraduate School (NPS) the goals of research are to:

* Provide a meaningful, creative learning experience for our officer students.

* Keep faculty at the cutting edge in their individual disciplines to ensure that the latest information is incorporated into NPS courses and curricula.

* Apply faculty and student knowledge to support Navy/DOD technological and operational areas.

Pursuit of these goals increases the technical and managerial capability of the officer corps to keep pace with an increasingly complex defense posture in today's world. It enables NPS to also attract and retain dynamic faculty who are both at the frontier of their academic fields and involved in military applications of their disciplines.

A widely recognized, important component of graduate education is the process of conducting an in-depth thesis. It is during this process that officer students enhance problem solving capabilities, self- confidence in data collection and analysis, time management techniques, creative thinking ability and effective communication skills.

Research at the cutting edge, that is coupled to the diverse educational objectives of NPS curricula, and that fosters day-to-day contact between professionally successful, career experienced officer students and military oriented faculty provides a unique learning experience that complements the knowledge gained in the classroom. The resulting new discoveries and applications can significantly improve the operational effectiveness of the Navy and DOD in the future.

Through the research program NPS obtains knowledge of the future technologies and challenges that will confront the military in the next century.

The overall research program at NPS has two funded components:

* The Direct Funded Research (DFR) program provides internal funding from the School's operating budget. This funding is used as a catalyst to stimulate innovative research ideas, especially for new faculty members. It is also used to ensure that the overall research program maintains a proper balance between science/engineering and information/policy science projects and between interdisciplinary and more traditional, discipline focussed projects, and that all curricula are equitably supported.

- During FY93, 28% of the total research program was supported by this DFR program. The research accomplished with these funds was performed for numerous Navy organizations, including CNO, the Chief of Naval Research, the Naval Systems Commands, and the Warfare Centers (Laboratories).

* The Reimbursable Research (RR) Program includes those projects externally funded on the basis of proposals submitted to outside sponsors by the School's faculty. These funds allow the faculty to interact closely with Research, Development, Test, and Evaluation program managers and high level policy makers throughout the Navy, DOD and other government agencies. This ensures that NPS research remains highly regarded by academic peers and government officials and fosters a closer nonisolating relationship between NPS and other outside organizations. This program also allows NPS faculty to work on dual use technologies that are important to both defense and the private sector and to participate in a dynamic Technology Transfer program.

  - During FY93, 72% of the total research program was supported by reimbursable funds. In addition to Navy funds, reimbursable support was received from various agencies of Defense, Army and Air Force, as well as the National Science Foundation, NASA, and the Department of Energy.

The two research programs are complementary and ensure that the overall research program is flexible, responsive, balanced and supportive of the broad diversity of the School's curricula and will remain that way through 2001.

Research conducted at NPS reflects the wide range of interests of the faculty and students associated with the various academic departments/groups and curricula, as well as the needs of the particular sponsors. About half of the research may be broadly classified as basic and half applied. Major thrusts in basic research exist in atmospheric and ocean sciences, electronics, computer sciences, physics, mathematics, mechanics and materials science.

The applied work supports many of the warfare categories, including undersea warfare space, C3I, manpower, mobility and logistics policy, and management (information and financial). The large majority of the work supports DOD key technologies. The Naval Postgraduate School's research program contributes substantially to both the science and technology base, as well as to the combat effectiveness, of the defense establishment.

A representative sampling of research thrusts is contained below:

* ATMOSPHERIC AND OCEAN SCIENCES

  The substantial program in Meteorology focusses on air-ocean modeling and prediction, tropical and mid-latitude weather systems, atmospheric boundary layers over sea and ice, and remote sensing. Research in coastal acoustic tomography has produced a technique known as domain localization. This technique has been successfully applied to data measured on Navy platforms. It is possible to deduce the location of a submerged source of sound using the measured sound speed field. NPS faculty also collaborate and are funded by the NRL-West on work involving optical propagation, coastal atmospheric

mesoscale modeling, climate modeling, synoptic-scale modeling, and EM wave propagation.

* SPACE

Space flight experiments are being developed at NPS under the Space Systems Academic Group. The projects are interdisciplinary in scope with an emphasis on practical engineering application. The PANSAT project endeavors to build, launch, and operate a small satellite for digital, spread spectrum communication. The FERRO project is a series of thin-film ferroelectric experiments to test and characterize ferroelectric devices through onboard testing in space. Other research projects supported through the Space Systems Academic Group are in the areas of spacecraft technology, space environment effects, control and dynamics, and thermoacoustics.

* AUTONOMOUS VEHICLES

The mission of the NPS AUV project is to develop advanced autonomous control technology in support of the Naval use of AUVs. Current research plans to understand and demonstrate the capability of a vehicle to negotiate within its environment using its own sensors and mission planning systems. Current naval missions for AUVs include mine search, survey and neutralization, and as submarine off-board sensors. Commercial uses of AUVs include ocean-science monitoring and survey and applications for chemical spill detection.

* POLICY

Faculty conduct research on the broad themes of regional security, defense planning, intelligence, and low-intensity conflict. The research is conducted for sponsors in DoD, OPNAV, Department of Energy, as well as being supported by foundations. The results of the research are provided to sponsors in the form of reports and briefings as well as introduced in courses and thesis research.

* MANPOWER

The Systems Management Department has entered into a unique partnership with the Navy Bureau of Medicine and Surgery (BuMed) to initiate a program to provide broad-based executive management education support targeted on the needs of its current and prospective MTF senior managers. This includes off-site delivery of training, a flexible modular systems which allows a flexible program tailored to the specific needs of the individual.

* MILITARY DECISION MAKING

A research program under the US Army Recruiting and Evaluation Command umbrella agreement is designed to provide tools and analysis which support and facilitate decision making at USAREC. It includes computer science, decision theory, economics, marketing science, optimization, probability and statistics. Specific tasks include recruiting resource

planning systems, analysis of recruiting bonus payments, realignment of USAREC stations, public perception of Army nursing careers, delayed entry programs, U.S. Army advertising budget, etc.

* COMPUTER SCIENCE/COMMUNICATIONS

The Computer Science Department is involved in state-of-the art research in high performance computing, virtual reality, robotics, software engineering (CAPS-Computer Aided Prototype Software), parallel and network systems. Heavy involvement in the C^3I area involves networking and communications. An initiative is underway to develop distance learning.

As research has evolved and grown during the past 30 years, so have the labs and facilities. Currently, there are 140 labs occupying 230,000 square feet of space used for research and applied instruction. This figure does not include the labs in the new Mechanical Engineering building which is due to come on-line in late 1994 or early 1995. Some representative facilities include:

* Systems Technology Lab (C^3 Academic Group)
* Combat Systems Technology Lab (Physics)
* Microwave and Antenna Lab (Electrical and Computer Engineering)
* Virtual Reality Lab (Computer Science)
* Integral Digital Environmental Analysis (IDEA) Lab (Meteorology Department)
* Hydrodynamics Lab (Mechanical Engineering Department)
* Spacecraft Test Lab/Satellite (Space Systems Academic Group)
* Turbopropulsion Lab (Aeronautics and Astronautics)
* In addition, plans are being developed for a new Underwater Systems Educational Lab.

An important part of the research work conducted at NPS is classified. In 1993, 33 theses were classified SECRET or above. Lab facilities supporting classified research include:

* Warfare Analysis Research Lab (Operations Research)
* Radar/EW Lab (Electrical and Computer Engineering)
* Sensitive Compartmented Information Facility (SCIF)
* Systems Technology Laboratories
* Theater Tactical Ballistic Missile Defense

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During FY93, NPS chartered several Research Centers in a variety of disciplines. The purpose of these Centers is to provide significant concentrations of faculty and staff expertise to participate in broad-based research programs. Centers have a strong research component, but also include an emphasis on instruction. They are reimbursably funded. The approved Centers include:

* Coastal Ocean-Acoustic Center

* Software Metrics Research Center

* Navy-NASA Joint Institute of Aeronautics

* Survivability and Lethality Assessment Center

* Unmanned Air Vehicle Technologies Center

* Eurasian Security Center

Research impact, productivity, and quality are interrelated and can be measured in various ways. One significant measure is the recognition researchers receive for the work they have done. Each year, numerous NPS faculty and students are recognized in various ways for their research work. A representative listing for 1993 appears below:

* Professor Robert Ball (Aeronautics and Astronautics)
Chairman, NRC Committee on Weapons Effects on Airborne Systems. The Committee produced a report, "Vulnerability Assessment of Aircraft: A Review of the DOD Live Fire Test and Evaluation Program."

* Professor Michael Zyda (Computer Science) Group Leader for NRC Computer Generation Technology Group of Committee on Virtual Reality Research and Development.

* Professor Stephen Garrett (Physics)
Received a Rolex Award for Enterprise and an R&D 100 Award for his work in thermoacoustic refrigeration.

* Professor Albert Semtner (Oceanography)
Awarded the 1993 Cray Research Information Technology Leadership Award for Breakthrough Computational Science for his work in modeling the world ocean.

* Professor David Schrady and CDR David Wadsworth USN (Operations Research)
Received the Operational Research Society's Goodeve Medal for their work on the development of a Battle Group Logistics Coordinator Support System.

* Professor Phillip Durkee (Meteorology)
Appointed to NRC Aerosol Panel of the Board of Atmospheric and Scientific Climatology which is tasked to study climatic change.

* Professor Norman Schneidewind (Systems Management)
Received IEEE Computer Society Meritorious Service Certificate. Prof. Schneidewind's software reliability model has been used by the Navy to predict the reliability of Trident fire control software and by NASA to predict the reliability of Space Shuttle software.

* LT R. Chandler Swallow, USN (Operations Research)
Received the Military Operations Research Society's 1993 Stephen A. Tisdale Graduate Research Award for his prize winning paper, "Optimizing Minefield Planning and Clearance".

Research productivity is most easily measured in terms of published output. In 1992, the last year for which final data is currently available, NPS faculty executed 124 faculty work years of research and produced 361 journal papers, 272 published conference papers, 613 conference presentations, 160 technical reports, 61 books and chapters, and 8 patents. They also supervised student research leading to 838 theses.

The NPS Research Program includes a broad range of projects, many of which are immediately responsive to the needs of the military Services. Illustrative examples include:

* Professors Brown and Rosenthal (Operations Research)
Developed an Officer Mobilization Model for the Marine Corps for which they received the Operations Research Society of America Koopman Prize.

* Professor Sam Parry (Operations Research)
Developed a combat model for the U.S. Army. Gen. Starry, USA (ret.), has stated "...no single individual or agency has had as much influence on the U.S. Army in the last eighteen years as Dr. Sam Parry and the Naval Postgraduate School".

* LT Charles Swicker (National Security Affairs)
Wrote a thesis on intelligence requirements for using cruise missiles against Iraq's nuclear weapons facilities which was cited by VADM R. M. Eytchison for its usefulness to Desert Storm planners.

In the years ahead, NPS will be called upon to operate effectively in a changing military environment, and to maintain excellence in carrying out its mission "to enhance the combat effectiveness of the Navy and Marine Corps by conducting and directing advanced education of commissioned officer...". Research will always play an important role in this mission.

New technologies and policy changes will occur, necessitating changes in educational programs, and stronger ties between the fleet and the support establishment. NPS will remain poised to face this challenge and to discover and utilize emerging technologies and utilize them within its curricula programs. In the process, NPS will continue to seek strong research relationships with DoD/DoD sponsors, Navy laboratories, non-DoD government agencies, other universities and the private sector (through CRADAs).

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It is our collective vision that:

Our research will continue to be recognized throughout the government as providing valuable, responsive and cost effective products, relevant to current and future defense applications. We will remain on the leading edge of technology, management and warfighting improvements.

Our student theses will be valued through DoD as thought provoking, program enhancing, and contributing to the solving of DoD problems.

Our faculty will be even more sought after as participants in the most prestigious national and international research activities, and for high level DoD positions and consultations.

9. IMMEDIATE SUPERIOR IN COMMAND (ISIC): Identify your ISIC. If your ISIC is not your funding source, please identify that source in addition to the operational ISIC.

• Operational name	UIC
Chief of Naval Operations (CNO)	00011
• Funding Source	UIC
CNO (N09B)	00011

10. PERSONNEL NUMBERS: Host activities are responsible for totalling the personnel numbers for all of their tenant commands, even if the tenant command has been asked to separately report the data. The tenant totals here should match the total tally for the tenant listing provided subsequently in this Data Call (see Tenant Activity list). (Civilian count shall include Appropriated Fund personnel only.)

On Board Count as of 01 January 1994

	Officers	Enlisted	Civilian (Appropriated)
• Reporting Command	101	97	1,020*
• Tenants (total)	63	117	372

*DRMI personnel included.

• Students	
Total	1,780
Navy	1,173
MC	115
Int'l	237
Army	188
AF	31
Other US	37

• Students (Short Courses)	
Aviation Safety	709
DRMI	400

Authorized Positions as of 30 September 1994

	Officers	Enlisted	Civilian (Appropriated)
• Reporting Command	93	101	979*
• Tenants (total)	63	117	372

*DRMI personnel included.

• Students	
Total	1,727
Navy	1,120
MC	140
International	225
Army	179
AF	32
Other US	31
• Students (Short Courses)	
Aviation Safety	709
DRMI	400

11. KEY POINTS OF CONTACT (POC): Provide the work, FAX, and home telephone numbers for the Commanding Officer or OIC, and the Duty Officer. Include area code(s). You may provide other key POCs if so desired in addition to those above.

Title/Name	Office	Fax	Home
• RADM T.A. MERCER Superintendent	408 - 656-2511 DSN - 878-2511	408 - 656-2237 DSN - 878-2237	408 - 646-8344
• CDR Hank Sanford Dir. Resource Mgmt	408 - 656-2245 DSN - 878-2245	408 - 656-2548 DSN - 878-2548	408 - 647-9646
• Robert Jay Comptroller	408 - 656-2245 DSN - 878-2245	408 - 656-2548 DSN - 878-2548	408 - 633-2773
• CAPT J. Begbie Dir. Mil. Operations	408 - 656-2406 DSN - 878-2406	408 - 656-2921 DSN - 878-2921	408 - 373-3963
• Duty Officer	408 - 656-2441 DSN - 878-2441	408 - 656-2921 DSN - 878-2921	N/A

12. TENANT ACTIVITY LIST: This list must be all-inclusive. Tenant activities are to ensure that their host is aware of their existence and any "subleasing" of space. This list should include the name and UIC(s) of all organizations, shore commands and homeported units, active or reserve, DOD or non-DOD (include commercial entities). The tenant listing

should be reported in the format provide below, listed in numerical order by UIC, separated into the categories listed below. Host activities are responsible for including authorized personnel numbers, end strength as of **30 September 1994**, for all tenants, even if those tenants have also been asked to provide this information on a separate Data Call. (Civilian count shall include Appropriated Fund personnel only.)

- Tenants residing on main complex (shore commands).

Tenant Command Name	UIC	Officer	Enlisted	Civilian
NAVY DENTAL CLINIC	35728	3	5	2
NAVY CRIMINAL INVESTIGATIVE SERVICE	42955	0	0	3
PERSONNEL SUPPORT DETACHMENT	43073	1	14	13
DEFENSE BUSINESS MGMT UNIVERSITY - DET	49567	0	0	3
TRAINING & DOCTRINE ANALYSIS COMMAND	4AE01	5	1	2
NAVAL FACILITIES ENGRG COMMAND	62474	3	0	7
NAVAL RESALE ACTIVITY	66288	1	3	N/A
DEFENSE INVESTIGATIVE SERVICE	68190	0	0	14
SCHEDULED AIRLINES TICKET OFFICE	COM'L	N/A	N/A	N/A
NAVY FEDERAL CREDIT UNION	COM'L	N/A	N/A	N/A
UNITED STATES POSTAL SERVICE	NON - DOD	N/A	N/A	N/A
DEFENSE PRINTING & PUBLICATION SERVICE	43642	0	0	5
NAVRESSECGRU-220SF	88694	7	1	N/A
NTIC-0820	88686	18	7	N/A
NPS FOUNDATION	NON-DOD	N/A	N/A	N/A
DEFENSE RESOURCES MANAGEMENT INSTITUTE	62271	6	N/A	29

- Tenants residing on main complex (homeported units.)

Tenant Command Name	UIC	Officer	Enlisted	Civilian
N/A	N/A	N/A	N/A	N/A

- Tenants residing in Special Areas (Special Areas are defined as real estate owned by host command not contiguous with main complex; e.g. outlying fields).

Tenant Command Name	UIC	Location	Officer	Enlisted	Civilian
FLEET NUMERICAL OEANOGRAPHY CENTER	63134	ANNEX, MONTEREY	45	68	198
NAVY RESEARCH LABORATORY	66856	ANNEX, MONTEREY	3	3	62
NAVY TELECOMMUNICATIONS CENTER	68067	ANNEX, MONTEREY	1	23	0
NOAA NATIONAL WEATHER SERVICE	NON-DOD	ANNEX, MONTEREY	0	0	39
NOAA PACIFIC FISHERIES ENVIRONMENTAL GROUP	NON-DOD	ANNEX, MONTEREY	1	0	12
NOAA - OCEAN APPLICATIONS BRANCH	NON-DOD	ANNEX, MONTEREY	0	0	12

- Tenants (Other than those identified previously)

Tenant Command Name	UIC	Location	Officer	Enlisted	Civilian
N/A	N/A	N/A	N/A	N/A	N/A

13. REGIONAL SUPPORT: Identify your relationship with other activities, not reported as a host/tenant, for which you provide support. Again, this list should be all-inclusive. The intent of this question is capture the full breadth of the mission of your command and your customer/supplier relationships. Include in your answer any Government Owned/Contractor Operated facilities for which you provide administrative oversight and control.

Activity name	Location	Support function (include mechanism such as ISSA, MOU, etc.)
GOVERNMENT		
DEFENSE MANPOWER DATA CENTER (DMDC)	MONTEREY, CA	COMPUTER/DATA PROCESSING, ADP SECURITY, FINANCE/ACCOUNTING, PERSONNEL, CUSTODIAL, MAIL PICK-UP/DELIVERY, PURCHASING/CONTRACTING, UTILITIES, REAL PROPERTY LEASE/PUBLIC WORKS, TELECOMMUNICATIONS (THRU NAVCOMTELSTA, SAN DIEGO) - ISSA
DEFENSE PERSONNEL SECURITY RESEARCH & EDUCATION (PERSEREC)	MONTEREY, CA	COMPUTER/DATA PROCESSING, FINANCE/ACCOUNTING, PERSONNEL, MAIL PICK-UP/DELIVERY, PURCHASING/CONTRACTING, UTILITIES, REAL PROPERTY LEASE/PUBLIC WORKS, TELECOMMUNICATIONS (THRU NAVCOMTELSTA, SAN DIEGO) - ISSA
NAVAL RESERVE CENTER	PACIFIC GROVE, CA	FIRE PROTECTION, REAL PROGERTY MAINTENANCE, SAFETY, TELECOMMUNICATIONS (THRU NAVTELCOMSTA, SAN DIEGO) SCHEDULED FOR CLOSURE 10/94 - ISSA
NAVAL SECURITY GROUP DETACHMENT (NSGD)	MONTEREY, CA	FINANCE/ACCOUNTING, LEGAL, PURCHASING/CONTRACTING, HOUSING, SAFETY, COMMUNITY/RECREATIONAL SERVICES, TRANSPORTATION HOUSEHOLD GOODS - ISSA (350 NAVY STUDENTS AT DLI)
DEFENSE INSTITUTE FOR TRAINING ANALYSIS (DITRA)	FT. ORD, CA	FINANCE/ACCOUNTING, TRAVEL, DITRA DIRECTOR IS NPS FACULTY MEMBER - MOU
DEFENSE HEALTH RESOURCES STUDY CENTER	MONTEREY, CA	FINANCE/ACCOUNTING, MAIL PICK-UP/DELIVERY,PW REAL PROPERTY SERVICE, PERSONNEL, UTILITIES, LIBRARY, CUSTODIAL, PURCHASING/CONTRACTING, COMPUTER/DATA PROCESSING, TELECOMMUNICATION SERVICES (THRU NAVCOMTELSTA, SAN DIEGO), COOPERATIVE RESEARCH WITH SYSTEMS MANAGEMENT DEPARTMENT
INSTITUTE FOR DEFENSE EDUCATION ANALYSIS	MONTEREY, CA	COOPERATIVE RESEARCH WITH SYSTEMS MANAGEMENT DEPARTMENT - MOU
DEFENSE ACQUISITION UNIVERSITY (DAU)	MONTEREY, CA	NPS IS A MEMBER OF DAU CONSORTIUM OF DOD ACQUISITION SCHOOLS - MOU
DEFENSE LANGUAGE INSTITUTE (DLI)	MONTEREY, CA	PROVIDES LANGUAGE COMPONENT FOR 40 NPS STUDENTS PER YEAR

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DEFENSE RESOURCES MANAGEMENT INSTITUTE

The Defense Resources Management Institute (DRMI) was established at the Naval Postgraduate School in 1965 by the DoD Comptroller. The DRMI was placed at NPS to take advantage of the high-quality faculty already in place at the School. The mission of the DRMI is to conduct interdisciplinary courses in resources management education under the functional coordination of a Policy Guidance Council chaired by the DoD Comptroller. Other members of the Council are the Assistant Secretary of Defense (Personnel and Readiness), the Assistant Secretary of Defense (Regional Security), the Director of Program Analysis and Evaluation and the Director of the Defense Security Assistance Agency.

The broad objectives of the DRMI are to: (1) Conduct courses in resources management for U.S. and foreign military and civilian personnel. The emphasis of DRMI programs is on the use of analytical concepts and techniques drawn management decision theory, economics and quantitative methods in the allocation and utilization of financial, logistic and manpower resources in defense organizations. (2) Maintain a program of research related to defense resource management education. The central focus of all DRMI programs is analytical decision making. Each course provides a multi-disciplinary program which encourages participants to develop an understanding of basic concepts of resources management, integrate the concepts into a systematic process of decision making for resources allocation and apply the concepts to illustrative examples. All courses are team taught by an interdisciplinary faculty, and approximately half of the course is devoted to small group seminars where participants apply the concepts developed in the lectures.

Since the Institute was founded in 1965, more than 12,000 US military officers and civilians have participated in its programs. More than 7,700 representatives from 120 nations have also participated in these programs. In addition, DRMI programs have been conducted in 38 countries as well as at numerous military facilities in the US. Since June 1991, the Institute has played a leading role in the Expanded IMET Initiative, presenting programs in resources management in a number of countries. The Institute has also collaborated with the National Security Affairs Department at NPS to develop a new course in civil-military relations for the Expanded IMET Program.

CURRICULA:

* Defense Resources Management Course
* International Defense Management Course
* Senior International Defense Management Course
* Mobile International Defense Management Course
* Analytical Decision Making Course

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MOBILE ANALYTICAL DECISION MAKING COURSE (MADMC)

SPONSORING ORGANIZATION:

* Policy Guidance Council chaired by the DoD Comptroller

OBJECTIVE:

* Apply the basic concepts and techniques of analytical decision making to the analysis of defense programs and policies and to the evolution and design of US defense management systems
* Emphasize the use of analytical techniques in locating defense resources

DESCRIPTION:

* Course Duration - 2 weeks
* Frequency - 3-5/year
* Participants - US military officers of grades O-4 through O-6, civilians of grades GS-11 through GS-15 or equivalent, and individuals participating in accelerated career development programs;
* Course has been offered at numerous military installations
* Note: this program has not been offered during the last two years due to constraints imposed by the large number of MIDMC offerings.

ANNUAL STUDENT INPUT: 100-200 US participants

Activity name	Location	Support function (include mechanism such as ISSA, MOU, etc.)
NON-GOVERNMENT		
MONTEREY BAY AQUARIUM RESEARCH INSTITUTE (MBARI)	MONTEREY AND MOSS LANDING, CA	JOINT RESEARCH ON AUV, JOINT OCEANIC MEASUREMENT WORK, NPS PROVIDES CALIBRATION FACILITIES, JOINT APPOINTMENT IN OCEANOGRAPHY DEPARTMENT, FELLOW MEMBER OF CIRIOS RESEARCH CONSORTIUM, MPS, MBARI, AND UCSC OWN ONE OF THE CODAR UNITS USED IN MAPPING CURRENTS IN MONTEREY BAY
UNIVERISTY OF CALIFORNIA - SANTA CRUZ (UCSC)	SANTA CRUZ, CA	MAJOR JOINT UNIVERSITY RESEARCH INITIATIVE WITH NPS AND MBARI ON REALTIME AIR/OCEAN DATA ANALYSIS, FELLOW MEMBER OF CIRIOS RESEARCH CONSORTIUM
MOSS LANDING MARINE LAB (MLML)	MOSS LANDING, CA	OPERATES SHARED RESEARCH VESSEL -- PT. SUR, PROVIDES TWO COURSES FOR NPS STUDENTS, FELLOW MEMBER OF CIRIOS RESEARCH CONSORTIUM
HOPKINS MARINE STATION OF STANFORD UNIVERISTY	MONTEREY, CA	JOINT EXPERIMENTS ON NEARSHORE CURRENTS, FELLOW MEMBER OF CIRIOS RESEARCH CONSORTIUM, RESOURCE FOR BIOLOGICAL OCEANOGRAPHY
MONTEREY INSTITUTE OF INTERNATIONAL STUDIES (MIIS)	MONTEREY, CA	FACULTY EXCHANGE WITH NPS NATIONAL SECURITY AFFAIRS DEPARTMENT
CAL STATE UNIVERSITY, MONTEREY BAY	MONTEREY, CA	NEW CAMPUS ON FORMER FT. ORD, PRELIMINARY PLANS FOR JOINT SHORT COURSES WITH NATIONAL SECURITY AFFAIRS DEPARTMENT
MONTEREY INSTITUTE OF RESEARCH IN ASTRONOMY (MIRA)	MONTEREY, CA	MIRA STAFF ARE THESIS ASSET FOR PHYSICS DEPARTMENT, NPS PROVIDES HELP WITH CALIBRATION AND MEASUREMENTS
MONTERY BAY AREA COOPERATIVE LIBRARY (MOBAC)	MONTEREY, CA	NPS IS HEAVILY USED INTERLIBRARY LOAN MEMBER, GOLDEN GATE UNIVERSITY AND MIIS HAVE BORROWING PRIVILEGES
GOLDEN GATE UNIVERSITY	MONTEREY, CA	STUDENTS HAVE ACCESS TO NPS LIBRARY
MONTEREY PENINSULA UNIFIED SCHOOL DISTRICT	MONTEREY, CA	SATURDAY SCOLARS PROGRAM WITH NPS, NPS IS SCIENCE ASSET FOR LOCAL HIGH SCHOOLS
ARMY RESEARCH INSTITUTE	MONTEREY, CA	EXERCISE DATABASE, BENEFITS FROM NPS THESES, IMPORTANT FOR ARNY STUDENTS
CITY OF MONTEREY	MONTEREY, CA	FIREFIGHTING SUPPORT-MOU
MONTEREY PENINSULA COLLEGE	MONTEREY, CA	TEACHES 2 COURSES TO INTERNATIONAL STUDENTS-MOA

Activity name	Location	Support function (include mechanism such as ISSA, MOU, etc.)
NON-GOVERNMENT (cont)		
MONTEREY COUNTY SHERIFF'S ORGANIZATION	MONTEREY COUNTY, CA	POLICE SERVICES - MOU
MONTEREY POLICE DEPARTMENT	MONTEREY, CA	POLICE SERVICES - MOU
MONTEREY POLICE DEPARTMENT	MONTEREY, CA	POLICE SERVICES: LA MESA HOUSING-COOP AGREEMENT
MONTEREY COUNTY	MONTEREY COUNTY, CA	FIRE SERVICES - MUTUAL AID AGREEMENT
MONTEREY AIRPORT POLICE DEPARTMENT	MONTEREY, CA	FIRE SERVICES - MUTUAL AID AGREEMENT
CALIFORNIA HIGHWAY PATROL	CALIFORNIA	HOUSING RENTAL LEASE (2)
PARTNERSHIP IN EXCELLENCE	MONTEREY, CA	COORDINATES NPS RESOURCES TO ASSIST EDUCATION AT LA MESA ELEMENTARY

14. FACILITY MAPS: This is a primary responsibility of the plant account holders/host commands. Tenant activities are not required to comply with submission if it is known that your host activity has complied with the request. Maps and photos should not be dated earlier than 01 January 1991, unless annotated that no changes have taken place. Any recent changes should be annotated on the appropriate map or photo. Date and label all copies.

- Local Area Map. This map should encompass, at a minimum, a 50 mile radius of your activity. Indicate the name and location of all DoD activities within this area, whether or not you support that activity. Map should also provide the geographical relationship to the major civilian communities within this radius. (Provide 12 copies.)

- Installation Map / Activity Map / Base Map / General Development Map / Site Map. Provide the most current map of your activity, clearly showing all the land under ownership/control of your activity, whether owned or leased. Include all outlying areas, special areas, and housing. Indicate date of last update. Map should show all structures (numbered with a legend, if available) and all significant restrictive use areas/zones that encumber further development such as HERO, HERP, HERF, ESQD arcs, agricultural/forestry programs, environmental restrictions (e.g., endangered species). (Provide in two sizes: 36"x 42" (2 copies, if available); and 11"x 17" (12 copies).)

- Aerial photo(s). Aerial shots should show all base use areas (both land and water) as well as any local encroachment sites/issues. You should ensure that these photos provide a good look at the areas identified on your Base Map as areas of concern/interest - remember, a picture tells a thousand words. Again, date and label all copies. (Provide 12 copies of each, 8½"x 11".)

- Air Installations Compatible Use Zones (AICUZ) Map. (Provide 12 copies.)

BRAC-95 CERTIFICATION

Reference: SECNAVNOTE 11000 of 08 December 1993

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

T.A. MERCER, RADM, USN
NAME (Please type or print)

T A Mercer
Signature

SUPERINTENDENT
Title

10 FEB 1994
Date

NAVAL POSTGRADUATE SCHOOL, MONTEREY, CA
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print) _____ Signature _____

Title _____ Date _____

Activity _____

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print) _____ Signature _____

Title _____ Date _____

Activity _____

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

CAPT S. STERLING, III
NAME (Please type or print) Signature

Acting Director 16 February 1994
Title Date

Field Support Activity
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

S. F. Loftus
Vice Admiral U.S. Navy
Deputy Chief of Naval Operations (Logistics)
NAME (Please type or print) Signature

23 FEB 1994
Title Date

Document Separator

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DATA CALL 65
ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA

Activity Identification: Please complete the following table, identifying the activity for which this response is being submitted.

Activity Name:	**NAVAL POSTGRADUATE SCHOOL**
UIC:	**62271**
Major Claimant:	**CNO N09BF**

General Instructions/Background:

Information requested in this data call is required for use by the Base Structure Evaluation Committee (BSEC), in concert with information from other data calls, to analyze both the impact that potential closure or realignment actions would have on a local community and the impact that relocations of personnel would have on communities surrounding receiving activities. In addition to Cost of Base Realignment Actions (COBRA) analyses which incorporate standard Department of the Navy (DON) average cost factors, the BSEC will also be conducting more sophisticated economic and community infrastructure analyses requiring more precise, activity-specific data. For example, activity-specific salary rates are required to reflect differences in salary costs for activities with large concentrations of scientists and engineers and to address geographic differences in wage grade salary rates. Questions relating to "Community Infrastructure" are required to assist the BSEC in evaluating the ability of a community to absorb additional employees and functions as the result of relocation from a closing or realigning DON activity.

Due to the varied nature of potential sources which could be used to respond to the questions contained in this data call, a block appears after each question, requesting the identification of the source of data used to respond to the question. To complete this block, identify the source of the data provided, including the appropriate references for source documents, names and organizational titles of individuals providing information, etc. Completion of this "Source of Data" block is critical since some of the information requested may be available from a non-DoD source such as a published document from the local chamber of commerce, school board, etc. Certification of data obtained from a non-DoD source is then limited to certifying that the information contained in the data call response is an accurate and complete representation of the information obtained from the source. Records must be retained by the certifying official to clearly document the source of any non-DoD information submitted for this data call.

General Instructions/Background (Continued):

The following notes are provided to further define terms and methodologies used in this data call. Please ensure that responses consistently follow this guidance:

Note 1: Throughout this data call, the term **"activity"** is used to refer to the DON installation that is the addressee for the data call.

Note 2: Periodically throughout this data call, questions will include the statement that the response should refer to the **"area defined in response to question 1.b., (page 3)"**. Recognizing that in some large metropolitan areas employee residences may be scattered among many counties or states, **the scope of the "area defined" may be limited to the sum of:**

- **those counties that contain government (DoD) housing units (as identified in 1.b.2)), and,**
- **those counties closest to the activity which, in the aggregate, include the residences of 80% or more of the activity's employees.**

Note 3: Responses to questions referring to **"civilians"** in this data call should reflect **federal civil service appropriated fund employees.**

1. Workforce Data

a. Average Federal Civilian Salary Rate. Provide the projected FY 1996 average gross annual appropriated fund **civil service** salary rate for the activity identified as the addressee in this data call. This rate should include all cash payments to employees, and exclude non-cash personnel benefits such as employer retirement contributions, payments to former employees, etc.

Average Appropriated Fund Civilian Salary Rate:	$46,769.00

Source of Data (1.a. Salary Rate):DCPDS

b. Location of Residence. Complete the following table to identify where employees live. Data should reflect current workforce.

1) Residency Table. Identify residency data, by county, for both military and civilian (civil service) employees working at the installation (including, for example, operational units that are homeported or stationed at the installation). For each county listed, also provide the estimated average distance from the activity, in miles, of employee residences and the estimated average length of time to commute one-way to work. For the purposes of displaying data in the table, any county(s) in which 1% or fewer of the activity's employees reside may be consolidated as a single line entry in the table, titled "Other".

County of Residence	State	No. of Employees Residing in County		Percentage of Total Employees	Average Distance From Base (Miles)	Average Duration of Commute (Minutes)
		Military	Civilian			
Monterey	CA	3124	1011	95	10	15
Santa Cruz	CA	0	26	1	45	50
Other	CA	129	68	4	60	75

= 100%

As discussed in Note 2 on Page 2, subsequent questions in the data call refer to the "area defined in response to question 1.b., (page 3)". In responding to these questions, the scope of the "area defined" may be limited to the sum of: a) those counties that contain government (DoD) housing units (as identified below), and, b) those counties closest to the activity which, in the aggregate, include the residences of 80% or more of the activity's employees.

2) Location of Government (DoD) Housing. If some employees of the base live in government housing, identify the county(s) where government housing is located:

Monterey, CA: Fort Ord and La Mesa

Source of Data (1.b. 1) & 2) Residence Data):DCPDS/AUTOMAP/PAYROLL REPORT

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ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA

c. Nearest Metropolitan Area(s). Identify all major metropolitan area(s) (i.e., population concentrations of 100,000 or more people) which are within 50 miles of the installation. If no major metropolitan area is within 50 miles of the base, then identify the nearest major metropolitan area(s) (100,000 or more people) and its distance(s) from the base.

City	County	Distance from base (miles)
MONTEREY	MONTEREY	0-3
SALINAS	MONTEREY	20
SANTA CRUZ	SANTA CRUZ	45

Source of Data (1.c. Metro Areas): Monterey Chamber of Commerce/AUTOMAP

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d. Age of Civilian Workforce. Complete the following table, identifying the age of the activity's **civil service** workforce.

Age Category	Number of Employees	Percentage of Employees
16 - 19 Years	9	.81%
20 - 24 Years	23	2.0%
25 - 34 Years	184	16.6%
35 - 44 Years	314	28.4%
45 - 54 Years	329	29.7%
55 - 64 Years	193	17.4%
65 or Older	53	4.7%
TOTAL	1105	100.0%

Source of Data (1.d.) Age Data): DCPDS

e. Education Level of Civilian Workforce

1) Education Level Table. Complete the following table, identifying the education level of the activity's **civil service** workforce.

Last School Year Completed	Number of Employees	Percentage of Employees
8th Grade or less	0	
9th through 11th Grade	16	1.4%
12th Grade or High School Equivalency	288	26.0%
1-3 Years of College	210	19.0%
4 Years of College (Bachelors Degree)	158	14.2%
5 or More Years of College (Graduate Work)	433	39.1%
TOTAL	1105	100.0%

2) Degrees Achieved. Complete the following table for the activity's **civil service** workforce. Identify the number of employees with each of the following degrees, etc. To avoid double counting, only identify the highest degree obtained by a worker (e.g., if an employee has both a Master's Degree and a Doctorate, only include the employee under the category "Doctorate").

Degree	Number of Civilian Employees
Terminal Occupation Program - Certificate of Completion, Diploma or Equivalent (for areas such as technicians, craftsmen, artisans, skilled operators, etc.)	9
Associate Degree	92
Bachelor Degree	143
Masters Degree	127
Doctorate	274

Source of Data (1.e.1) and 2) Education Level Data): DCPDS

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ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA

f. Civilian Employment By Industry. Complete the following table to identify by "industry" the type of work performed by **civil service** employees at the activity. The intent of this table is to attempt to stratify the activity civilian workforce using the same categories of industries used to identify private sector employment. Employees should be categorized based on their primary duties. Additional information on categorization of private sector employment by industry can be found in the Office of Management and Budget Standard Industrial Classification (SIC) Manual. However, you do not need to obtain a copy of this publication to provide the data requested in this table.

Note the following specific guidance regarding the "Industry Type" codes in the first column of the table: Even though categories listed may not perfectly match the type of work performed by civilian employees, please attempt to assign each civilian employee to one of the "Industry Types" identified in the table. However, only use the Category 6, "Public Administration" sub-categories when none of the other categories apply. Retain supporting data used to construct this table at the activity-level, in case questions arise or additional information is required at some future time. **Leave shaded areas blank.**

Industry	SIC Codes	No. of Civilians	% of Civilians
1. Agriculture, Forestry & Fishing	01-09	0	
2. Construction (includes facility maintenance and repair)	15-17	102	9%
3. Manufacturing (includes Intermediate and Depot level maintenance)	20-39	0	
3a. Fabricated Metal Products (include ordnance, ammo, etc.)	34	0	
3b. Aircraft (includes engines and missiles)	3721 et al	0	
3c. Ships	3731	0	
3d. Other Transportation (includes ground vehicles)	various	0	
3e. Other Manufacturing not included in 3a. through 3d.	various	0	
Sub-Total 3a. through 3e.	20-39	0	

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Industry	SIC Codes	No. of Civilians	% of Civilians
4. Transportation/Communications/Utilities	40-49		
4a. Railroad Transportation	40	0	
4b. Motor Freight Transportation & Warehousing (includes supply services)	42	39	3.5%
4c. Water Transportation (includes organizational level maintenance)	44	0	
4d. Air Transportation (includes organizational level maintenance)	45	0	
4e. Other Transportation Services (includes organizational level maintenance)	47	3	.27%
4f. Communications	48	0	
4g. Utilities	49	6	.54%
Sub-Total 4a. through 4g.	40-49	48	4.3%
5. Services	70-89		
5a. Lodging Services	70	0	
5b. Personal Services (includes laundry and funeral services)	72	0	
5c. Business Services (includes mail, security guards, pest control, photography, janitorial and ADP services)	73	168	15%
5d. Automotive Repair and Services	75	3	.27%
5e. Other Misc. Repair Services	76	1	.09%
5f. Motion Pictures	78	0	
5g. Amusement and Recreation Services	79	4	.36%
5h. Health Services	80	0	
5i. Legal Services	81	1	.09%

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ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA

Industry	SIC Codes	No. of Civilians	% of Civilians
5j. Educational Services	82	444	40%
5k. Social Services	83	0	
5l. Museums	84	0	
5m. Engineering, Accounting, Research & Related Services (includes RDT&E, ISE, etc.)	87	84	7.6%
5n. Other Misc. Services	89	61	5.5%
Sub-Total 5a. through 5n.:	70-89	766	69%
6. Public Administration	91-97		
6a. Executive and General Government, Except Finance	91	106	9%
6b. Justice, Public Order & Safety (includes police, firefighting and emergency management)	92	59	5.3%
6c. Public Finance	93	12	1%
6d. Environmental Quality and Housing Programs	95	12	1%
Sub-Total 6a. through 6d.		189	17%
TOTAL		1105	100 %

Source of Data (1.f.) Classification By Industry Data):DCPDS

g. Civilian Employment by Occupation. Complete the following table to identify the types of "occupations" performed by **civil service** employees at the activity. Employees should be categorized based on their primary duties. Additional information on categorization of employment by occupation can be found in the Department of Labor Occupational Outlook Handbook. However, you do not need to obtain a copy of this publication to provide the data requested in this table.

Note the following specific guidance regarding the "Occupation Type" codes in the first column of the table: Even though categories listed may not perfectly match the type of work performed by civilian employees, please attempt to assign each civilian employee to one of the "Occupation Types" identified in the table. Refer to the descriptions immediately following this table for more information on the various occupational categories. Retain supporting data used to construct this table at the activity-level, in case questions arise or additional information is required at some future time. **Leave shaded areas blank.**

Occupation	Number of Civilian Employees	Percent of Civilian Employees
1. Executive, Administrative and Management	239	21.6%
2. Professional Specialty		
2a. Engineers	25	2.2%
2b. Architects and Surveyors		
2c. Computer, Mathematical & Operations Research	5	.45%
2d. Life Scientists		
2e. Physical Scientists	28	2.5%
2f. Lawyers and Judges		
2g. Social Scientists & Urban Planners	4	.36%
2h. Social & Recreation Workers		
2i. Religious Workers		
2j. Teachers, Librarians & Counselors	344	31.1%
2k. Health Diagnosing Practitioners (Doctors)		
2l. Health Assessment & Treating(Nurses, Therapists, Pharmacists, Nutritionists, etc.)		
2m. Communications		

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Occupation	Number of Civilian Employees	Percent of Civilian Employees
2n. Visual Arts	4	.36%
Sub-Total 2a. through 2n.:	410	37.1%
3. Technicians and Related Support		
3a. Health Technologists and Technicians		
3b. Other Technologists	104	9.4%
Sub-Total 3a. and 3b.:	104	9.4%
4. Administrative Support & Clerical	183	16.5%
5. Services		
5a. Protective Services (includes guards, firefighters, police)	45	4%
5b. Food Preparation & Service		
5c. Dental/Medical Assistants/Aides		
5d. Personal Service & Building & Grounds Services (includes janitorial, grounds maintenance, child care workers)		
Sub-Total 5a. through 5d.	45	4%
6. Agricultural, Forestry & Fishing		
7. Mechanics, Installers and Repairers	30	2.7%
8. Construction Trades	39	3.5%
9. Production Occupations	14	1.2%
10. Transportation & Material Moving	8	.72%
11. Handlers, Equipment Cleaners, Helpers and Laborers (not included elsewhere)	33	2.9%
TOTAL	1105	100%

Source of Data (1.g.) Classification By Occupation Data):DCPDS

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ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA

Description of Occupational Categories used in Table 1.g. The following list identifies public and private sector occupations included in each of the major occupational categories used in the table. Refer to these examples as a guide in determining where to allocate **appropriated fund civil service jobs** at the activity.

1. **Executive, Administrative and Management.** Accountants and auditors; administrative services managers; budget analysts; construction and building inspectors; construction contractors and managers; cost estimators; education administrators; employment interviewers; engineering, science and data processing managers; financial managers; general managers and top executives; chief executives and legislators; health services managers; hotel managers and assistants; industrial production managers; inspectors and compliance officers, except construction; management analysts and consultants; marketing, advertising and public relations managers; personnel, training and labor relations specialists and managers; property and real estate managers; purchasing agents and managers; restaurant and food service managers; underwriters; wholesale and retail buyers and merchandise managers.
2. **Professional Specialty.** Use sub-headings provided.
3. **Technicians and Related Support.** Health Technologists and Technicians sub-category - self-explanatory. Other Technologists sub-category includes aircraft pilots; air traffic controllers; broadcast technicians; computer programmers; drafters; engineering technicians; library technicians; paralegals; science technicians; numerical control tool programmers.
4. **Administrative Support & Clerical.** Adjusters, investigators and collectors; bank tellers; clerical supervisors and managers; computer and peripheral equipment operators; credit clerks and authorizers; general office clerks; information clerks; mail clerks and messengers; material recording, scheduling, dispatching and distributing; postal clerks and mail carriers; records clerks; secretaries; stenographers and court reporters; teacher aides; telephone, telegraph and teletype operators; typists, word processors and data entry keyers.
5. **Services.** Use sub-headings provided.
6. **Agricultural, Forestry & Fishing.** Self explanatory.
7. **Mechanics, Installers and Repairers.**Aircraft mechanics and engine specialists; automotive body repairers; automotive mechanics; diesel mechanics; electronic equipment repairers; elevator installers and repairers; farm equipment mechanics; general maintenance mechanics; heating, air conditioning and refrigeration technicians; home appliance and power tool repairers, industrial machinery repairers; line installers and cable splicers; millwrights; mobile heavy equipment mechanics; motorcycle, boat and small engine mechanics; musical instrument repairers and tuners; vending machine servicers and repairers.
8. **Construction Trades.** Bricklayers and stonemasons; carpenters; carpet installers; concrete masons and terrazzo workers; drywall workers and lathers; electricians; glaziers; highway maintenance; insulation workers; painters and paperhangers; plasterers; plumbers and pipefitters; roofers; sheet metal workers; structural and reinforcing ironworkers; tilesetters.
9. **Production Occupations.** Assemblers; food processing occupations; inspectors, testers and graders; metalworking and plastics-working occupations; plant and systems operators, printing occupations; textile, apparel and furnishings occupations; woodworking occupations; miscellaneous production operations.
10. **Transportation & Material Moving.** Busdrivers; material moving equipment operators; rail transportation occupations; truckdrivers; water transportation occupations.
11. **Handlers, Equipment Cleaners, Helpers and Laborers** (not included elsewhere). Entry level jobs not requiring significant training.

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h. Employment of Military Spouses. Complete the following table to provide estimated information concerning **military spouses** who are also employed in the area defined in response to question 1.b., above. **Do not fill in shaded area.**

1. Percentage of Military Employees Who Are Married:	**72**
2. Percentage of Military Spouses Who Work Outside of the Home:	**40**
3. Break out of Spouses' Location of Employment (Total of rows 3a. through 3d. should equal 100% and reflect the number of spouses used in the calculation of the "Percentage of Spouses Who Work Outside of the Home".	
3a. Employed "On-Base" - Appropriated Fund:	**8**
3b. Employed "On-Base" - Non-Appropriated Fund:	**3**
3c. Employed "Off-Base" - Federal Employment:	**10**
3d. Employed "Off-Base" - Other Than Federal Employment	**79**

Source of Data (1.h.) Spouse Employment Data): NPS SURVEY

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2. Infrastructure Data. For each element of community infrastructure identified in the two tables below, rate the community's ability to accommodate the relocation of additional functions and personnel to your activity. Please complete each of the three columns listed in the table, reflecting the impact of various levels of increase (20%, 50% and 100%) in the number of personnel working at the activity (and their associated families). In ranking each category, use one of the following three ratings:

A - Growth can be accommodated with little or no adverse impact to existing community infrastructure and at little or no additional expense.

B - Growth can be accommodated, but will require some investment to improve and/or expand existing community infrastructure.

C - Growth either cannot be accommodated due to physical/environmental limitations or would require substantial investment in community infrastructure improvements.

Table 2.a., "Local Communities": This first table refers to the local community (i.e., the community in which the base is located) and its ability to meet the increased requirements of the installation.

Table 2.b., "Economic Region": This second table asks for an assessment of the infrastructure of the economic region (those counties identified in response to question 1.b., (page 3) - taken in the aggregate) and its ability to meet the needs of additional employees and their families moving into the area.

For both tables, annotate with an asterisk (*) any categories which are wholly supported on-base, i.e., are not provided by the local community. These categories should also receive an A-B-C rating. Answers for these "wholly supported on-base" categories should refer to base infrastructure rather than community infrastructure.

NAVAL POSTGRADUATE SCHOOL
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ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA

a. Table A: Ability of the local community to meet the expanded needs of the base.

1) Using the A - B - C rating system described above, complete the table below.

Category	20% Increase	50% Increase	100% Increase
Off-Base Housing	A	A	A
Schools - Public	A	A	A
Schools - Private	A	A	A
Public Transportation - Roadways	A	A	A
Public Transportation - Buses/Subways	A	A	A
Public Transportation - Rail	A	A	A
Fire Protection	A	A	A
Police	A	A	A
Health Care Facilities	A	A	A
Utilities:			
Water Supply	A	A	A
Water Distribution	A	A	A
Energy Supply	A	A	A
Energy Distribution	A	A	A
Wastewater Collection	A	A	A
Wastewater Treatment	A	A	A
Storm Water Collection	A	A	A
Solid Waste Collection and Disposal	A	A	A
Hazardous/Toxic Waste Disposal	A	A	A
Recreational Activities	A	A	A

Remember to mark with an asterisk any categories which are wholly supported on-base.

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LT Ben Pina FLD SUPACT
7/29/94

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b. Table B: Ability of the region described in the response to question 1.b. (page 3) (taken in the aggregate) to meet the needs of additional employees and their families relocating into the area.

1) Using the **A - B - C** rating system described above, complete the table below.

Category	20% Increase	50% Increase	100% Increase
Off-Base Housing	A	A	A
Schools - Public	A	A	A
Schools - Private	A	A	A
Public Transportation - Roadways	A	A	A
Public Transportation - Buses/Subways	A	A	A
Public Transportation - Rail	A	A	A
Fire Protection	A	A	A
Police	A	A	A
Health Care Facilities	A	A	A
Utilities:			
Water Supply	A	A	A
Water Distribution	A	A	A
Energy Supply	A	A	A
Energy Distribution	A	A	A
Wastewater Collection	A	A	A
Wastewater Treatment	A	A	A
Storm Water Collection	A	A	A
Solid Waste Collection and Disposal	A	A	A
Hazardous/Toxic Waste Disposal	A	A	A
Recreation Facilities	A	A	A

Remember to mark with an asterisk any categories which are wholly supported on-base.

2) For each rating of "C" identified in the table on the preceding page, attach a brief narrative explanation of the types and magnitude of improvements required and/or the nature of any barriers that preclude expansion.

NOT APPLICABLE

Source of Data (2.b. 1) & 2) - Regional Table):

1. **Association of Monterey Bay Area Governments**
2. **Monterey Unified School District**
3. **Monterey County Office**
4. **NPS Public Works Department Records**

3. Public Facilities Data:

a. **Off-Base Housing Availability.** For the counties identified in the response to question 1.b. (page 3), in the aggregate, estimate the current average vacancy rate for community housing. Use current data or information identified on the latest family housing market analysis. For each of the categories listed (rental units and units for sale), combine single family homes, condominiums, townhouses, mobile homes, etc., into a single rate:

Rental Units: **14.8%**

Units for Sale: **3.6%**

Source of Data (3.a. Off-Base Housing): California Department of Finance Demographic Research Unit 1 January 1994 Population & Housing Estimates for Monterey & Santa Cruz counties.

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b. **Education.**

1) Information is required on the current capacity and enrollment levels of school systems serving employees of the activity. Information should be keyed to the counties identified in the response to question 1.b. (page 3).

School District	County	Number of Schools			Enrollment		Pupil-to-Teacher Ratio		Does School District Serve Gov't Housing Units? *
		Element-ary	Middle	High	Current	Max. Capacity	Current	Max. Ratio	
MONTEREY USD	MONTEREY	14	7	5	11,836	*	26:1	*	YES
PACFIC GROVE	MONTEREY	3	1	2	2,315	*	22:1	*	NO
CARMEL	MONTEREY	3	1	2	2,297	*	24:1	*	NO
SALINAS UNIFIED	MONTEREY	13	3	4	18,386	*	26:1	*	NO
ALISAL	MONTEREY	7	0	#	5,000	*	29:1	*	NO
WASHINGTON USD	MONTEREY	2	1	#	700	*	24:1	*	NO
SANTA RITA	MONTEREY	2	1	#	2,049	*	27:1	*	NO
NORTH MONTEREY	MONTEREY	4	2	1	5,000	*	28:1	*	NO

 # NOTE: THESE 3 DISTRICTS FEED STUDENTS INTO THE SALINAS UNIFIED HIGH SCHOOLS.

*** NOTE: MOST LOCAL SCHOOL DISTRICTS HAVE A CONTRACT WITH THE TEACHER'S UNIONS TO MAINTAIN PUPIL: TEACHER RATIOS AT A MAXIMUM OF 26:1. IF EXCESS STUDENTS ENROLL IN A PARTICULAR LOCALE, PORTABLE CLASSROOMS ARE BROUGHT IN, AND TEACHERS ARE RELOCATED OR HIRED TO COVER THE EXCESS. ACTUAL CLASSROOM RATIO VARIES SOMEWHAT FROM GRADE TO GRADE.**

* Answer "Yes" in this column if the school district in question enrolls students who reside in government housing.

Source of Data (3.b.1) Education Table): SUPERINTENDENT OF SCHOOLS

2) Are there any on-base "Section 6" Schools? If so, identify number of schools and current enrollment.

NO

Source of Data (3.b.2) On-Base Schools):

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3) For the counties identified in the response to question 1.b. (page 3), in the aggregate, list the names of undergraduate and graduate colleges and universities which offer certificates, Associate, Bachelor or Graduate degrees :

CABRILLO COLLEGE
CALIFORNIA STATE UNIVERSITY AT MONTEREY BAY
(under construction; classes start September 1995)
CHAPMAN COLLEGE
GAVILIAN COLLEGE
GOLDEN GATE UNIVERSITY
HARTNELL COLLEGE
MONTEREY COLLEGE OF LAW
MONTEREY INSTITUTE OF INTERNATIONAL STUDIES
MONTEREY PENINSULA COLLEGE
SAN JOSE STATE UNIVERSITY
UNIVERSITY OF CALIFORNIA AT SANTA CRUZ
UNIVERSITY OF SAN FRANCISCO

SCHOOLS LISTED ABOVE OFFER DEGREES FROM ASSOCIATES TO PhD.

Source of Data (3.b.3) Colleges): TELEPHONE DIRECTORY
MONTEREY COMMUNITY DEVELOPMENT DEPT

4) For the counties identified in the response to question 1.b. (page 3), in the aggregate, list the names and major curriculums of vocational/technical training schools:

CENTRAL COAST COLLEGE OF BUSINESS DATA PROCESSING
(SECRETARIAL SCIENCE/ACCOUNTING/HOTEL SERVICES)
CENTER FOR EMPLOYMENT TRAINING
(AUTOMATED OFFICE SKILLS/CUSTODIAL SCIENCE)
HEALD BUSINESS COLLEGE
(ACCOUNTING/SECRETARIAL SCIENCE/COMPUTER APPLICATIONS)
SALINAS BEAUTY COLLEGE
(COSMETOLOGY)
REGIONAL OCCUPATIONAL PROGRAM
(CLERICAL/BUSINESS/SERVICE/HEALTH CARE COURSES)
SHORELINE OCCUPATIONAL SERVICES
(ELECTRONICS TECH/RETAIL SALES/SECRETARIAL SCIENCE)
WAYNE'S COLLEGE OF BEAUTY, INC
(COSMETOLOGY)
H&R BLOCK INCOME TAX

(INCOME TAXES)
TRAVEL TRAINING CENTER
(TRAVEL INDUSTRY)

SCHOOLS LISTED ABOVE OFFER DIPLOMAS AND/OR CERTIFICATES.

Source of Data (3.b.4) Vo-tech Training): TELEPHONE DIRECTORY

c. **Transportation.**

1) Is the activity served by public transportation?

	Yes	No
Bus:	XX	__
Rail:	XX	__
Subway:	__	XX
Ferry:	__	XX

Source of Data (3.c.1) Transportation): MONTEREY COUNTY REGIONAL TRANSPORTATION PLAN

2) Identify the location of the nearest passenger railroad station (long distance rail service, not commuter service within a city) and the distance from the activity to the station.

SALINAS; 13 MILES (SERVED BY CONNECTOR BUS TO/FROM MONTEREY)

Source of Data (3.c.2) Transportation): MONTEREY COUNTY REGIONAL TRANSPORTATION PLAN

3) Identify the name and location of the nearest commercial airport (with public carriers, e.g., USAIR, United, etc.) and the distance from the activity to the airport.

MONTEREY PENINSULA AIRPORT; 2 MILES

Source of Data (3.c.3) Transportation): MONTEREY PENINSULA AIRPORT

4) How many carriers are available at this airport?

FOUR

Source of Data (3.c.4) Transportation): MONTEREY PENINSULA AIRPORT

5) What is the Interstate route number and distance, in miles, from the activity to the nearest Interstate highway?

INTERSTATE 5: 76 MILES

Source of Data (3.c.5) Transportation): RAND MCNALLY ATLAS

6) Access to Base:

a) Describe the quality and capacity of the road systems providing access to the base, specifically during peak periods. (Include both information on the area surrounding the base and information on access to the base, e.g., numbers of gates, congestion problems, etc.)

ROADS TO NAVPGSCOL ARE CLASSIFIED AS COLLECTORS OR LOCAL STREETS. ALL ROADS ARE ADEQUATE AND IN GOOD CONDITION. DEL MONTE AVENUE IS SCHEDULED FOR IMPROVEMENTS TO INCREASE CARRYING CAPACITY.

b) Do access roads transit residential neighborhoods?

YES

c) Are there any easements that preclude expansion of the access road system?

NO

d) Are there any man-made barriers that inhibit traffic flow (e.g., draw bridges, etc.)?

NO

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Source of Data (3.c.6) Transportation): MONTEREY COUNTY REGIONAL TRANSPORTATION PLAN; NAVPGSCOL PUBLIC WORKS RECORDS

d. **Fire Protection/Hazardous Materials Incidents.** Does the activity have an agreement with the local community for fire protection or hazardous materials incidents? Explain the nature of the agreement and identify the provider of the service.

MONTEREY COUNTY MUTUAL AID PLAN; MUTUAL AID MATRIX DEFINES LEVEL OF RESPONSE FOR VARIOUS SCENARIOS AND/OR MATERIALS. IF WARRANTED, STATE ASSISTANCE CAN ALSO BE REQUESTED.

Source of Data (3.d. Fire/Hazmat): MONTEREY COUNTY MUTUAL AID PLAN

e. **Police Protection.**

1) What is the level of legislative jurisdiction held by the installation?

CONCURRENT

2) If there is more than one level of legislative jurisdiction for installation property, provide a brief narrative description of the areas covered by each level of legislative jurisdiction and whether there are separate agreements for local law enforcement protection.

NOT APPLICABLE

3) Does the activity have a specific written agreement with local law enforcement concerning the provision of local police protection?

YES

4) If agreements exist with more than one local law enforcement entity, provide a brief narrative description of whom the agreement is with and what services are covered.

NO

5) If military law enforcement officials are routinely augmented by officials of other federal agencies (BLM, Forest Service, etc.), identify any written agreements covering such services and briefly describe the level of support received.

NOT APPLICABLE

Source of Data (3.e. 1) - 5) - Police):	**MUTUAL AID PLAN; NAVPGSCOL SECURITY DEPT RECORDS**

f. **Utilities.**

1) Does the activity have an agreement with the local community for water, refuse disposal, power or any other utility requirements? Explain the nature of the agreement and identify the provider of the service.

REFUSE COLLECTION: CONTRACT WITH CITY OF MONTEREY
ELECTRICITY: CONTRACT WITH PACIFIC GAS & ELECTRIC
GAS: NATURAL GAS CLEARING HOUSE (TRANSMITTED THROUGH PG&E LINES)
SEWAGE: CONTRACT WITH MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY
WATER: CONTRACT WITH CALIFORNIA/AMERICAN WATER

2) Has the activity been subject to water rationing or interruption of delivery during the last five years? If so, identify time period during which rationing existed and the restrictions imposed. Were activity operations affected by these situations? If so, explain extent of impact.

YES, A NEW CONSTRUCTION MORATORIUM WAS IN EFFECT FROM 1990 TO 1992. WATER RATIONING WAS ENFORCED FROM 1991 TO 1993. A VARIANCE HAD TO BE APPROVED VIA PUBLIC HEARINGS FOR ANY NEW CONSTRUCTION DURING THIS PERIOD.

3) Has the activity been subject to any other significant disruptions in utility service, e.g., electrical "brown outs", "rolling black outs", etc., during the last five years? If so, identify time period(s) covered and extent/nature of restrictions/disruption. Were activity operations affected by these situations? If so, explain extent of impact.

NO

Source of Data (3.f. 1) - 3) Utilities):	**FACILITIES/UTILITIES CONTRACTS; PUBLIC WORKS RECORDS**

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ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA

4. **Business Profile.** List the top ten employers in the geographic area defined by your response to question 1.b. (page 3), taken in the aggregate, (include your activity, if appropriate):

Employer	Product/Service	No. of Employees
1. DEFENSE LANGUAGE INST	ARMY BASE	3771
2. COUNTY OF MONTEREY	COUNTY SERVICES	3694
3. NAVPGSCOL	NAVY BASE	3268
4. DOLE FRESH VEGETABLES	PRODUCE	3000
5. HOUSEHOLD CREDIT	FINANCE	1800
6. TANIMURA & ANTLE	PRODUCE	1800
7. MP UNIFIED SCHOOL DIST	EDUCATION	1550
8. D'ARRIGO BROTHERS	PRODUCE	1500
9. COMMUNITY HOSPITAL OF MP	MEDICAL	1426
10. PEBBLE BEACH CORP	RESORT	1400

Source of Data (4. Business Profile): MONTEREY CHAMBER OF COMMERCE
SALINAS CHAMBER OF COMMERCE
NAVPGSCOL PERSONNEL RECORDS
DEFLANGINST PERSONNEL RECORDS

DATA CALL 65
ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA

5. **Other Socio-Economic Impacts.** For each of the following areas, describe other recent (past 5 years), on-going or projected economic impacts (both positive and negative) on the geographic region defined by your response to question 1.b. (page 3), in the aggregate:

a. Loss of Major Employers:

The closure of Fort Ord in 1993 eliminated the largest employer in the county(~ 14,000 active duty personnel). The negative impacts of this closure have been less than originally projected because of increased strength in agriculture and tourism, the two remaining economic mainstays of the county economy. The Fort Ord closure has resulted in increased unemployment, high rental housing vacancies in communities around the former army base, and in localized impacts on businesses in Seaside and Marina.

b. Introduction of New Businesses/Technologies:

Several new ventures are underway on land made available by the closure of Fort Ord: a new California State University campus (Cal State University, Monterey Bay) is being established, and the University of California, Santa Cruz, is developing a research/technology center. Monterey county is further proposing an agricultural technology center be created as part of the Monterey Bay Educational, Science and Technology (MBEST) development effort. The Monterey Peninsula is becoming widely known as an international language resource center with the Defense Language Institute, Monterey Institute of International Studies, and AT&T Foreign Language Service headquartered here. Increased language resources and international business development efforts are proposed.

c. Natural Disasters:

The 1989 Loma Prieta earthquake caused severe damage to communities to the north and east of Monterey. Damage in Monterey was limited to power outages and minor structural problems. Monterey generally sits on a foundation of granite bedrock, which typically experiences less damage in a major earthquake than other geological formations.

d. Overall Economic Trends:

Monterey did not experience the same level of recession felt by the rest of California from 1991-1993, even with the impacts of the Fort Ord closure. Rental housing is readily available, although rental rates are significantly above the national norm. In particular, the costs to purchase a home on the Monterey Peninsula are

among the most expensive in the nation. The primary economic activities in the county are agriculture in the Salinas Valley, tourism on the Monterey Peninsula, and military educational functions of the Naval Postgraduate School and the Defense Language Institute in Monterey. Because of the cylical nature of agriculture and tourism, unemployment is high in the winter and low in the summer, and remains consistently several points higher than the national norm.

A strong economy is expected for the next five years, based on increased value of agriculture products; expanded tourism; development of two new universities and the educational, science and technology center at Fort Ord; and increased construction in the non-residential and housing sectors throughout the county.

Source of Data (5. Other Socio/Econ):	MONTEREY CITY PLANNER FORT ORD REUSE PLAN

6. Other. Identify any contributions of your activity to the local community not discussed elsewhere in this response.

The Naval Postgraduate School actively contributes to the educational and socio-cultural life of the Monterey Peninsula. In 1993, approximately 1600 primary and secondary high school students from over 120 local schools participated in Discovery Day, a science and engineering enrichment program.

International students at the Naval Postgraduate School sponsor International Day to provide information to the local community about the variety of cultures represented at the Naval Postgraduate School. Over 2000 people attended the event in 1994.

Three Concerts on the Lawn are co-sponsored each year with the Monterey Bay Symphony. Typically, around 1500 individuals attend each performance.

Senior representatives of the Naval Postgraduate School participated in the 1994 July 4th Monterey City Parade and the Sloat Landing Celebration sponsored by the Monterey History and Art Association. The Association's Maritime Museum, which documents Monterey's status as an important center in U.S. maritime history, has loaned the Naval Postgraduate School items from its collection for display. The Naval Postgraduate School Association has donated important historical artifacts to the Museum, and many individuals with present or former Naval Postgraduate School affiliations provide significant volunteer support to the Museum.

DATA CALL 65
ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA

The Naval Postgraduate School is also an important source of revenue for the local hospitality industry. During FY 1993, over 5800 individuals attended conferences sponsored by the Naval Postgraduate School. Most of the conferees stayed at hotels in Monterey.

Source of Data (6. Other): PUBLIC AFFAIRS OFFICE AND RESEARCH OFFICE AT NPS, REGISTRAR, MARITIME MUSEUM OF MONTEREY.

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print) _____ Signature _____

Title _____ Date _____

Activity _____

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print) _____ Signature _____

Title _____ Date _____

Activity _____

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

Mr. Robert W. Thornett
NAME (Please type or print) Signature

Director
Title 7/21/94 Date

Field Support Activity
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER
NAME (Please type or print) Signature

Title 8/3/94 Date

BRAC - 95 CERTIFICATION

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained here is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

T. A. MERCER, RADM, USN
NAME (Please type or print)

T A Mercer
Signature

SUPERINTENDENT
Title

9/14/94
Date

NAVAL POSTGRADUATE SCHOOL
Activity

Document Separator

DATA CALL 66
INSTALLATION RESOURCES 234

Activity Information:

Activity Name:	**NAVAL POSTGRADUATE SCHOOL**
UIC:	**62271**
Host Activity Name (if response is for a tenant activity):	
Host Activity UIC:	

General Instructions/Background. A separate response to this data call must be completed for each Department of the Navy (DON) host, independent and tenant activity which separately budgets BOS costs (regardless of appropriation), and, is located in the United States, its territories or possessions.

1. Base Operating Support (BOS) Cost Data. Data is required which captures the total annual cost of operating and maintaining Department of the Navy (DON) shore installations. Information must reflect FY 1996 budget data supporting the FY 1996 NAVCOMPT Budget Submit. Two tables are provided. Table 1A identifies "Other than DBOF Overhead" BOS costs and Table 1B identifies "DBOF Overhead" BOS costs. These tables must be completed, as appropriate, for all DON host, independent or tenant activities which separately budget BOS costs (regardless of appropriation), and, are located in the United States, its territories or possessions. Responses for DBOF activities may need to include both Table 1A and 1B to ensure that all BOS costs, including those incurred by the activity in support of tenants, are identified. If both table 1A and 1B are submitted for a single DON activity, please ensure that no data is double counted (that is, included on both Table 1A and 1B). The following tables are designed to collect all BOS costs currently budgeted, regardless of appropriation, e.g., Operations and Maintenance, Research and Development, Military Personnel, etc. Data must reflect FY 1996 and should be reported in thousands of dollars.

a. Table 1A - Base Operating Support Costs (Other Than DBOF Overhead). This Table should be completed to identify "Other Than DBOF Overhead" Costs. Display, in the format shown on the table, the O&M, R&D and MPN resources currently budgeted for BOS services. O&M cost data must be consistent with data provided on the BS-1 exhibit. Report only direct funding for the activity. Host activities should not include reimbursable support provided to tenants, since tenants will be separately reporting these costs. Military personnel costs should be included on the appropriate lines of the table. Please ensure that individual lines of the table do not include duplicate costs. Add additional lines to the table (following line 2j., as necessary, to identify any additional cost elements not currently shown). **Leave shaded areas of table blank.**

Table 1A - Base Operating Support Costs (Other Than DBOF Overhead)			
Activity Name: NAVAL POSTGRADUATE SCHOOL		**UIC: 62271**	
Category	**FY 1996 BOS Costs ($000)**		
	Non-Labor	**Labor**	**Total**
1. Real Property Maintenance Costs:			
1a. Maintenance and Repair	1541	2853	4394
1b. Minor Construction	0	0	0
1c. Sub-total 1a. and 1b.	1541	2853	4394
2. Other Base Operating Support Costs:			
2a. Utilities	1712	281	1993
2b. Transportation	100	179	279
2c. Environmental	130	150	280
2d. Facility Leases	0	0	0
2e. Morale, Welfare & Recreation	0	857	857
2f. Bachelor Quarters	32	757	789
2g. Child Care Centers	35	384	419
2h. Family Service Centers	4	176	180
2i. Administration	500	3482	3982
2j. Other (Specify) Includes			
2j.1 Fire	12	723	735
2j.2 Engineering Support	1961	1707	3668
2j.3 Supply	300	2903	3203
2j.4 Chaplain	100	531	631
2j.5 Communications	819	0	819
2j.6 Security	13	587	600
2k. Sub-total 2a. through 2j:	5718	12717	18435
3. Grand Total (sum of 1c. and 2k.):	7259	15570	22829

7/29 FSA

b. Funding Source. If data shown on Table 1A reflects more than one appropriation, then please provide a break out of the total shown for the "3. Grand-Total" line, by appropriation:

Appropriation	Amount ($000)
O&M,N	17,581
MP,N	5,248

FSA 7/29

c. Table 1B - Base Operating Support Costs (DBOF Overhead). This Table should be submitted for all current DBOF activities. Costs reported should reflect BOS costs supporting the DBOF activity itself (usually included in the G&A cost of the activity). For DBOF activities which are tenants on another installation, total cost of BOS incurred by the tenant activity for itself should be shown on this table. It is recognized that differences exist among DBOF activity groups regarding the costing of base operating support: some groups reflect all such costs only in general and administrative (G&A), while others spread them between G&A and production overhead. Regardless of the costing process, all such costs should be included on Table 1B. The Minor Construction portion of the FY 1996 capital budget should be included on the appropriate line. Military personnel costs (at civilian equivalency rates) should also be included on the appropriate lines of the table. Please ensure that individual lines of the table do not include duplicate costs. Also ensure that there is no duplication between data provided on Table 1A. and 1B. These two tables must be mutually exclusive, since in those cases where both tables are submitted for an activity, the two tables will be added together to estimate total BOS costs at the activity. Add additional lines to the table (following line 21., as necessary, to identify any additional cost elements not currently shown). **Leave shaded areas of table blank.**

Other Notes: All costs of operating the five Major Range Test Facility Bases at DBOF activities (even if direct RDT&E funded) should be included on Table 1B. Weapon Stations should include underutilized plant capacity costs as a DBOF overhead "BOS expense" on Table 1B..

DATA CALL 66
INSTALLATION RESOURCES

Table 1B - Base Operating Support Costs (DBOF Overhead)			
Activity Name: NOT APPLICABLE		**UIC:** 62271	
Category	**FY 1996 Net Cost From UC/FUND-4 ($000)**		
	Non-Labor	**Labor**	**Total**
1. Real Property Maintenance Costs:			
1a. Real Property Maintenance (>$15K)			
1b. Real Property Maintenance (<$15K)			
1c. Minor Construction (Expensed)			
1d. Minor Construction (Capital Budget)			
1c. Sub-total 1a. through 1d.			
2. Other Base Operating Support Costs:			
2a. Command Office			
2b. ADP Support			
2c. Equipment Maintenance			
2d. Civilian Personnel Services			
2e. Accounting/Finance			
2f. Utilities			
2g. Environmental Compliance			
2h. Police and Fire			
2i. Safety			
2j. Supply and Storage Operations			
2k. Major Range Test Facility Base Costs			
2l. Other (Specify)			
2m. Sub-total 2a. through 2l:			
3. Depreciation			
4. Grand Total (sum of 1c., 2m., and 3.) :			

DATA CALL 66
INSTALLATION RESOURCES

2. Services/Supplies Cost Data. The purpose of Table 2 is to provide information about projected **FY 1996** costs for the purchase of services and supplies by the activity. **(Note: Unlike Question 1 and Tables 1A and 1B, above, this question is not limited to overhead costs.)** The source for this information, where possible, should be either the NAVCOMPT OP-32 Budget Exhibit for O&M activities or the NAVCOMPT UC/FUND-1/IF-4 exhibit for DBOF activities. Information must reflect FY 1996 budget data supporting the FY 1996 NAVCOMPT Budget Submit. Break out cost data by the major sub-headings identified on the OP-32 or UC/FUND-1/IF-4 exhibit, disregarding the sub-headings on the exhibit which apply to civilian and military salary costs and depreciation. Please note that while the OP-32 exhibit aggregates information by budget activity, this data call requests OP-32 data for the activity responding to the data call. Refer to NAVCOMPTINST 7102.2B of 23 April 1990, Subj: Guidance for the Preparation, Submission and Review of the Department of the Navy (DON) Budget Estimates (DON Budget Guidance Manual) with Changes 1 and 2 for more information on categories of costs identified. Any rows that do not apply to your activity may be left blank. However, totals reported should reflect all costs, exclusive of salary and depreciation.

Table 2 - Services/Supplies Cost Data	
Activity Name: NAVAL POSTGRADUATE SCHOOL	**UIC: 62271**

Cost Category	FY 1996 Projected Costs ($000)
Travel:	944
Material and Supplies (including equipment):	333
Industrial Fund Purchases (other DBOF purchases):	202
Transportation:	133
Other Purchases (Contract support, etc.): **Includes Purchased Communications (non-SF)** **Purchased Utilities (non-SF)** **Facilities Maintenance by Contract**	15254
Total:	16866

FSA 7/29

DATA CALL 66
INSTALLATION RESOURCES

3. Contractor Workyears.

a. On-Base Contract Workyear Table. Provide a projected estimate of the number of contract workyears expected to be **performed "on base"** in support of the installation during FY 1996. Information should represent an annual estimate on a full-time equivalency basis. Several categories of contract support have been identified in the table below. While some of the categories are self-explanatory, please note that the category "mission support" entails management support, labor service and other mission support contracting efforts, e.g., aircraft maintenance, RDT&E support, technical services in support of aircraft and ships, etc.

Table 3 - Contract Workyears	
Activity Name: NAVAL POSTGRADUATE SCHOOL	**UIC: 62271**
Contract Type	**FY 1996 Estimated Number of Workyears On-Base**
Construction:	85
Facilities Support:	50
Mission Support:	3
Procurement:	0
Other:*	0
Total Workyears:	138

* **Note:** Provide a brief narrative description of the type(s) of contracts, if any, included under the "Other" category.

b. Potential Disposition of On-Base Contract Workyears. If the mission/functions of your activity were relocated to another site, what would be the anticipated disposition of the **on-base contract workyears** identified in Table 3.?

1) Estimated number of contract workyears which would be transferred to the receiving site (This number should reflect the number of jobs which would in the future be contracted for at the receiving site, not an estimate of the number of people who would move or an indication that work would necessarily be done by the same contractor(s)):

85 Construction
3 Mission Support
50 Facilities Support
138 Total

2) Estimated number of workyears which would be eliminated:

-0-

3) Estimated number of contract workyears which would remain in place (i.e., contract would remain in place in current location even if activity were relocated outside of the local area):

-0-

c. "Off-Base" Contract Workyear Data. Are there any contract workyears located in the local community, but not on-base, which would either be eliminated or relocated if your activity were to be closed or relocated? If so, then provide the following information **(ensure that numbers reported below do not double count numbers included in 3.a. and 3.b., above)**:

No. of Additional Contract Workyears Which Would Be Eliminated	General Type of Work Performed on Contract (e.g., engineering support, technical services, etc.)
0.5	Facilities Support Service Contracts (e.g. janitorial)

No. of Additional Contract Workyears Which Would Be Relocated	General Type of Work Performed on Contract (e.g., engineering support, technical services, etc.)
-0-	

BRAC - 95 CERTIFICATION

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained here is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

T. A. MERCER, RADM, USN
NAME (Please type or print)

T A Mercer
Signature

SUPERINTENDENT
Title

7/14/94
Date

NAVAL POSTGRADUATE SCHOOL
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print) _____ Signature _____

Title _____ Date _____

Activity _____

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print) _____ Signature _____

Title _____ Date _____

Activity _____

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

Mr. Robert W. Thornett
NAME (Please type or print) Signature

Director 7/22/94
Title Date

Field Support Activity
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

J. B. GREENE, JR.
NAME (Please type or print) Signature

ACTING
Title

15 AUG 1994
Date

Document Separator

234 R

DATA CALL 64

CONSTRUCTION COST AVOIDANCES

Table 1: Military Construction (MILCON) Projects (Excluding Family Housing Construction Projects)

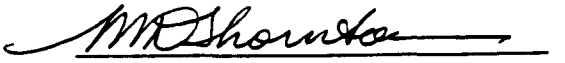
Installation Name:	**MONTEREY CA NPGS**
Unit Identification Code (UIC):	**N62271**
Major Claimant:	**CNO**

Project FY	Project No.	Description	Appn	Project Cost Avoid ($000)
1997	151	GYMNASIUM	MCON	4,110
		Sub-Total - 1997		**4,110**
1999	129	BOQ CONVER & SEISMIC UPGR	MCON	7,300
		Sub-Total - 1999		**7,300**
2001	152	ACADEMIC BLDG ALTERATIONS	MCON	7,770
2001	155	BOQ SEISMIC UPGRADE	MCON	3,800
		Sub-Total - 2001		**11,570**
		Grand Total		**22,980**

BRAC-95 CERTIFICATION

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MICHAEL D. THORNTON
NAME (Please type or print)


Signature

CDR, CEC, USN
Title

9 Dec 94
Date

MILCON PROGRAMMING DIVISION
Division

NAVAL FACILITIES ENGINEERING COMMAND
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

J. E. BUFFINGTON, RADM, CEC, USN
NAME (Please type or print)

Signature

COMMANDER
Title

12/9/94
Date

NAVAL FACILITIES ENGINEERING COMMAND
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER

NAME (Please type or print)

Signature

Title

12/9/94
Date

Document Separator

DATA CALL 64
CONSTRUCTION COST AVOIDANCES

R

Table 2: Family Housing Construction Projects

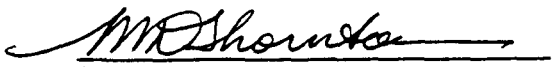
Installation Name:	**MONTEREY CA NPGS**
Unit Identification Code (UIC):	**N62271**
Major Claimant:	**CNO**

Project FY	Project No.	Description	Appn	Project Cost Avoid ($000)
1998	H342	COMMUNITY CENTER	FHSG	1,690
		Sub-Total - 1998		**1,690**
		Grand Total		**1,690**

BRAC-95 CERTIFICATION

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MICHAEL D. THORNTON
NAME (Please type or print)


Signature

CDR, CEC, USN
Title

9 Dec 94
Date

MILCON PROGRAMMING DIVISION
Division

NAVAL FACILITIES ENGINEERING COMMAND
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

J. E. BUFFINGTON, RADM, CEC, USN
NAME (Please type or print)

Signature

COMMANDER
Title

12/9/94
Date

NAVAL FACILITIES ENGINEERING COMMAND
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER
NAME (Please type or print)

Signature

Title

12/7/94
Date

Document Separator

DATA CALL 64

CONSTRUCTION COST AVOIDANCES

Table 1: Military Construction (MILCON) Projects (Excluding Family Housing Construction Projects)

Installation Name:	**MONTEREY CA NPGS**
Unit Identification Code (UIC):	**N62271** #234
Major Claimant:	**CNO**

Project FY	Project No.	Description	Appn	Project Cost Avoid ($000)
1997	151	GYMNASIUM	MCON	4,110
		Sub-Total - 1997		**4,110**
1999	129	BOQ CONVER & SEISMIC UPGR	MCON	7,300
		Sub-Total - 1999		**7,300**
2000	142	CHAPEL	MCON	4,160
		Sub-Total - 2000		**4,160**
2001	152	ACADEMIC BLDG ALTERATIONS	MCON	7,770
2001	155	BOQ SEISMIC UPGRADE	MCON	3,800
		Sub-Total - 2001		**11,570**
		Grand Total		**27,140**

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

J. E. BUFFINGTON, RADM, CEC, USN
NAME (Please type or print)

Jack E Buffington
Signature

7/13/94
Date

COMMANDER
Title

NAVAL FACILITIES ENGINEERING COMMAND
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER

NAME (Please type or print)

W A Earner
Signature

7/18/94
Date

Title

BRAC-95 CERTIFICATION

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MARK E. DONALDSON
NAME (Please type or print)

Signature

CDR, CEC, USN
Title

12 July 1994
Date

MILCON PROGRAMMING DIVISION
Division

FACILITIES PROGRAMMING AND CONSTRUCTION DIRECTORATE
Department

NAVAL FACILITIES ENGINEERING COMMAND
Activity

Enclosure (1)

BRAC DATA CALL NUMBER 64
CONSTRUCTION COST AVOIDANCE

Information on cost avoidance which could be realized as the result of cancellation of on-going or programmed construction projects is provided in Tables 1 (MILCON) and 2 (FAMILY HOUSING). These tables list MILCON/FAMILY HOUSING projects which fall within the following categories:

1. all programmed construction projects included in the FY1996 - 2001 MILCON/FAMILY HOUSING Project List,

2. all programmed projects from FY1995 or earlier for which cost avoidance could still be obtained if the project were to be canceled by 1 OCT 1995, and,

3. all programmed BRAC MILCON/FAMILY HOUSING projects for which cost avoidance could still be obtained if the project were to be canceled by 1 OCT 1995.

Projects listed in Tables 1 and 2 with potential cost avoidance were determined as meeting any one of the following criteria:

Projects with projected Work in Place (WIP) less than 75% of the Current Working Estimate (CWE) as of 1 OCT 1995 .

Projects with projected completion dates or Beneficial Occupancy Dates subsequent to 31 March 1996.

Projects with projected CWE amount greater than $15M.

The estimated cost avoidance for projects terminated after construction award would be approximately one-half of the CWE for the remaining work. Close-out, claims and other termination costs can consume the other half.

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DATA CALL 64
CONSTRUCTION COST AVOIDANCES

Table 2: Family Housing Construction Projects

Installation Name:	**MONTEREY CA NPGS**
Unit Identification Code (UIC):	**N62271** #234
Major Claimant:	**CNO**

Project FY	Project No.	Description	Appn	Project Cost Avoid ($000)
1998	H342	COMMUNITY CENTER	FHSG	1,690
		Sub-Total - 1998		**1,690**
		Grand Total		**1,690**

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

J. E. BUFFINGTON, RADM, CEC, USN
NAME (Please type or print)

Signature

COMMANDER
Title

7/13/94
Date

NAVAL FACILITIES ENGINEERING COMMAND
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER

NAME (Please type or print)

Signature

Title

7/18/94
Date

BRAC-95 CERTIFICATION

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MARK E. DONALDSON
NAME (Please type or print)

Signature

CDR, CEC, USN
Title

12 July 1994
Date

MILCON PROGRAMMING DIVISION
Division

FACILITIES PROGRAMMING AND CONSTRUCTION DIRECTORATE
Department

NAVAL FACILITIES ENGINEERING COMMAND
Activity

Enclosure (1)

BRAC DATA CALL NUMBER 64
CONSTRUCTION COST AVOIDANCE

Information on cost avoidance which could be realized as the result of cancellation of on-going or programmed construction projects is provided in Tables 1 (MILCON) and 2 (FAMILY HOUSING). These tables list MILCON/FAMILY HOUSING projects which fall within the following categories:

1. all programmed construction projects included in the FY1996 - 2001 MILCON/FAMILY HOUSING Project List,

2. all programmed projects from FY1995 or earlier for which cost avoidance could still be obtained if the project were to be canceled by 1 OCT 1995, and,

3. all programmed BRAC MILCON/FAMILY HOUSING projects for which cost avoidance could still be obtained if the project were to be canceled by 1 OCT 1995.

Projects listed in Tables 1 and 2 with potential cost avoidance were determined as meeting any one of the following criteria:

Projects with projected Work in Place (WIP) less than 75% of the Current Working Estimate (CWE) as of 1 OCT 1995 .

Projects with projected completion dates or Beneficial Occupancy Dates subsequent to 31 March 1996.

Projects with projected CWE amount greater than $15M.

The estimated cost avoidance for projects terminated after construction award would be approximately one-half of the CWE for the remaining work. Close-out, claims and other termination costs can consume the other half.

Document Separator

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BRAC DATA CALL #33

NAVAL POSTGRADUATE SCHOOL

MONTEREY, CA

BRAC 1995 ENVIRONMENTAL DATA CALL:
All Navy/Marine Corps Host Activities

INDEX

ENVIRONMENTAL DATA CALL

Responses to the following questions provide data that will allow an assessment of the potential environmental impact associated with the closure or realignment of a Navy shore activity. This criterion consists of:

- Endangered/Threatened Species and Biological Habitat
- Wetlands
- Cultural Resources
- Environmental Facilities
- Air Pollution
- Environmental Compliance
- Installation Restoration
- Land/Air/Water Use

As part of the answers to these questions, a *source citation* (e.g., 1993 base loading, 1993 base-wide Endangered Species Survey, 1993 letter from USFWS, 1993 Base Master Plan, 1993 Permit Application, 1993 PA/SI, etc.) must be included. It is probable that, at some point in the future, you will be asked to provide additional information detailing specifics of individual characteristics. In anticipation of this request, supporting documentation (e.g., maps, reports, letters, etc.) regarding answers to these questions should be retained. Information needed to answer these questions is available from the cognizant EFD Planning and Real Estate Divisions, and Environment, Safety, and Health Divisions; and from the activity Public Works Department, and activity Health Monitoring and Safety Offices.

For purposes of the questions associated with land use at your base is *defined* as *land* (acreage owned, withdrawn, leased, and controlled through easements); *air* (space controlled through agreements with the FAA, e.g., MOAs); *and water* (navigation channels and waters along a base shoreline) *under the control of the Navy.*

Provide a list of tenant activities with UICs that are covered in this response.

See attachment (4).

1. ENDANGERED/THREATENED SPECIES AND BIOLOGICAL HABITAT

1a. For federal or state listed endangered, threatened, or category 1 plant and/or animal species on your base, complete the following table. Critical/sensitive habitats for these species are designated by the U. S. Fish and Wildlife Service (USFWS). A species is present on your base if some part of its life-cycle occurs on Navy controlled property (e.g., nesting, feeding, loafing). Important Habitat refers to that number of acres of habitat that is important to some life cycle stage of the threatened/endangered species that is not formally designated.

SPECIES (plant or animal)	Designation (Threatened/ Endangered)	Federal/ State	Critical/ Designated Habitat (Acres)	Important Habitat (acres)
example: Haliaeetus leucocephalus - bald eagle	*threatened*	*Federal*	*25*	*0*
Euphilotes enoptes smithi Smith's Blue Butter fly	Endangered	Federal State	55	30
Anniella pulchra nigra California Black Legless Lizard	Candidate Endangered	Federal State	55	30
Arctostaphylos hookeri Hooker's Manzanita	Special Status Plant	Federal State	116	10
Arctostaphylos pumila Sandmat Manzanita	Special Status Plant	Federal State	116	10
Chorizanthe pungens Monterey Spineflower	Candidate Endangered	Federal State	116	10
Piperia yadonii Pacific Grove Rein Orchid	Proposed Endangered	Federal State	116	10
Gilia tenuiflora Dune Gilia	Proposed Endangered	Federal State	55	20
Erysium menziesii Menzies' Wallflower	Proposed Endangered	Federal State	55	20

Source Citation: Naval Postgraduate School:
Natural Resources Management Plan, 1988
Categorical Exclusion Dunes Restoration, Feb 92
Sensitive Plant Species Survey, Aug 93

1b.

Have your base operations or development plans been constrained due to: - USFWS or National Marine Fisheries Service (NMFS)? - State required modifications or constraints? If so, identify below the impact of the constraints including any restrictions on land use.	NO
Are there any requirements resulting from species not residing on base, but which migrate or are present nearby? If so, summarize the impact of such constraints.	NO

1c. If the area of the habitat and the associated species have not been identified on base maps provided in Data Call 1, submit this information on an updated version of Data Call 1 map.

ANSWER: **See maps provided as enclosures (2) and (3).**

1d.

Have any efforts been made to relocate any species and/or conduct any mitigation with regards to critical habitats or endangered/threatened species? Explain what has been done and why.	NO

1e.

Will any state or local laws and/or regulations applying to endangered/threatened species which have been enacted or promulgated but not yet effected, constrain base operations or development plans beyond those already identified? Explain.	NO

2. WETLANDS

Note: Jurisdictional wetlands are those areas that meet the wetland definitional criteria detailed in the Corps of Engineers (COE) Wetland Delineation Manual, 1987, Technical Report Y-87-1, U.S. Army Engineer Waterway Experiment Station, Vicksburg, MS or officially adapted state definitions.

2a.

Does your base possess federal jurisdictional wetlands?	YES
Has a wetlands survey in accordance with established standards been conducted for your base?	YES
When was the survey conducted or when will it be conducted?	06/10/93
What percent of the base has been surveyed?	100%
What is the total acreage of jurisdictional wetlands present on your base?	16

Source Citation: Survey and maps by GEONEX under contract to WESTDIVNAVFACENGCOM.

2b. If the area of the wetlands has not been identified on base maps provided in Data Call 1, submit this on an updated version of Data Call 1 map.

ANSWER: **Wetlands Survey Final Report and Maps due 30 Sept 94.**

2c. Has the EPA, COE or a state wetland regulatory agency required you to modify or constrain base operations or development plans in any way in order to accommodate a jurisdictional wetland? ****NO**** If YES, summarize the results of such modifications or constraints.

3. CULTURAL RESOURCES

3a.

Has a survey been conducted to determine historic sites, structures, districts or archaeological resources which are listed, or determined eligible for listing, on the National Register of Historic Places? If so, list the sites below.	YES

ANSWER: **A survey of the Main Station was completed and a historic district was identified to the State Historic Preservation Office. The historic district has not yet been nominated to the National Register.**

3b.
YES/NO

Has the President's Advisory Council on Historic Preservation or the cognizant State Historic Preservation Officer required you to mitigate or constrain base operations or development plans in any way in order to accommodate a National Register cultural resource? If YES, list the results of such modifications or constraints below.	NO

3c.

Are there any on base areas identified as sacred areas or burial sites by Native Americans or others? List below.	YES

ANSWER: **Potential burial sites are located on the Main Station and the Research Area.**

4. ENVIRONMENTAL FACILITIES

Notes: If your facility is permitted for less than maximum capacity, state the maximum capacity and explain below the associated table why it is not permitted for maximum capacity. Under "Permit Status" state when the permit expires, and whether the facility is operating under a waiver. For permit violations, limit the list to the last 5 years.

4a.

Does your base have an operating landfill?					NO
ID/Location of Landfill	Permitted Capacity (CYD)		Maximum Capacity (CYD)	Contents[1]	Permit Status
	TOTAL	Remaining			

[1] Contents (e.g. building demolition, asbestos, sanitary debris, etc)

Are there any current or programmed projects to correct deficiencies or improve the facility?

N/A

4b. If there are any non-Navy users of the landfill, describe the user and conditions/agreements.

N/A

4c.

Does your base have any disposal, recycling, or incineration facilities for solid waste?					NO
Facility/Type of Operation	**Permitted Capacity**	**Ave Daily Throughput**	**Maximum Capacity**	**Permit Status**	**Comments**

List any permit violations and projects to correct deficiencies or improve the facility.

4d.

Does your base own/operate a Domestic Wastewater Treatment Plant (WWTP) ?					NO
ID/Location of WWTP	**Permitted Capacity**	**Ave Daily Discharge Rate**	**Maximum Capacity**	**Permit Status**	**Level of Treatment/Year Built**

List permit violations and discuss any projects to correct deficiencies.

4e. If you do not have a domestic WWTP, describe the average discharge rate of your base to the local sanitary sewer authority, discharge limits set by the sanitary sewer authority (flow and pollutants) and whether the base is in compliance with their permit. Discuss recurring discharge violations.

ANSWER:
Average daily discharge: **.36 MGD (for main station and LaMesa)**
Maximum capacity: **1.45 MGD (same as daily)**

REVISED 7/94

Limits set by the sanitary sewer authority: **None**
Base is in compliance with their permit. **Yes**
Annual inspections have revealed no deficiencies or violations.

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4b. If there are any non-Navy users of the landfill, describe the user and conditions/agreements.

N/A

4c.

Does your base have any disposal, recycling, or incineration facilities for solid waste?					NO
Facility/Type of Operation	**Permitted Capacity**	**Ave Daily Throughput**	**Maximum Capacity**	**Permit Status**	**Comments**

List any permit violations and projects to correct deficiencies or improve the facility.

4d.

Does your base own/operate a Domestic Wastewater Treatment Plant (WWTP) ?					NO
ID/Location of WWTP	**Permitted Capacity**	**Ave Daily Discharge Rate**	**Maximum Capacity**	**Permit Status**	**Level of Treatment/Year Built**

List permit violations and discuss any projects to correct deficiencies.

4e. If you do not have a domestic WWTP, describe the average discharge rate of your base to the local sanitary sewer authority, discharge limits set by the sanitary sewer authority (flow and pollutants) and whether the base is in compliance with their permit. Discuss recurring discharge violations.

ANSWER: **Sanitary sewer fees are based on 80% of December potable water usage. Annual inspections have revealed no deficiencies or violations.**

4f.

Does your base operate an Industrial Waste Treatment Plant (IWTP)?					NO
ID/Location of IWTP	Type of Treatment	Permitted Capacity	Ave Daily Discharge Rate	Maximum Capacity	Permit Status

List any permit violations and projects to correct deficiencies or improve the facility.

4g. Are there other waste treatment flows not accounted for in the previous tables? Estimate capacity and describe the system.

ANSWER: **State permitted silver recovery unit at Photo Lab (Bldg 200). All waste photographic solutions are disposed of as hazardous waste.**

4h.

Does your base operate drinking Water Treatment Plants (WTP)?					YES
ID/Location of WTP	Operating (GPD)		Method of Treatment	Maximum Capacity	Permit Status
	Permitted Capacity	Daily Rate			
La Mesa Village Permit# 27-703	NA	0.3 MGPD	Fluoridation	1.4 MGD	ACTIVE

List permit violations and projects/actions to correct deficiencies or improve the facility.

ANSWER: **Future projects include:**

(a) Repair of steel above ground water storage tanks
(b) Removal of emergency water pump fuel storage tank
(c) Installation of backflow prevention devices
(d) Construction of additional water storage tank

4i. If you do not operate a WTP, what is the source of the base potable water supply. State terms and limits on capacity in the agreement/contract, if applicable.

ANSWER: **NPS purchases water from the California American Water Company. NPS consistently uses less water than allowed under guidelines from the Monterey County Water Resources Control Agency.**

4j.

Does the presence of contaminants or lack of supply of water constrain base operations. Explain.	NO

4k.

Other than those described above does your base hold any NPDES or stormwater permits? If YES, describe permit conditions.	YES
If NO, why not and provide explanation of plan to achieve permitted status.	

ANSWER: **The permit has not yet been issued, but we have identified ourselves as an industrial activity, and we have submitted a California Water Resources Control Board "Notice of Intent" to participate in the state-wide General Stormwater Permit. Conditions outlined by the state are not known at this time; we have been complying within Federal guidelines.**

4l.

Does your base have bilge water discharge problem?	NO
Do you have a bilge water treatment facility?	NO

Explain:

4m.

Will any state or local laws and/or regulations applying to Environmental Facilities, which have been enacted or promulgated but not yet effected, constrain base operations or development plans beyond those already identified? Explain.	NO

4n. What expansion capacity is possible with these Environmental Facilities? Will any expansions/upgrades as a result of BRACON or projects programmed through the Presidents budget through FY1997 result in additional capacity? Explain.

ANSWER: **Fluorination is currently operating at 25% of its capacity.**
Water usage runs between 80-90% of allocation.

4o. Do capacity limitations on any of the facilities discussed in question 4 pose a present or future limitation on base operations? Explain.

NO

5. AIR POLLUTION

5a.

What is the name of the Air Quality Control Areas (AQCAs) in which the base is located? MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT
Is the installation or any of its OLFs or non-contiguous base properties located in different AQCAs? ** NO **. List site, location and name of AQCA.

5b. For each parcel in a separate AQCA fill in the following table. Identify with and "X" whether the status of each regulated pollutant is: attainment/nonattainment/maintenance. For those areas which are in non-attainment, state whether they are: Marginal, Moderate, Serious, Severe, or Extreme. State target attainment year.

Site: NAVAL POSTGRADUATE SCHOOL
AQCA: MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT

Pollutant	Attainment	Non-Attainment	Maintenance	Target Attainment Year[1]	Comments[2]
CO	X				
Ozone		moderate FED/CAL		95/97	NPS IS OK
PM-10		moderate CALIF		NA	NPS IS OK
SO_2	X				
NO_2	X				
Pb	X				

[1] Based on national standard for Non-Attainment areas or SIP for Maintenance areas.

[2] Indicate if attainment is dependent upon BRACON, MILCON or Special Projects. Also indicate if the project is currently programmed within the Presidents FY1997 budget.

ANSWER: **NPS does not emit any pollutant above permitted threshold levels.**

5c. For your base, identify the baseline level of emissions, established in accordance with the Clean Air Act. Baseline information is assumed to be 1990 data or other year as specified. Determine the total level of emissions (tons/yr) for CO, NOx, VOC, PM10 for the general sources listed. For all data provide a list of the sources and show your calculations. Use known emissions data, or emissions derived from use of state methodologies, or identify other sources used. "Other Mobile" sources include such items as ground support equipment.

	Emission Sources (Tons/Year)				
Pollutant	Permitted Stationary	Personal Automobiles	Aircraft Emissions	Other Mobile	Total
CO	NA	NA	NA	NA	
NOx	NA	NA	NA	NA	
VOC	10	NA	NA	NA	10
PM10	NA	NA	NA	NA	

Source Document: Naval Postgraduate School Emission Inventory Report, 1989

5d. For your base, determine the total FY1993 level of emissions (tons/yr) for CO, NOx, VOC, PM10 for the general sources listed. For all data provide a list of the sources and show your calculations. Use known emissions data, or emissions derived from use of state methodologies, or identify other sources used. "Other Mobile" sources include such items as ground support equipment.

	Emissions Sources (Tons/Year)				
Pollutant	Permitted Stationary	Personal Automobiles	Aircraft Emissions	Other Mobile	Total
CO	NA	NA	NA	NA	
NOx	NA	NA	NA	NA	
VOC	9	NA	NA	NA	9
PM10	NA	NA	NA	NA	

Source Document: Naval Postgraduate School Emission Inventory Report, 1991

5e. Provide estimated increases/decreases in air emissions (Tons/Year of CO, NOx, VOC, PM10) expected within the next six years (1995-2001). Either from previous BRAC realignments and/or previously planned downsizing shown in the Presidents FY1997 budget. Explain.

ANSWER: **The largest source of toxic air emissions is the NEX Automobile Service Center. Gasoline sales are expected to remain fairly constant for the foreseeable future.**

5f. Are there any critical air quality regions (i.e. non-attainment areas, national parks, etc.) within 100 miles of the base?

NO

5g. Have any base operations/mission/functions (i.e.: training, R&D, ship movement, aircraft movement, military operations, support functions, vehicle trips per day, etc.) been restricted or delayed due to air quality considerations. Explain the reason for the restriction and the "fix" implemented or planned to correct.

NO

5h. Does your base have Emission Reduction Credits (ERCs) or is it subject to any emission offset requirements? If yes, provide details of the sources affected and conditions of the ERCs and offsets. Is there any potential for getting ERCs?

NO

6. ENVIRONMENTAL COMPLIANCE

6a.
Identify compliance costs, currently known or estimated that are required for permits or other actions required to bring existing practices into compliance with appropriate regulations. Do not include Installation Restoration costs that are covered in Section 7 or recurring costs included in question 6c. For the last two columns provide the combined total for those two FY's.

Program	Survey Com-pleted?	Costs in $K to correct deficiencies					
		FY94	FY95	FY96	FY97	FY98-99	FY00-01
Air	YES	10	NA	NA	NA	NA	NA
Hazardous Waste	YES	20	NA	NA	NA	NA	NA
Safe Drinking Water Act	YES	60	10	NA	NA	NA	NA
PCBs	YES	20	0	0	0	0	0
Other (non-PCB) Toxic Substance Control Act							
Lead Based Paint	NO	30	10	NA	NA	NA	NA
Radon	YES	0	0	0	0	0	0
Clean Water Act	YES	20	100	20	NA	NA	NA
Solid Waste	YES	0	0	0	0	0	0
Oil Pollution Act	YES	0	0	0	0	0	0
USTs	YES	375	200	75	75	0	0
Other							
Total		535	320	95	75	0	0

Provide a separate list of compliance projects in progress or required, with associated cost and estimated start/completion date. **(See attachment 3.)**

6b.
Does your base have structures containing asbestos? **YES**
What % of your base has been surveyed for asbestos? 100%
Are additional surveys planned? **NO**
What is the estimated cost to remediate asbestos ($K) 4,700
Are asbestos survey costs based on encapsulation, removal or a combination of both?

ANSWER: **Primarily removal; chosen as the over all abatement policy due to the age and condition of the asbestos present. Only friable materials are being removed. Nonfriable and enclosed materials are being left intact. They will have to be dealt with during building demolition.**

6c. Provide detailed cost of recurring operational (environmental) compliance costs, with funding source.

Funding Source	FY92	FY93	FY94	FY95	FY96	FY97	FY98-99	FY00-01
O&MN								
HA	199	0	0	NA	NA	NA	NA	NA
PA	109	1839	754	2300	NA	NA	NA	NA
Other (specify) HAZMIN	0	0	12					
TOTAL								

6d. Are there any compliance issues/requirements that have impacted operations and/or development plans at your base.

NO

7. INSTALLATION RESTORATION

7a.

Does your base have any sites that are contaminated with hazardous substances or petroleum products?	YES
Is your base an NPL site or proposed NPL site?	NO

7b. Provide the following information about your Installation Restoration (IR) program. Project list may be provided in separate table format. Note: List only projects eligible for funding under the Defense Environmental Restoration Account (DERA). Do not include UST compliance projects properly listed in section VI.

Site # or name	Type site [1]	Groundwater Contaminated?	Extends off base?	Drinking Water Source?	Cost to Complete ($M)/Est. Compl. Date	Status[2]/Comments
B704	UST	NO	NO	NO	40K AUG 94	RI
B348	UST	YES	NO	NO	400K SEPT 96	RA

[1] Type site: CERCLA, 'RCRA corrective action (CA), UST or other (explain)

[2] Status = PA, SI, RI, RD, RA, long term monitoring, etc.

7c. Have any contamination sites been identified for which there is no recognized/accepted remediation process available? List.

NO

7d.

Is there a groundwater treatment system in place?	NO
Is there a groundwater treatment system planned?	NO

State scope and expected length of pump and treat operation.

NA

7e.

Has a RCRA Facilities Assessment been performed for your base?	NO

7f. Does your base operate any conforming storage facilities for handling **hazardous materials**? If YES, describe facility, capacity, restrictions, and permit conditions.

NO

7g. Does your base operate any conforming storage facilities for handling **hazardous waste**? If YES, describe facility, capacity, restrictions, and permit conditions.

NO

7h. Is your base responsible for any non-appropriated fund facilities (exchange, gas station) that require cleanup? If so, describe facility/location and cleanup required/status.

ANSWER: **See 7b. B348 is the NEX Auto Service Center. A UST leak Remedial Investigation is complete. Remedial Action includes tank replacement and removal of contaminated soil. Monitoring of wells will continue for at least two years.**

7i.

Do the results of any radiological surveys conducted indicate limitations on future land use? Explain below.	NO

7j. Have any base operations or development plans been restricted due to Installation Restoration considerations?

NO

7k. List any other hazardous waste treatment or disposal facilities not included in question 7b. above. Include capacity, restrictions and permit conditions?

NONE

8. LAND / AIR / WATER USE

8a. List the acreage of each real estate component controlled or managed by your base (e.g., Main Base - 1,200 acres, Outlying Field - 200 acres, Remote Range - 1,000 acres, remote antenna site - 5 acres, Off-Base Housing Area - 25 acres).

Parcel Descriptor	Acres	Location
MAIN STATION	135	MONTEREY, CA
LA MESA VILLAGE HOUSING	301	MONTEREY, CA
ANNEX	23	MONTEREY, CA
LAB/REC	101	MONTEREY, CA
RESEARCH	55	MONTEREY, CA

8b. Provide the acreage of the land use categories listed in the table below:

LAND USE CATEGORY		ACRES
Total Developed: (administration, operational, housing, recreational, training, etc.)		**176**
Total Undeveloped (areas that are left in their natural state but are under specific environmental development constraints, i.e.: wetlands, endangered species, etc.)		Wetlands: **16**
		All Others: **50**
Total Undeveloped land considered to be without development constraints, but which may have operational/man caused constraints (i.e.: HERO, HERF, HERP, ESQD, AICUZ, etc.) TOTAL		**0**
Total Undeveloped land considered to be without development constraints		**80**
Total Off-base lands held for easements/lease for specific purposes		
Breakout of undeveloped, restricted areas. Some restricted areas may overlap:	ESQD	
	HERF	
	HERP	
	HERO	
	AICUZ	
	Airfield Safety Criteria	
	Other	

8c. How many acres on your base (includes off base sites) are dedicated for training purposes (e.g., vehicular, earth moving, mobilization)? This does not include buildings or interior small arms ranges used for training purposes.

NONE

8d. What is the date of your last AICUZ update? **N/A** Are any waivers of airfield safety criteria in effect on your base? ** N/A **. Summarize the conditions of the waivers below.

8e. List the off-base land use *types* (e.g, residential, industrial, agricultural) and *acreage* within Noise Zones 2 & 3 generated by your flight operations and whether it is compatible/incompatible with AICUZ guidelines on land use.

Acreage/Location/ID	Zones 2 or 3	Land Use	Compatible/ Incompatible
NA			

8f. List the navigational channels and berthing areas controlled by your base which require maintenance dredging? Include the frequency, volume, current project depth, and costs of the maintenance requirement.

Navigational Channels/ Berthing Areas	Location / Description	Maintenance Dredging Requirement			
		Frequency	Volume (MCY)	Current Project Depth (FT)	Cost ($M)
NA					

8g.
Summarize planned projects through FY 1997 requiring **new channel or berthing area** dredged depths, include location, volume and depth.

NA

8h.

Are there available **designated dredge disposal areas** for maintenance dredging material? List location, remaining capacity, and future limitations.	NA
Are there available **designated dredge disposal areas** for new dredge material? List location, remaining capacity, and future limitations.	NA
Are the dredged materials considered contaminated? List known contaminants.	NA

8i. List any requirements or constraints resulting from consistency with **State Coastal Zone Management Plans.**

ANSWER: Compliance with State Coastal Zone Management Plans does not significantly restrict or restrain the NPS mission.

8j. Describe any **non-point source pollution problems affecting water quality ,e.g.:** coastal erosion.

ANSWER: Parking lot run off is the single largest non-point source pollution problem. Beach erosion is a minor problem during severe winter storms.

8k.

If the base has a cooperative agreement with the US Fish and Wildlife Service and/or the State Fish and Game Department for conducting a hunting and fishing program, does the agreement or these resources constrain either current or future operations or activities? Explain the nature and extent of restrictions.	NO

8l. List any other areas on your base which are indicated as protected or preserved habitat other than threatened/endangered species that have been listed in Section 1. List the species, whether or not treated, and the acres protected/preserved.

NA

9. WRAPUP

9a. Are there **existing or potential environmental showstoppers** that have affected or will affect the accomplishment of the installation mission that have not been covered in the previous 8 questions?

NO

9b. Are there any **other environmental permits** required for base operations, include any relating to industrial operations.

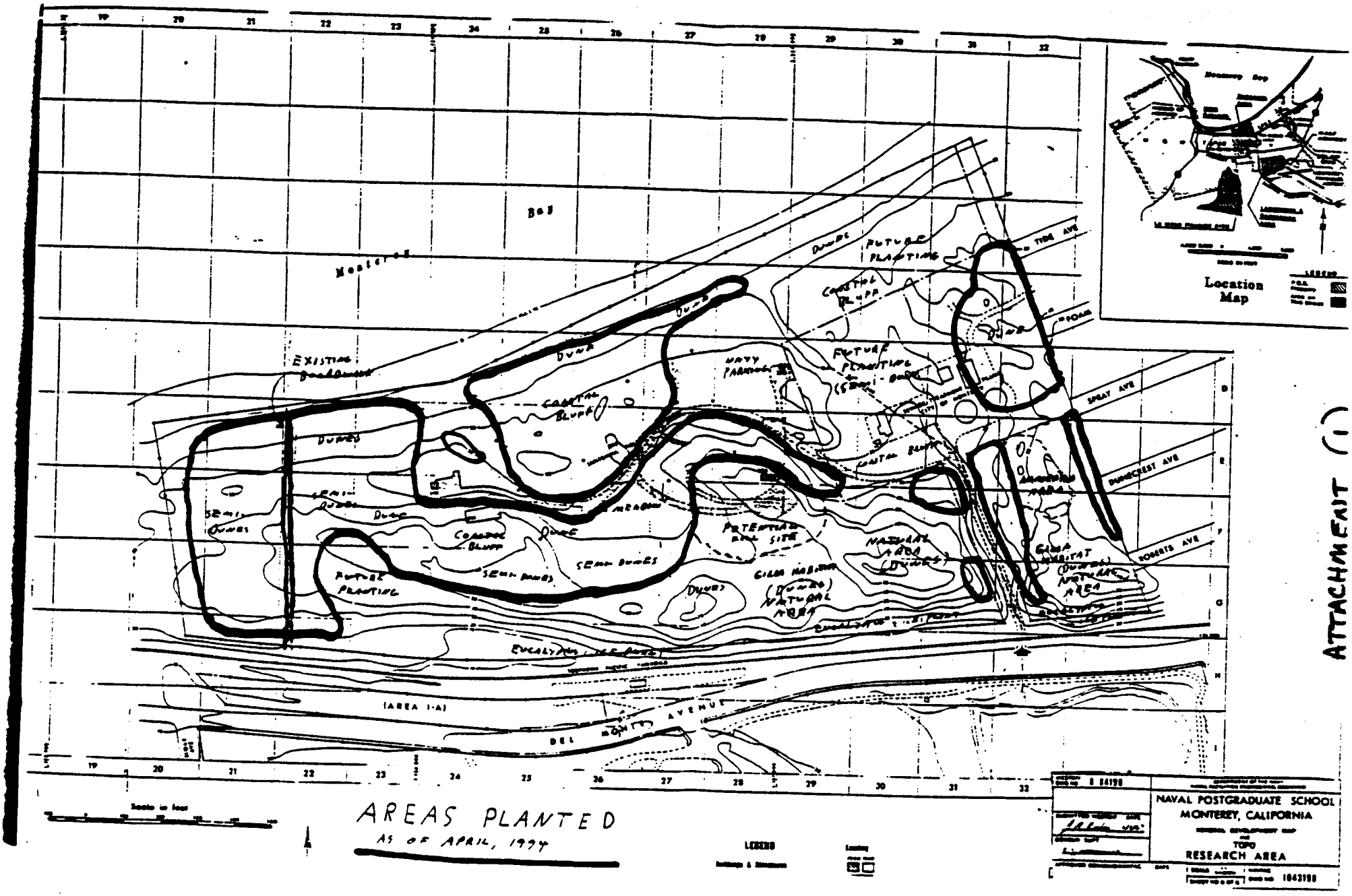
NO

9c. Describe any **other environmental or encroachment restrictions** on base property not covered in the previous 8 sections.

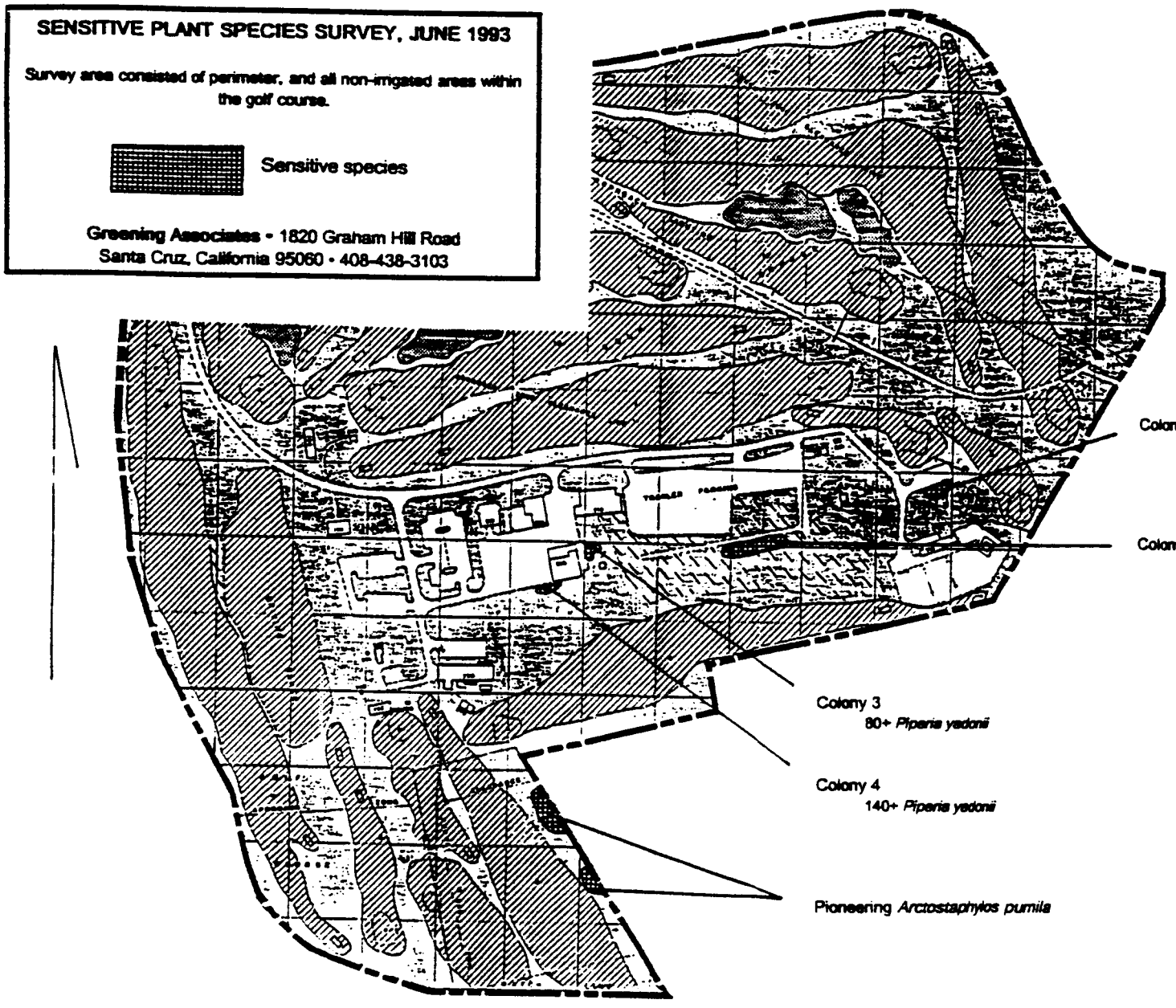
NONE

9d. List **any future/proposed laws/regulations or any proposed laws/regulations** which will constrain base operations or development plans in any way. Explain.

NONE



ATTACHMENT (1)



Laboratory and Recreational Area

NATURAL RESOURCE MANAGEMENT PLAN MAP

ATTACHMENT (2)

NAVAL POSTGRADUATE SCHOOL MONTEREY

ENVIRONMENTAL COMPLIANCE

PROGRAM	PROJECT	STATUS/COMPLETE
Air	Gas meters for boilers at Bldg 700	21 JUN 94
Hazardous Waste	Install monitoring wells at Bldg 348	1 JAN 95
Safe Drinking Water Act	Install backflow protection devices	Complete
PCB	Remove/dispose of last transformer	Complete
Lead Paint	Purchase survey instrument/training	1 OCT 94
Clean Water Act	Stormwater compliance	1 JAN 97
UST	Tank replacement	31 DEC 98

Attachment (3)

ENVIRONMENTAL DATA CALL

TENANT COMMAND NAME	UIC
NAVY DENTAL CLINIC	35728
NAVY CRIMINAL INVESTIGATIVE SERVICE	42955
PERSONNEL SUPPORT DETACHMENT	43073
DEFENSE BUSINESS MGMT UNIVERSITY DET	49567
TRAINING/DOCTRINE ANALYSIS COMMAND	4AE01
NAVAL FACILITIES ENGINEERING COMMAND	62474
NAVAL RESALE ACTIVITY	66288
DEFENSE INVESTIGATIVE SERVICE	68190
DEFENSE PRINTING/PUBLICATION SERVICE	43642
NAVRESSECGRU-220SF	88694
NTIC-0820	88686
DEFENSE RESOURCES MANAGEMENT INSTITUTE	62271
FLEET NUMERICAL METEOROLOGY AND OCEANOGRAPHY CENTER	63134
NAVY RESEARCH LABORATORY	66856
NAVY TELECOMMUNICATIONS CENTER	68067

ATTACHMENT (4)

BRAC-95 CERTIFICATION

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

T. A. MERCER
NAME (Please type of print)

T A Mercer
Signature

Superintendent
Title
Naval Postgraduate School
Monterey, CA
Activity

1 June 1994
Date

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print

Signature

Title

Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type of print

Signature

Title

Date

Activity

In certify that the information herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

ROBERT W. THORNETT

NAME (Please type or print

Signature

Director

Title

7 June 1994

Date

Field Support Activity

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

P.W. DRENNON

NAME (Please type of print

Signature

ACTIVE

Title

6/24/94

Date

R

BRAC - 95 CERTIFICATION
DATA CALL #33

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained here is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

THOMAS A. MERCER
NAME (Please type or print)

Thomas A. Mercer
Signature

SUPERINTENDENT
Title

12/16/94
Date

NAVAL POSTGRADUATE SCHOOL
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print) _____ Signature _____

Title _____ Date _____

Activity _____

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print) _____ Signature _____

Title _____ Date _____

Activity _____

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

Mr. Robert W. Thornett
NAME (Please type or print) Signature

Director
Title 12/20/94
Date

Field Support Activity
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER
NAME (Please type or print) Signature

Title 1/5/95
Date

Document Separator

234

BRAC DATA CALL #23

NAVAL POSTGRADUATE SCHOOL

MONTEREY, CA

MILITARY VALUE ANALYSIS:
DATA CALL WORK SHEET FOR
TRAINING CENTER/SCHOOL: NAVAL POSTGRADUATE SCHOOL

Category ..... Education and Training
Subcategory ..... Training Centers and Schools
Types ..... Navy and Marine Corps Training Centers and Navy Schools

*********If any responses are classified, attach a separate classified annex*********

June 2, 1994

UIC: 62271

NAVY TRAINING CENTERS AND SCHOOLS LISTING:

Type	Title	Location
School	U.S. Naval Academy	Annapolis, MD
School	Naval War College	Newport, RI
School	Naval Postgraduate School	Monterey, CA
School	Surface Warfare Officers School Command	Newport, RI
School	Navy Supply Corps School	Athens, GA
School	Navy Submarine School	New London, CT
Training Center	Naval Education and Training Center	Newport RI
Training Center	Naval Training Center	Great Lakes, IL
Training Center	Trident Training Facility	Bangor, WA
Training Center	Trident Training Facility	Kings Bay, GA
Training Center	Naval Nuclear Power Training Unit	Balston Spa, NY
Training Center	Naval Nuclear Power Training Unit	Idaho Falls, ID
Training Center	Naval Technical Training Center	Corry Station, FL
Training Center	Naval Technical Training Center	Meridian, MS
Training Center	Naval Air Technical Center (Millington)	Pensacola
Training Center	Fleet Combat Training Center, Atlantic	Virginia Beach, VA
Training Center	Fleet Combat Training Center, Pacific	San Diego, CA
Training Center	Naval Amphibious School	Little Creek, VA
Training Center	Naval Amphibious School	Coronado, CA
Training Center	Fleet Training Center	Norfolk, VA
Training Center	Fleet Training Center	Mayport, FL
Training Center	Fleet Training Center	San Diego, CA
Training Center	Fleet Anti-Submarine Warfare Training Center, Atlantic	Norfolk, VA
Training Center	Fleet Anti-Submarine Warfare Training Center, Pacific	San Diego, CA
Training Center	Fleet Mine Warfare Training Center (Charleston)	Ingleside, TX
Training Center	AEGIS Training Center	Dahlgren, Va

MARINE CORPS TRAINING CENTERS LISTING:

Type	Title	Location
Training Center	Marine Corps Combat Development Command	Quantico, Va
Training Center	Marine Corps Air Ground Combat Center	Twentynine Palms, Ca
Training Center	Marine Corps Recruit Depot	Parris Island, SC
Training Center	Marine Corps Recruit Depot	San Diego, Ca

Data for Military Value

Table of Contents

Introduction

1. Purpose. This introduction provides general instructions for replying to this data call; individual questions and footnotes give specific instructions for completion of tables, computations, etc.

2. References

a. Use projected promotion and retention rates and the Base Force Structure as outlined in the JCS Memorandum dated 7 February 1994 re: 1995 Base Realignments and Closures Force Structure Plan to determine future training mission requirements.

b. Refer to the NAVFAC P-72 for Facility Category Code Numbers (CCNs).

c. NAVFAC P-80 provides a discussion of the general nature of each CCN; use it to delineate "types" of facilities that share a common CCN.

d. Refer to NAVFACINST 11010.44E for definition of adequate, substandard, and adequate facilities.

e. Use the DoD Military Training Report FY 1993 definitions of types of training to classify the training and education conducted by the school or training center.

3. Definition of Terms. For purposes of this data call the following apply:

a. A **Formal School** is an activity that sponsors one or more programmed courses of instruction (i.e. Chaplain's School, Service Schools Command, Weapons Training Battalion).

b. A **Course of Instruction** (i.e. Boiler Technician "A," Scout Sniper Instructor) comprises one or more individual contact periods (classes).

c. A **Combined Arms Exercise** (CAX) is training that units are programmed to undergo at the Marine Corps Air Ground Combat Center, Twentynine Palms, CA.

d. An **Educational Institution** is an activity that grants either an undergraduate or postgraduate degree(s) (i.e. U.S. Naval Academy).

e. A **Degree** requires the completion of an established curriculum.

f. A **Curriculum** comprises one or more courses of instruction.

g. A **Facility** is a space (e.g. a room), a defined area (e.g. a range), a structure (e.g. a building), or a structure other than a building (e.g. an obstacle course); it is possible for a building to house one or more facilities of different types.

Introduction (Cont.)

h. **Recruit Training** is training upon initial enlistment or induction which provides a general indoctrination to the service, teaches skills and knowledge in basic military subjects, and prepares the recruit for early adjustment to military life. For the Navy, this is Class "R" training.

i. **Officer Acquisition Training** consists of training and education programs leading to a commission. For the Marine Corps, this includes the Marine Enlisted Commissioning Education Program (MECEP); for the Navy, this is class "P" training.

j. **Apprentice Training** is fundamental training in one of four basic skills areas (Seaman, Fireman, Airman, Constructionman) that enlisted personnel, who are not yet slated for a rating, receive immediately after recruit training. For the Navy, this is class "AA" training.

k. **Initial Skill Training** includes all formal training following recruit training or commissioning and leading toward the award of a military occupational specialty (MOS) or rating at the lowest level. For the Navy, this includes all class "A" training (except "AA") and class "M" (subcategories "M3" and "M4" only) training.

l. **Skill Progression Training** is training servicemembers receive after initial skill training, and normally after having gained experience though actual work in their specialty, through which is gained the knowledge to perform at higher skill levels, in a supervisory position, and to assume increased responsibilities. For the Navy, this is class "C", "G" and "M" (subcategories "M1" and "M2" only) training.

m. **Functional Training** is training in subject areas that cut across the scope of MOSs/ratings and provides additional required skills with out changing the servicemembers primary specialty or skill level. For the Navy, this is class "F" training.

n. **Team Training** provides team functional skill training to increase proficiency required by Fleet or Type Commanders. For the Navy, this includes class "T" training.

o. **Professional Development Education** (PDE) provides training and education to career military personnel, enlisted and officer, to prepare them to perform increasingly complex responsibilities as they progress in their military careers. PDE may or may not lead to an academic degree. For the Navy, this is class "D" and "E" training.

4. Coordinating Instructions

a. Enter the primary UIC *of the data call respondent* (identified in the preceding listings of Navy and Marine Corps schools and training centers) and the page number at the bottom of each page of the response; ensure that additional pages created include this identifier.

b. Where information about current facilities available is requested, include MILCON projects that are not BRAC related, which have been authorized and appropriated and for which contracts are to be awarded by 30 September 1994; *do not* include projects submitted in the FY 95

Introduction (Cont.)

Presidential Budget. Proposed MILCON projects in support of previous BRAC decisions should be included in response by gaining activities.

c. If any of the information requested is subject to change between now and the end of Fiscal Year 2001 due to known redesignations, realignments/closures or other action, provide current and projected data and so annotate.

d. Use the codes listed below to respond to questions where the "Type of Training" is requested.

Code	Type of Training
RT	Recruit Training
OA	Officer Acquisition Training
AA	Apprentice
IS(E)	Enlisted Initial Skill Training
IS(O)	Officer Initial Skill Training
SP(E)	Enlisted Skill Progression Training
SP(O)	Officer Skill Progression Training
FE	Enlisted Functional Training
FO	Officer Functional Training
TT	Functional Team Training
PD	Professional Development Education

e. Where "Course Identifier" is requested, educational institutions shall indicate the department and time period concerned (e.g. English/1st Semester, Wargaming Center); formal schools shall use course identification numbers, either CIN or CID; and the Marine Corps Air Ground Combat Center shall indicate CAX types (e.g. USMC BLT, USMCR RLT).

f. Tenant activities of a school or training center that use space must be accounted for under the host UIC for all courses taught and classroom space utilized.

g. Unless specified otherwise, "throughput" figures should include that from all sources (DON, other DoD, active and reserve components, and non-DoD).

h. Use "N/A" to respond to a question and/or table that does not apply; provide the reason(s) why it is not applicable.

Introduction (Cont.)

i. Provide best estimates where projections of future peacetime or mobilization requirements are requested.

j. Delete the examples in bold type (provided in various tables to facilitate understanding on how to present the data requested) in responding to the questions.

Mission Requirements

A. Formal Training

1. Using the below table, indicate the types of training that are currently conducted at your activity/installation (i.e., answer yes or no for each type). For those types of training that are conducted, also give the number of courses taught and the number of students trained during FY 1993. **For CAX's, provide number of types vice number of courses.** Calculate AOB for formal schools and educational institutions using calendar days as follows:

Formal Schools (Students take only one course at a time)

$$AOB = \frac{\text{Sum of (course length x course throughput) for each course}}{365}$$

Educational Institutions (students take multiple courses at one time)

AOB = Daily number of students averaged over 365 days

Naval Postgraduate School

Type of Training	Yes/ No	Student Throughput	# of Courses	AOB
Recruit Training	No			
Officer Acquisition Training	No			
Professional Development Education [1]	Yes	42070	1850	1820
Apprentice Training	No			
Initial Skills Training (E)	No			
Initial Skills Training (O)	No			
Skill Progression Training (E)	No			
Skill Progression Training (O)	Yes	772	4	48
Functional Training (E)	No			
Functional Training (O)[2]	Yes	363	1	39
Functional Team Training (O/E)	No			
CAX	No			

1 Includes 297 for aviation safety squadron commander course. Throughput number is total grades given FY93. Refresher course data incomplete.

2 Aviation safety officer course.

Mission Requirements

A. Formal Training

1. Using the below table, indicate the types of training that are currently conducted at your activity/installation (i.e., answer yes or no for each type). For those types of training that are conducted, also give the number of courses taught and the number of students trained during FY 1993. **For CAX's, provide number of types vice number of courses.** Calculate AOB for formal schools and educational institutions using calendar days as follows:

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Educational Institutions (students take multiple courses at one time)

AOB = Daily number of students averaged over 365 days

Naval Postgraduate School

Type of Training	Yes/ No	Student Throughput	# of Courses	AOB
Recruit Training	No			
Officer Acquisition Training	No			
Professional Development Education [1]	Yes	42070	1850	1920
Apprentice Training	No			
Initial Skills Training (E)	No			
Initial Skills Training (O)	No			
Skill Progression Training (E)	No			
Skill Progression Training (O)	Yes			
Functional Training (E)	No			
Functional Training (O)[2]	Yes	363	1	
Functional Team Training (O/E)	No			
CAX	No			

1 Includes 297 for aviation safety squadron commander course. Throughput number is total grades given FY93. Refresher course data incomplete.

2 Aviation safety officer course.

Mission Requirements (Cont.)
A. Formal Training (Cont.)

Defense Resources Management Institute

Type of Training	Yes/ No	Student Throughput	# of Courses	AOB
Recruit Training				
Officer Acquisition Training				
Professional Development Education	Yes	412	8	41
Apprentice Training				
Initial Skills Training (E)				
Initial Skills Training (O)				
Skill Progression Training (E)				
Skill Progression Training (O)				
Functional Training (E)				
Functional Training (O)				
Functional Team Training (O/E)				
CAX				

Mission Requirements (Cont.)
A. Formal Training (Cont.)

2. Indicate in the table below all types of training that were conducted at your installation at any time during the past ten years (since fiscal year 1984). For those training types that are no longer conducted, give the year when the training ended.

Naval Postgraduate School

Type/Level Training	Yes/No	Year Training Ended
Recruit Training	No	
Officer Acquisition Training	No	
Professional Development Education	Yes	N/A
Apprentice Training	No	
Initial Skills Training (E)	No	
Initial Skills Training (O)	No	
Skill Progression Training (E)	No	
Skill Progression Training (O)	Yes	N/A
Functional Training (E)		
Functional Training (O)	Yes	N/A
Functional Team Training (O/E)		

Mission Requirements (Cont.)
A. Formal Training (Cont.)

Defense Resources Management Institute

Type/Level Training	Yes/No	Year Training Ended
Recruit Training	No	
Officer Acquisition Training	No	
Professional Development Education	Yes	N/A
Apprentice Training	No	
Initial Skills Training (E)	No	
Initial Skills Training (O)	No	
Skill Progression Training (E)	No	
Skill Progression Training (O)	No	
Functional Training (E)	No	
Functional Training (O)	No	
Functional Team Training (O/E)	No	

3. If your command provides undergraduate/graduate degrees answer the following four questions.

(a) Does your activity grant undergraduate degrees? If yes, complete the following table.

Yes, BAs or BSs

Type of Degree	Number of Degrees Awarded		
	FY 1991	FY 1992	FY 1993
BS	2	2	1

Mission Requirements (Cont.)
A. Formal Training (Cont.)

(b) Does your activity grant graduate degrees? If yes, complete the following table.

Type of Degree	Support Subspecialty Billet			Support JPME Billet		
	FY 1991	FY 1992	FY 1993	FY 1991	FY 1992	FY 1993
MA	73	77	101			
MS	864	831	768			
PHD	9	8	13			
Engineer	18	25	19			

(c) What percentage of those enrolled in an undergraduate/graduate degree program did not complete requirements for a degree? Provide the percentage for the past three years.

6.3%

(d) Is there a degree granted at your institution that cannot be obtained elsewhere? If so, provide a list.

Master of Science in Applied Science (Undersea Warfare)
Master of Science in Systems Technology (Command, Control and Communications)
Master of Science in Systems Engineering (Electronic Warfare)
Master of Science in Systems Technology (Space Systems Operations)
Master of Science in Resource Planning and Management for International Defense

Mission Requirements (Cont.)
A. Formal Training (Cont.)

(b) Does your activity grant graduate degrees? If yes, complete the following table.

Type of Degree	Support Subspecialty Billet			Support JPME Billet		
	FY 1991	FY 1992	FY 1993	FY 1991	FY 1992	FY 1993
MA	73	77	101			
MS	864	831	768			
PHD	9	8	13			
Engineer	18	25	19			

(c) What percentage of those enrolled in an undergraduate/graduate degree program did not complete requirements for a degree? Provide the percentage for the past three years.

(d) Is there a degree granted at your institution that cannot be obtained elsewhere? If so, provide a list.

Master of Science in Applied Science (Undersea Warfare)
Master of Science in Systems Technology (Command, Control and Communications)
Master of Science in Systems Engineering (Electronic Warfare)
Master of Science in Systems Technology (Space Systems Operations)
Master of Science in Resource Planning and Management for International Defense

Mission Requirements (Cont.)
A. Formal Training (Cont.)

4. Indicate in the following table by a "y" for yes and a "n" for no each type of school at your command.

School	Enlisted (Y/N)	Officer (Y/N)
Senior Enlisted Academy	N	
Surface Warfare Training	N	N
AEGIS	N	N
Submarine Warfare Training	N	N
Diving and/or Salvage	N	N
Dental	N	N
Chaplain/Religious Programs	N	N
PAO/Journalism/Photography	N	N
Communications	N	N
Oceanography/Aerography	N	N
Aviation/Flight	N	N
Supply/Logistics	N	N
JAG/Legal	N	N
CEC/Seabee	N	N
Medical	N	N
Education	N	N
Cryptology	N	N
Intelligence	N	N
EOD	N	N
General Skills	N	N
Special Warfare	N	N
Music	N	N

Mission Requirements (Cont.)
A. Formal Training (Cont.)

5. Do you have a requirement for teaching classified course work?

YES. At NPS, 17 or 39 degree programs are very dependent upon classified course work/resources and could not be taught without classified access.

If yes answer the following questions.

(a) How many courses do you teach that utilize classified resources?

76 ~~75~~ **course segments at the SECRET level (1418 students) in 1993.**
BP 15 ~~13~~ **course segments in 1993 at the TOP SECRET/SCI (SCIF) level.**
At least 75 segments of SECRET courses will be offered in 1995.
15 ~~17~~ **courses (number of segments not yet known) projected at TOP SECRET/SCI(SCIF) level for 1995;**

(b) Do you have an approved Sensitive Compartmented Information Facility (SCIF)? **YES**
Provide capacity in terms of seats for each SCIF.

It has 30 seats in one classroom. That one classroom will be used to support 24 SCI course segments projected for FY 95. Guest lectures, seminars, conferences, and SCI thesis advising place additional requirements on that classroom. The SCIF also has a 600 square foot reading area which can seat 42.

SCIF INFORMATION.

1 CLASSROOM WITH 30 SEATS — 900 FT^2

BP 1 STUDY ROOM WITH 15 SEATS - 600 FT^2

BP 1300 FT^2 OF OTHER SCIF OFFICES, ENTRYWAY & HALLWAY

BP — REVISED BY LT Ben O. Pier 10/14/94
FLD SUPACT. PER NPS REVISION OF 10/12/94 (DEAN ELSTER)
NAVAUDIT FINDING.

Mission Requirements (Cont.)
A. Formal Training (Cont.)

5. Do you have a requirement for teaching classified course work?

YES. At NPS, 17 or 39 degree programs are very dependent upon classified course work/resources and could not be taught without classified access.

If yes answer the following questions.

(a) How many courses do you teach that utilize classified resources?

75 course segments at the SECRET level (1418 students) in 1993.
13 course segments in 1993 at the TOP SECRET/SCI (SCIF) level.
At least 75 segments of SECRET courses will be offered in 1995.
17 courses (number of segments not yet known) projected at TOP SECRET/SCI(SCIF) level for 1995;

(b) Do you have an approved Sensitive Compartmented Information Facility (SCIF)? **YES**
Provide capacity in terms of seats for each SCIF.

It has 30 seats in one classroom. That one classroom will be used to support 24 SCI course segments projected for FY 95. Guest lectures, seminars, conferences, and SCI thesis advising place additional requirements on that classroom. The SCIF also has a 600 square foot reading area which can seat 42.

Mission Requirements (Cont.)
A. Formal Training (Cont.)

(c) Do you have any secure classrooms/labs (do not include SCIF's)? **YES**
How many? Provide the capacity in terms of seats for each classroom.

The term "secure classroom" is inexact. If the question refers to "strongrooms", NPS has none. SECRET material may be taught, and is taught, in any classroom on campus provided requisite security steps are taken prior to start of the class session. NPS does have secure labs; those are listed below:

Classroom/Lab	Capacity
Radar Systems	35
EW Systems	28
Secure Computing	4
Air/Ocean/OR Tactics	12
JMIE	2
WARLAB	24
Systems Technology	54
Classroom (Focal Point)	36
BMDO Research	2
IJWA	5
Library RRD	33

(d) Do you have secured storage? **YES** Provide square footage.

The SCIF has 267.5 square feet of SCI storage. NPS could use more SCI storage area. NPS has 2657 cubic feet of classified storage containers across campus in rooms such as faculty offices. The 2657 ft^3 are in 1214 drawers that average 1.5 ft^2 each. The Dudley Knox Library has a classified storage area of 2256 square feet.

(e) Are current facilities adequate to support courses that use classified material?

Not at the SCI level. The SCIF was built when primary user was a relatively small intelligence curriculum. Now, many curricula require its support.

The SCI facility serves 523 regular users, four external commands, two reserve units, and SCI needs of visiting conference and seminar attendees. The cramped SCI facility adversely impacts to some degree research, teaching and study. Plans are underway to expand SCI square footage at NPS.

Mission Requirements (Cont.)
A. Formal Training (Cont.)

Space Systems Lab, an internal component of the SCIF, has well defined and immediate requirement for expansion to support class work in Electrical Engineering, Space Systems Engineering, Space Systems Operations, Computer Science and C3 curricula.

As mentioned under paragraph c. above, any classroom on campus can be used to teach SECRET material provided required security steps are fulfilled by the faculty and students.

6. For each type of training conducted by your command, give the number of courses that are currently taught by mobile training teams (MTT), video teletraining (VTT), and at other geographic locations (i.e., correspondence or non-resident programs (Cor/NR)).

Naval Postgraduate School

Type/Level Training	MTT	VTT[a]	Cor/NR
Recruit Training			
Officer Acquisition Training			
Professional Development Education	0	0	1
Apprentice Training			
Initial Skills Training (E)			
Initial Skills Training (O)			
Skill Progression Training (E)			
Skill Progression Training (O)	0	0	0
Functional Training (E)			
Functional Training (O)	0	0	0
Functional Team Training (O/E)			

a. Changes on 05 July 1994 when Distance Learning using interactive video aero engineering instruction begins between Monterey and Arlington, VA.

Mission Requirements (Cont.)
A. Formal Training (Cont.)

Defense Resources Management Institute

Type/Level Training	MTT	VTT	Cor/NR
Recruit Training			
Officer Acquisition Training			
Professional Development Education	2		
Apprentice Training			
Initial Skills Training (E)			
Initial Skills Training (O)			
Skill Progression Training (E)			
Skill Progression Training (O)			
Functional Training (E)			
Functional Training (O)			
Functional Team Training (O/E)			

7. For each type of training conducted by your command give the number of courses that could be taught by mobile training teams (MTT), video teletraining (VTT), and at other geographic locations (i.e., correspondence or non-resident programs (Cor/NR)).

Naval Postgraduate School

Type/Level Training	MTT	VTT	Cor/NR
Recruit Training			
Officer Acquisition Training			
Professional Development Education	1[a]	150[b]	
Apprentice Training			
Initial Skills Training (E)			
Initial Skills Training (O)			
Skill Progression Training (E)			
Skill Progression Training (O)			
Functional Training (E)			
Functional Training (O)			
Functional Team Training (O/E)			

a. Civil Military Relations Course
b. Estimate--lab and classified courses are entirely excluded

Mission Requirements (Cont.)
A. Formal Training (Cont.)

Defense Resources Management Institute

Type/Level Training	MTT	VTT	Cor/NR
Recruit Training			
Officer Acquisition Training			
Professional Development Education	2		
Apprentice Training			
Initial Skills Training (E)			
Initial Skills Training (O)			
Skill Progression Training (E)			
Skill Progression Training (O)			
Functional Training (E)			
Functional Training (O)			
Functional Team Training (O/E)			

8. List the courses taught by your command that require special/unique facilities which are not currently available at any other Navy/Marine Corps facility.

Many NPS courses have associated instructional laboratories which are an integral part of the course. Most such laboratories have been designed to specifically support the course work, and as a result are unique and not available elsewhere. Some of these are computer laboratories which are easier to duplicate, but have configurations of software and network connections to servers and central facilities which are not available elsewhere.

Course Identifier	**Unique/Special Facility Requirements**
AE2015 ENGINEERING DYNAMICS	lab: MICROCOMPUTERS
AE2036 PERFORMANCE, STABILITY	lab: ADV COMPUTING
AE2036 PERFORMANCE, STABILITY	lab: COMPUTER INSTRUCTION
AE2036 PERFORMANCE, STABILITY	lab: MICROCOMPUTERS
AE2042 THERMO-FLUID DYNAMICS	lab: MICROCOMPUTERS
AE2339 AEROSPACE SYS DYNAMICS	lab: CONTROLS
AE2440 INTRO DIGITAL COMPUTN	lab: ADV COMPUTING, COMPUTER INSTRUCTION, MICROCOMPUTERS
AE2801 AERO-LABORATORIES I	lab: FATIGUE

Mission Requirements (Cont.)
A. Formal Training (Cont.)

Course Identifier	Unique/Special Facility Requirements
AE3340 LIN VIB&DYNAMIC STAB	lab: ADV COMPUTING, COMPUTER INSTRUCTION
AE3341 CONTROL:AEROSPACE VEH	lab: ADV COMPUTING, COMPUTER INSTRUCTION
AE3451 AIRCRAFT,MISSL PROPUL	lab: ADV COMPUTING
AE3451 AIRCRAFT,MISSL PROPUL	lab: COMPUTER INSTRUCTION, SATELLITE, SPACE ATT
AE4451 AIRCRAFT ENGINE DESIGN	lab: ADV COMPUTING, COMPUTER INSTRUCTION
AE4505 LASER/PART BEAM TECH	lab: LINEAR ACCELERATOR, LASER DISCHARGE
AE4507 FLUID DYN & HEAT TRFR	lab: ADV COMPUTING
AE4507 FLUID DYN & HEAT TRFR	lab: COMPUTER INSTRUCTION
AE4632 COMPUTER METHODS AERO	lab: ADV COMPUTING, COMPUTER INSTRUCTION
AE4816 DYN FLEX SPACE STRUCT	lab: SPACE ATT
AE4870 DESIGN OF SPACECRAFT	lab: SATELLITE, SPACE ATT
AE4871 SPCECRFT DSGN & INTII	lab: SATELLITE
AE4871 SPCECRFT DSGN & INTII	lab: SPACE ATT
CC4103 C3 SYSTEMS EVALUATION	lab: SYSTEMS TECH
CC4750 MILITARY COMMUNICATIONS NETWORKS	lab: SYSTEMS TECH
CS0101 REFRESH-Lab: SYSTEMS	lab: ACADEMIC COMPUTING
CS2970 STRUCT PROGR W/ADA	lab: MICROCOMPUTER
CS3030 PRIN OPERATING SYSTEMS	lab: VISUAL DATABASE & INTER
CS3111 PRIN PROGRAM LANGUAGE	lab: ACADEMIC COMPUTING
CS3300 DATA STRUCTURES	lab: ACADEMIC COMPUTING, MICROCOMPUTER
CS3310 ARTIFICIAL INTELL	lab: ARTIFICIAL INTELL
CS3320 DATABASE SYSTEMS	lab: MICROCOMPUTER
CS3450 SOFTWARE SYST DESIGN	lab: VISUAL DATABASE & INTER
CS3460 SOFTWARE METHODOLOGY	lab: SOFTWARE ENGINEERING
CS3550 COMP IN COMBAT SYSTEMS	lab: ACADEMIC COMPUTING

Mission Requirements (Cont.)
A. Formal Training (Cont.)

Course Identifier	Unique/Special Facility Requirements
CS4112 OPERATING SYSTEMS	lab: VISUAL DATABASE & INTER
CS4150 PROGRAMG TOOLS/ENVIRON	lab: SOFTWARE ENGINEERING
CS4202 COMPUTER GRAPHICS	lab: GRAPHICS & VIDEO
CS4203 INTERACT COMPUTA SYST	lab: GRAPHICS & VIDEO
CS4310 ADV ARTIFICIAL INTELLG	lab: ARTIFICIAL INTELL
CS4311 EXPERT SYSTEMS	lab: ARTIFICIAL INTELL
CS4311 EXPERT SYSTEMS	lab: ARTIFICIAL INTELL
CS4312 ADVANCED DATABASE SYS	lab: VISUAL DATABASE & INTER
CS4313 ADVANCED ROBOTIC SYS	lab: ARTIFICIAL INTELL
CS4314 SYMBOLIC COMPUTING	lab: ARTIFICIAL INTELL
CS4322 ADV DATABASE SYS TOPIC	lab: VISUAL DATABASE & INTER
CS4450 ADV COMPUTER ARCHITECT	lab: PARALLEL PROCESSING
CS4451 MULTI-PROC/REAL-TIME	lab: PARALLEL PROCESSING
CS4470 COMP GRAPHICS TOPICS	lab: GRAPHICS & VIDEO
CS4471 COMPUTER ANIMATION	lab: GRAPHICS & VIDEO
CS4472 PHYSICALLY BASED MODEL	lab: GRAPHICS & VIDEO
CS4473 VIRTUAL WORLDS SIM SYS	lab: GRAPHICS & VIDEO
CS4500 SOFTWARE ENGINEERING	lab: SOFTWARE ENGINEERING
CS4520 ADV SOFTWARE ENG	lab: SOFTWARE ENGINEERING
CS4530 SOFTWARE ENG ADA	lab: SOFTWARE ENGINEERING
CS4540 SOFTWARE TESTING	lab: SOFTWARE ENGINEERING
CS4601 COMPUTER SECURITY	lab: COMP SYSTEM & SECURITY
CS4602 ADV COMPUTER SECURITY	lab: COMP SYSTEM & SECURITY
CS4920 ADA REAL TIME SOFTWARE	lab: GRAPHICS & VIDEO
CS4920 ADV TOPICS/CS	lab: GRAPHICS & VIDEO
CS4920 COMPUTER INTERFACE DES	lab: GRAPHICS & VIDEO
CS4920 EXP SYS IN ROBOTICS	lab: GRAPHICS & VIDEO
CS4920 HPOS W/KERBEROS	lab: GRAPHICS & VIDEO
CS4920 INTRO TO COMP MGMT	lab: GRAPHICS & VIDEO
CS4920 KERBEROS NETWORK SECUR	lab: GRAPHICS & VIDEO
CS4920 ONLINE HELP SYS DEVEL	lab: GRAPHICS & VIDEO

Mission Requirements (Cont.)
A. Formal Training (Cont.)

Course Identifier	Unique/Special Facility Requirements
CS4920 PARALLEL COMPUTING	lab: GRAPHICS & VIDEO
CS4920 PREDICATE CALCULUS	lab: GRAPHICS & VIDEO
CS4920 SCIENTIFIC VISUALIZATI	lab: GRAPHICS & VIDEO
CS4920 USER INTERFACE DESIGN	lab: GRAPHICS & VIDEO
EC1010 INTRO TO MATLAB	lab: PC/CAD, SERVO/CONTROLS
EC2010 ANL SIGNALS & SYSTEMS	lab: PC/CAD
EC2100 CIRCUIT ANALYSIS I	lab: ELECT & CIRCTS
EC2110 CIRCUIT ANALYSIS II	lab: ELECT & CIRCTS
EC2200 ELEX ENGINEERING I	lab: ELECT & CIRCTS
EC2210 ELEX ENGINEERING II	lab: ELECT & CIRCTS
EC2220 DESIGN ELab: CIRCUITS	lab: ELECT & CIRCTS
EC2300 CONTROL SYSTEMS	lab: SERVO/CONTROLS
EC2500 PRINCIPLES OF COM SYS	lab: COMM (TEACHING)
EC2610 ELECTROMAGNETIC ENGRG	lab: uWAVE/ANTENNAS
EC2650 ACCL REV ELECTROMAG	lab: uWAVE/ANTENNAS
EC2800 INTRO:MICROPROCESSORS	lab: DIGITAL SYSTEMS
EC3210 INTRO ELECTRO-OPT ENG	lab: OPTICAL ELEX
EC3270 POWER ELECTRONICS	lab: POWER ELECTRONICS
EC3310 LINEAR OPTIMAL ESTMATN	lab: SERVO/CONTROLS
EC3550 FIBEROPTIC SYSTEMS	lab: OPTICAL ELEX
EC3600 ELECTROMAG RADIATION	lab: uWAVE/ANTENNAS
EC3610 MICROWAVE CIRCUITS	lab: uWAVE/ANTENNAS
EC3620 MICROWAVE DEVICES	lab: uWAVE/ANTENNAS
EC3640 ELECTRO ENVIRO EFFECTS	lab: SIGNAL ENHANCEMENT LAB
EC3650 COMPUT ELECTROMAG MODL	lab: uWAVE/ANTENNAS
EC3670 PRINS OF RADAR SYSTS	lab: RADAR SYSTEMS
EC3800 MICROPROC SYST DESIGN	lab: DIGITAL SYSTEMS
EC3820 COMPUTER SYSTEMS	lab: VLSI CAE/CAD
EC3830 DIGITAL DESIGN METHOD	lab: VLSI CAE/CAD
EC4320 DES, LINEAR CNTRL SYS	lab: SERVO/CONTROLS
EC4330 NAVIGATN,MISL&AVIONICS	lab: SERVO/CONTROLS

Mission Requirements (Cont.)
A. Formal Training (Cont.)

Course Identifier	Unique/Special Facility Requirements
EC4340 NAVIGATN,MISL&AVIONICS	lab: SERVO/CONTROLS
EC4410 SPEECH SIGNAL PROCESS	lab: ACADEMIC COMP
EC4470 ADAPTIVE SIGNAL PROCES	lab: ACADEMIC COMP
EC4480 IMAGE PROC & RECOGNI	lab: IMAGE PROC
EC4610 RADAR SYSTEMS	lab: RADAR SYSTEMS
EC4620 RADAR SYSTEMS	lab: RADAR SYSTEMS
EC4660 HIGH FREQ TECHNIQUES	lab: SIGNAL ENHANCEMENT LAB
EC4670 ELECTRONIC WARFARE	lab: EW SYSTEMS
EC4680 ELEX WARFARE TECH&SYS	lab: EW SYSTEMS
EC4690 PRINC ELECT WARFARE	lab: EW SYSTEMS
EC4810 FAULT TOLERANT COMPTR	lab: VLSI CAE/CAD
EC4870 VLSI SYSTEMS DESIGN	lab: VLSI CAE/CAD
EO3720 ANALY RANDOM SIGNALS	lab: ACADEMIC COMP
EO3780 ELab: WARFARE,COMPUTER	lab: ACADEMIC COMP
IS2000 INTRO TO COMPUTER MGT	lab: INFORMATION SYSTEMS
IS3502 CMPTR NETWORKS: WA/LA	lab: INFORMATION SYSTEMS, SOFTWARE METRICS
IS4185 DECISION SUPPORT SYSTS	lab: INFORMATION SYSTEMS
IS4300 SOFTWARE ENGRG & MGMT	lab: INFORMATION SYSTEMS
IS4502 TELECOMMUNICATIONS NET	lab: INFORMATION SYSTEMS
MA4393 TOPIC IN APPLIED MATH	lab: JANUS
ME2441 ENGRG COMPUTATION LAB	lab: CAD/CAE
ME3241 POWER PLANTS LAB	lab: GAS TURBINE
ME3802 CONTROLS LABORATORY	lab: CONTROL SYSTEMS
ME4211 HYDRODYNAMICS	lab: HYDRO/ FL MECH
ME4220 VISCOUS FLOW	lab: HYDRO/ FL MECH
ME4811 MODERN CONTROL SYSTEMS	lab: CONTROL SYSTEMS
ME4813 FLUID POWER LAB	lab: CONTROL SYSTEMS
MN4163 TECHNIQUES,FIN CONTROL	lab: INFORMATION SYSTEMS
MN4310 LOGISTICS ENGINEERING	lab: INFORMATION SYSTEMS
MR2020 COMPUTER/AIR-OCEAN SCI	lab: IDEA

Mission Requirements (Cont.)
A. Formal Training (Cont.)

Course Identifier	Unique/Special Facility Requirements
MR2210 INTRO TO METEOROL/LAB	lab: SYNOPTIC AN & FORCST
MR2413 METEOROL, ANTISUB WAR	lab: AIR/OCEAN/OR TACTICS
MR2416 METEOROL, ELab: WARFARE	lab: AIR/OCEAN/OR TACTICS
MR2419 ATMOSPHERIC FACTOR C3	lab: AIR/OCEAN/OR TACTICS
MR3150 ANALY AIR-OCEAN TIME	lab: MARINE ATMOSPHR MEAS
MR3222 METEOR ANALYSIS LAB	lab: IDEA
MR3234 TROPOS&STRATOS METEOR	lab: IDEA
MR3252 TROPICAL METEOROL/LAB	lab: SYNOPTIC AN & FORCST
MR3262 OP ATMOSPH PREDIC/LAB	lab: IDEA, SYNOPTIC AN & FORCST
MR4413 AIR/SEA INTERACTION	lab: MARINE ATMOSPHR MEAS
MR4416 ELEC&OPTICAL PROPAGATN	lab: AIR/OCEAN/OR TACTICS
MR4800 ADV TOPICS IN METEOR	lab: SYNOPTIC AN & FORCST
OC2020 COMPTR COMP AIR/OC SC	lab: COMPUTER GRAPHICS
OC3150 ANALYSI AIR-OCEAN TIME	lab: COMPUTER GRAPHICS
OC3240 OCEAN CIRCULATION	lab: COMPUTER GRAPHICS
OC3266 ACOUSTIC FORECASTING	lab: TACTICAL MICRO
OC3570 OP OCEANO & MET	lab: SHIP (UNOLS/NAVO)
OC3570 OPER OCEANOGRAPHY	lab: SHIP (UNOLS/NAVO)
OC4213 NEARSHORE/WAVE PROCESS	lab: COMPUTER GRAPHICS
OC4323 NUM AIR&OCEAN MODELING	lab: COMPUTER GRAPHICS
OC4413 AIR-SEA INTERACTION	lab: COMPUTER GRAPHICS
OC4414 ADV AIR-SEA INTERACTNS	lab: COMPUTER GRAPHICS
PH2119 OSCILLATIONS AND WAVES	lab: ACOUSTICS
PH2911 INTRO:COMPTNL PHYSICS	lab: COMP AND SIMULATION
PH3208 ELEC-OPTIC PRIN & DEV	lab: ELECTRO-OPTICS
PH3402 UNDERWATER ACOUSTICS	lab: ACOUSTICS
PH3451 FUNDAMENTAL ACOUSTICS	lab: ACOUSTICS
PH3452 UNDERWATER ACOUSTICS	lab: ACOUSTICS
PH3855 NUCLEAR PHYSICS	lab: LINEAR ACCELERATOR, NUCLEAR PH
PH4054 BEAM&LASER WEAPON PHYS	lab: LINEAR ACCELERATOR

Mission Requirements (Cont.)
A. Formal Training (Cont.)

Course Identifier	Unique/Special Facility Requirements
PH4209 EO/IR SYS&CNTRMSR	lab: ELECTRO-OPTICS
PH4253 SENSORS,SIGNALS & SYST	lab: ELECTRO-OPTICS
PH4403 UNDERWATER ACOUSTICS	lab: ACOUSTICS
PH4410 ADV ACOUSTICS LAB	lab: ACOUSTICS
PH4454 TRANSDUCER THEORY	lab: ACOUSTICS
PH4911 WEAPONS SYS SIMULATION	lab: COMP AND SIMULATION
SE2012 APP PHYSICS Lab: I	lab: APPLIED PHYSICS
SE2013 APPLIED PHYS Lab: II	lab: APPLIED PHYSICS
SE2014 PHY LABIII:DIGITAL TEC	lab: APPLIED PHYSICS
SE3015 PHY Lab: IV:SYS CONTROL	lab: APPLIED PHYSICS
TS3000 ELECTRICAL POWER ENGR	lab: POWER ELECTRONICS

A significant number of NPS classes require special library collections. The NPS Library has been configured to support the unique programs that exist. Each academic department has a representative who insures that their Department's specific requirements are met by placing orders for specific books and journals. This collection does not exist at any other location. Each library collection also includes data bases for that area of study. Most Departments also have libraries with special collections.

Course Identifier	Unique/Special Facility Requirements
MN3301	ACQUISITION & CONTRACTING MANAGEMENT LIBRARY
MN3303	ACQUISITION & CONTRACTING MANAGEMENT LIBRARY
MN3304	ACQUISITION & CONTRACTING MANAGEMENT LIBRARY
MN3305	ACQUISITION & CONTRACTING MANAGEMENT LIBRARY
MN3312	ACQUISITION & CONTRACTING MANAGEMENT LIBRARY
MN3371	ACQUISITION & CONTRACTING MANAGEMENT LIBRARY
MN4301	ACQUISITION & CONTRACTING MANAGEMENT LIBRARY
MN4307	ACQUISITION & CONTRACTING MANAGEMENT LIBRARY
MN4110	DEFENSE MANPOWER DATA CENTER, MONTEREY, CA
MN4111	DEFENSE MANPOWER DATA CENTER, MONTEREY, CA
MN4761	DEFENSE MANPOWER DATA CENTER, MONTEREY, CA

Mission Requirements (Cont.)
A. Formal Training (Cont.)

Course Identifier	Unique/Special Facility Requirements
NS3300	MIDDLE EAST COLLECTION
NS3310	MIDDLE EAST COLLECTION
NS3320	MIDDLE EAST COLLECTION
NS3360	MIDDLE EAST COLLECTION
NS3361	MIDDLE EAST COLLECTION
NS3400	RUSSIA, EASTERN EUROPE, AND CENTRAL ASIA COLLECTION
NS3401	RUSSIA, EASTERN EUROPE, AND CENTRAL ASIA COLLECTION
NS3410	RUSSIA, EASTERN EUROPE, AND CENTRAL ASIA COLLECTION
NS3450	RUSSIA, EASTERN EUROPE, AND CENTRAL ASIA COLLECTION
NS3460	RUSSIA, EASTERN EUROPE, AND CENTRAL ASIA COLLECTION
NS4410	RUSSIA, EASTERN EUROPE, AND CENTRAL ASIA COLLECTION
NS4451	RUSSIA, EASTERN EUROPE, AND CENTRAL ASIA COLLECTION
NS3501	LATIN AMERICA COLLECTION
NS3510	LATIN AMERICA COLLECTION
NS3520	LATIN AMERICA COLLECTION
NS4510	LATIN AMERICA COLLECTION
NS4560	LATIN AMERICA COLLECTION
NS3600	ASIA COLLECTION
NS3601	ASIA COLLECTION
NS3620	ASIA COLLECTION
NS3661	ASIA COLLECTION
NS3662	ASIA COLLECTION
NS3663	ASIA COLLECTION
NS3667	ASIA COLLECTION
NS4660	ASIA COLLECTION
NS4690	ASIA COLLECTION
NS3700	EUROPE COLLECTION
NS3710	EUROPE COLLECTION
NS3720	EUROPE COLLECTION
NS4710	EUROPE COLLECTION

Mission Requirements (Cont.)
A. Formal Training (Cont.)

Course Identifier	Unique/Special Facility Requirements
NS4720	EUROPE COLLECTION
NS3800	CONFLICT, TERRORISM, SPECIAL OPERATIONS COLLECTION
NS3801	CONFLICT, TERRORISM, SPECIAL OPERATIONS COLLECTION
NS3880	CONFLICT, TERRORISM, SPECIAL OPERATIONS COLLECTION
NS3881	CONFLICT, TERRORISM, SPECIAL OPERATIONS COLLECTION
NS3882	CONFLICT, TERRORISM, SPECIAL OPERATIONS COLLECTION
NS4250	CONFLICT, TERRORISM, SPECIAL OPERATIONS COLLECTION
NS4830	CONFLICT, TERRORISM, SPECIAL OPERATIONS COLLECTION
NS4850	CONFLICT, TERRORISM, SPECIAL OPERATIONS COLLECTION
NS4860	CONFLICT, TERRORISM, SPECIAL OPERATIONS COLLECTION
NS4032	INTERNATIONAL RELATIONS COLLCTION
NS4033	INTERNATIONAL RELATIONS COLLCTION

Mission Requirements (Cont.)
A. Formal Training (Cont.)

9. List by course identifier the courses/CAX's in which elements must be waived because the current training facilities/areas do not completely accommodate course/CAX requirements. Provide a general description of the training element waived and the reason(s) why it was waived (specify any applicable CCN or training area).

Course Identifier	Description of Training Element Waived	Reason for waiver
		None

10. Complete the following table for each course/CAX which requires the use of training facilities/areas at other locations. Provide course identifier, name and location of the training facility or area, distance in miles, frequency/convening, annual costs and the reason for using the training facility/area. Do not include courses taught by MTT's.

Course Identifier	Name and Location of Training Facility/Area	Distance (miles)	Freq/ Conv	Annual Costs	Reason
	None				

11. Does your command/installation train both male and female personnel? **YES** If so, to what extent are facilities segregated by gender? Indicate which facilities are gender specific by CCN and provide the square footage.

NPS is fully integrated.

Mission Requirements (Cont.)

B. Other Training Support

1. List all ground combat units that train at your installation.

Ground Unit	Training Function / Facilities Used
	None

2. List all other units not previously mentioned (active, reserve, guard, etc.) that train at your installation.

Operational Unit	Training Function / Facilities Used
ONI-2020	Intell/SCIF
Nav-Res Sec Grp	Intell/SCIF

3. List all requirements the installation or its tenants have to support local area unit or battle group level training (e.g., battle group exercise).

Training Supported	Location of Training	Type of Support	# Times per Year
		None	

Mission Requirements (Cont.)

C. Other Military Support

1. List all current RDT&E programs (RDT&E, funded studies, etc) that are active on your installation. Note if they can't be relocated and explain why.

The RDT&E programs at NPS contribute significant military value to DoN, and DoD (about 2/3 of the programs support DoN and the other 1/3 support DoD and othergovernment agencies). They are unique to this institution because of the specific composition of our faculty, student body and staff, as well as the unique facilities in our laboratories and the location of NPS with respect to the Monterey Bay Sanctuary, nearby DoN/DoD tenant activities and consortia with various neighboring academic institutions. Most of these research programs cannot be relocated to other institutions orlocations without a significant loss of quality, time and cost. The greatest resource NPS has is its faculty who, in aggregate, not only represent a unique blend of academic interests but also possess many years of experience participating in, and solving problems for, DoN/DoD systems commands, research offices, laboratories, fleet and field operations in peacetime and in combat situations. The current composition of NPS faculty has been developed over the past two to three decades in order to provide the most effective graduate education for the present and future needs of the military. A relocation of NPS to any other facility will no doubt affect the composition of our faculty and this severe loss in expertise will take a decade or more to repair.

Listed below are the FY94 RDT&E projects by academic department. Those projects that can't be relocated are so indicated and the reason why relocation can't occur is provided by a letter code. These codes and reasons are listed below:

a. NPS has a unique faculty expertise. The research is tied directly to an individual at NPS.

b. NPS possesses unique facilities that do not exist elsewhere.

c. The work is classified.

d. This research is being performed because of the unique synergism of a professional military student and a faculty member experienced in military technology/operations/personnel systems.

e. The location of NPS near the Pacific Ocean, the Monterey Bay Sanctuary and other oceanographic/meteorological research institutions (e.g., Fleet Numerical Meteorologic and Oceanographic Center, NRL West, Monterey Bay Aquarium Research Institute, etc.).

f. The location of NPS near other tenant commands (e.g., Defense Manpower Data Center, Defense Resources Management Institute, Defense Health Resources

Mission Requirements (Cont.)
C. Other Military Support (Cont.)

Study Center, U.S. Army Training and Doctrine Command Analysis Center (TRAC), etc.).

g. The location of NPS near other educational institutions (e.g., Monterey Institute of International Studies, Defense Language Institute, etc.).

h. The cooperative arrangement between NPS and NASA Ames Research Center.

TITLE	RELO CATE	REAS ON	SPONSOR
..ACCURACY AND IONOSPHERIC EFFECTS STUDY	NO	A	NAVAL ELEC SYS ENGR CTR
DILEMMAS OF STATES:...	NO	A	US INSTITUTE OF PEACE
MANAGING EDITOR F/FERROELECTRIC BULLETIN	NO	A	ONR
DOM. SOURCE OF IRANIAN SECURITY POLICY	NO	A	NSGSA
DEFENSE ACQUISITION UNIVERSITY...	NO	A	DLA
DIGITAL FILTER INITIAL. IN THE OCEAN	NO	A	ONR
SPACECRAFT SYSTEMS	NO	A	SPAWAR
NASA/USRA ADVANCED DESIGN PROGRAM	NO	A	UNIV SPACE RES ASSO
SPACECRAFT SYSTEMS	NO	A	SPAWAR
AIRCRAFT COMBAT SURVIVABILITY SHORT CRS.	NO	A	NAVAIR
...AIRCRAFT FLYING IN CLOSE PROXIMITY	NO	A	NAVAIR
NASA/USRA UNIVERSITY ADVANCED DESIGN ...	NO	A	UNIV SPACE RES ASSO
SH-60B HELICOPTER NON-LINEAR SIMULATION	NO	A	NAWC-AIRCRAFT DIVISION
SH-60B HELICOPTER NON-LINEAR SIMULATION	NO	A	NAWC-AIRCRAFT DIVISION
SOFTWARE MANAGEMENT	NO	A	PACIFIC BELL
INTEGRATED COMPUTER-AIDED MODELING ...	NO	A	COAST GUARD
DEPOT MAINTENANCE RESOURCE PREDICTION...	NO	A	SLA
DEPOT MAINTENANCE RESOURCE PREDICTION...	NO	A	SLA
...CURRENT USE OF ADA IN DOD	NO	A	DISA
...RESEARCH SUPPORT FOR THE RAMP PROGRAM	NO	A	NAVSUP
IMPACT OF DMR AND BUDGET REDUCTION	NO	A	COMNAVAIRPAC
ANALYSIS/IMPACT OF DBOF BUDGET REDUCTION	NO	A	COMNAVAIRPAC
ANALYSIS OF SHIP SYSTEMS CONDITION ...	NO	A	NAVSEA
...SHIP SYSTEMS CONDITION ASSESSMENT	NO	A	NAVSEA
...IMPLEMENTATION OF THE MTF EME PROGRAM	NO	A	BUMED
DEVELOPMENT OF 3D MODEL FOR PROPAGATION.	NO	A	NSGSA
WAVELET TIME-FREQUENCY ANALYSIS OF...	NO	A	SAF/FMBMB
EM SCATTERING FROM TUBULAR CYLINDER ...	NO	A	SANDIA NATIONAL LABS

Mission Requirements (Cont.)
C. Other Military Support (Cont.)

TITLE	RELO CATE	REAS ON	SPONSOR
PROTOCOLS F/MARITIME MOBILE COMMUNICATIO	NO	A	COAST GUARD
...DECENTRALIZED GROUP MEMBERSHIP SVC	NO	A	NSF
MULTILINEAR EXTENSIONS OF GAMES/APPL...	NO	A	NSF
..CORRELATIONS IN WELDING ALUMINUM ALLOY	NO	A	MARTIN MARIETTA SPACE SY
TROPICAL AND MONSOON STUDIES	NO	A	NSF
BOTTOM PRESSURE FLUCTUATIONS...	NO	A	SCRIPPS
..GLOBAL EDDY-RESOLVING THERMODYNAMIC...	NO	A	NSF
..MASSIVELY PARALLEL OCEAN CLIMATE MODEL	NO	A	DEPARTMENT OF ENERGY
...EXTENDING GRAPHICAL CORRELATION...	NO	A	NSF
EDIT ASST FOR NAVAL RESEARCH LOGISTICS	NO	A	JOHN WILEY AND SONS
SUBMARINE MACHINERY CRADLE:...	NO	A	NAVSEA
ELECTROMAGNETIC PULSE FIELD ENHANCEMENT	NO	A	NAVSEA
...THERMOCAPILLARY CONVECTION IN WELDING	NO	A	ONR
...WIDEBANDING TECHNIQUES F/VHF ANTENNAS	NO	A	ARMY COMM ELEC COMMNAND
...IN OCEAN SURFACE WAVES	NO	A	WASHINGTON STATE UNIV
...IMPLEMENTATION OF THE MFT EME PROGRAM	NO	A	BUMED
...HIGH-ANGLE-OF ATTACK MISSILE...	NO	A	NAWC
NAVFAC PUBLIC WORKS COMMUNITY BUSINESS..	NO	A	NAVAL FAC ENGR CMD
AMERICA'S ALL-VOLUNTEER FORCE	NO	A	OASD/DASD
MAX STRESSES...AXIAL LOAD/LAT PRESSURE	NO	A	NSWC-CARDEROCK DIVISION
NUMERICAL STUDIES OF SEPARATION BUBBLES	NO	A	NASA
...THE NAVAL AIRCRAFT ENGINE COMPONENT	NO	A	NAVAIR
RUSSIAN SCHOLAR EXCHANGE	NO	A	ONR
...ENHANCED FIGHTER MANEUVERABILITY	NO	A	NAWC-AIRCRAFT DIVISION
...MARINE AEROSOL PARTICLES	NO	A	NOAA
READINESS-BASED SPARING REPLENISHMENT...	NO	A	NAV SHIP PART CONTROL CTR
THE COMPRESSIBLE NAVIER-STOKES EQUATIONS	NO	A	ONR
FIBER OPTICS LABORATORY DEVELOPMENT	NO	A	SPAWAR
SPACECRAFT SYSTEMS	NO	A	SPAWAR
BARENT SEA POLAR FRONT DATA ANALYSIS	NO	A	ONR
...NUCLEAR ELECTRIC PROPULSION	NO	A	KIRKLAND AFB
OBJECT-ORIENTED ENTERPRISE TECHNOLOGY	NO	A	DISA
TRAVEL TO/FROM NELLIS AFB	NO	A	USAF COMBAT RESCUE SCHOOL

Mission Requirements (Cont.)

C. Other Military Support (Cont.)

TITLE	RELO CATE	REAS ON	SPONSOR
THE RUSSIAN-UKRAINIAN CONFLICT	NO	A	DEPARTMENT OF ENERGY
..BUDGET REDUCTION AND COST-AVOIDANCE...	NO	A	NAVAL AIR FORCE
GPS ANARCTIC LANDING SYSTEM:...	NO	A	NAVAL ELEC SYS ENGR CTR
UCAR VISITING SCIENTIST POSITION F/COMET	NO	A	NOAA
TROUBLED SYSTEMS PROCESS	NO	A	NAVAL WEAPONS STATION
DOM SOURCE OF IRANIAN SECURITY POLICY	NO	A	NSGSA
..ANALYSIS OF A WAVERIDER CONFIGURED MDL	NO	A	NASA AMES
ACOUSTIC RAY VARIABILITY MODELING	NO	A	"NPS FOUNDATION, INC"
PARALLEL ORBIT PROPAGATOR	NO	A	NRL
LITTORAL ZONE ATMOSPHERIC BOUNDARY LAYER	NO	A	NRL
TECHNOLOGY REVIEW/UPDATE F/TECHNICAL...	NO	A	
TECHNOLOGY REVIEW/UPDATE F/TECHNICAL...	NO	A	
DEPOT MAINTENANCE RESOURCE PREDICTION...	NO	A	SLA
...MEASURES IN THE JAPAN SEA/EAST SEA	NO	A	OFC OF NAVAL INTELLIGENCE
NEARSHORE WAVE PROCESSES	NO	AB	ONR
AIR-MOBILE GROUND SECURITY SYSTEM...	NO	AB	NCCOSC
PLUME CHARACTERISTICS IN SOLID/LIQUID...	NO	AB	PHILLIPS LAB
...P3-SERVICES READINESS PROGRAM	NO	AB	NAWC-AIRCRAFT DIVISION
...TIE BAR FOR THE H-46 HELICOPTER	NO	AB	NAVAIR
APPLICATIONS OF SOFTWARE QUALITY MATRICS	NO	AB	USA OP/TEST/EVAL CMD
COASTAL OCEAN ACOUSTIC TOMOGRAPHY DATA..	NO	AB	ONR
SSAG RESEARCH PROJECTS	NO	AB	NRL
PLUME CHARACTERISTICS IN SOLID/LIQUID...	NO	AB	PHILLIPS LAB
SURF PREDICTION	NO	AB	ONR
VERIFICATION OF SUBSUMPTION CONTROL...	NO	AB	NAVEODTECHCEN
COHERENT ACOUSTIC SEDIMENT-FLUX PROBE...	NO	AB	USAE WATERWAYS EXP STA
COMBUSTION BEHAVIOR/AIRBREATHING MISSILE	NO	AB	NAWC-WEAPONS DIVISION
WIND/METEOROLOGICAL ANALYSES(NORCSEX-91)	NO	AB	NRL
IMPLEMENTATION OF A SOFTWARE METRIC PLAN	NO	AB	NSWC-DAHLGREN DIVISION
NPS BUOY MEASUREMENTS IN IRAMMP TEST	NO	AB	NCCOSC
...COMPOSITE RELIABILITY/LIFE PREDICTION	NO	AB	USARO
OBSERVATIONS OF...FLOW STRUCTURES...	NO	AB	ONR
...SATELLITE-BASED OBSERVATIONS OF...	NO	AB	NOAA

Mission Requirements (Cont.)

C. Other Military Support (Cont.)

TITLE	RELO CATE	REAS ON	SPONSOR
FAN & COMPRESSOR STALL & OFF-DESIGN...	NO	AB	NAWC-AIRCRAFT DIVISION
TURBINE TIP-LEAKAGE FLOW	NO	AB	NAWC-AIRCRAFT DIVISION
...CONSTANT DEPTH SCRATCH TESTING...	NO	AB	NSWC-CRANE DIVISION
SOOT EMISSIONS FROM GAS TURBINE ENGINES	NO	AB	NAWC-AIRCRAFT DIVISION
SOOT EMISSIONS FROM GAS TURBINE ENGINES	NO	AB	NAWC-AIRCRAFT DIVISION
MEASUREMENTS OF PARTICULATE AND PLUME...	NO	AB	PHILLIPS LABORATORY
...ANZFLUX	NO	AB	NSF
...EFFECTS OF SST MEASUREMENTS ON...	NO	AB	NAVAL OCEANOGRAPHIC OFC
AIR OCEAN SHIPBOARD MEASUREMENT	NO	AB	SPAWAR
FLEET AIR OCEAN EQUIPMENT	NO	AB	SPAWAR
CONDUCTIVITY MEASUREMENTS IN THE...	NO	ABC	NRPO
SAGE III SCIENCE TEAM PARTICIPATION	NO	ABC	NASA
IMOM VERIFICATION AND VALIDATION	NO	ABC	USAF INFO WARFARE CTR
THE EFFECTS OF SHIP ACTIVITY ON CLOUD...	NO	ABC	ONR
AEROSOL STUDIES W/REMOTELY PILOTED...	NO	ABC	ONR
NAVEL ACADEMIC CTR F/INFRARED TECHNOLOGY	NO	ABCD	NCCOSC-NRAD
ELECTRO-OPTICS/TARGET DETECTION RESEARCH	NO	ABCD	NCCOSC
ELECTRONIC SURVEILLANCE SYSTEMS STUDIES	NO	ABCD	SPAWAR
ELECTRONIC SURVEILLANCE SYSTEMS STUDIES	NO	ABCD	SPAWAR
RADIATION INSENSITIVE SEMICONDUCTOR NET.	NO	ABCD	NRL
COMMUNICATION SYS PERFORMANCE EVALUATION	NO	ABCD	NSGSA
INTEGRATION OF EKF/FFT TECHNIQUES IN ...	NO	ABCD	SPAWAR
SUPPORT F/VALIDATION OF THREAT SIMULATOR	NO	ABCD	DIA
BMDO RESEARCH SUPPORT	NO	ABCD	SDIO
...(BGLCSS) IN THE JOTS II SYSTEM	NO	ABCD	NRL
FIBER OPTIC HYDROPHONE SYSTEM DEVELOPMEN	NO	ABCD	NAVSEA
INFRARED TECHNOLOGY SPT TO AEGIS PROGRAM	NO	ABCD	JOHNS HOPKINS UNIVERSITY
"SELAR,HTSSE, STAR EDUCATIONAL PROJECT"	NO	ABCD	SAF
PACIFIC COASTAL MOUNTAIN ATMOSPHERIC ...	NO	ABCD	ANDREWS AFB
...ADAPTIVE OPTICAL PROGRAMS	NO	ABCD	PHILLIPS LAB
GEOLOCATION SYSTEMS/PROCESSING TECHNIQUE	NO	ABCD	NRL
SOFTWARE ANALYSIS AND ELECTRICAL TESTING	NO	ABCD	NAVAL MARITME INTELL CTR
ULTRA-WIDEBAND IMPULSE ANTENNA DESIGN	NO	ABCD	USACECOM

Mission Requirements (Cont.)

C. Other Military Support (Cont.)

TITLE	RELOCATE	REASON	SPONSOR
AEGIS ENVIRONMENTAL ASSESSMENT SUPPORT	NO	ABCD	NAVAIR
...IRST TECHNOLOGY DEVELOPMENT	NO	ABCD	NAVSEA
BMDO RESEARCH SUPPORT	NO	ABCD	BMDO
METHODOLOGY F/SUPPORTING C3I REQUIREMENT	NO	ABCD	DIRECTOR/NET ASSESSMENT
STRUCTURAL DYNAMICS OF THE PHALANX GUN	NO	ABCD	NSWC-PORT HUENEME DIV
GEOLOCATION SYSTEM/PROCESSING TECHNIQUES	NO	ABCD	NRL
TACTICAL LOGISTICS SUPPORT SYSTEM	NO	ABCD	CNO
STRUCTURAL DYNAMICS OF THE PHALANX GUN	NO	ABCD	NSWC-PORT HUENEME DIV
...WAVELETS...DYNAMIC/TRANSIENT SIGNALS	NO	ABCDF	SPAWAR
ANALYSIS FOR BUREAU OF NAVAL PERSONNEL	NO	ABCF	CHIEF OF NAVAL PERSONNEL
LARGE SCALE OPTIMIZATION	NO	ABD	ONR
ATMOSPHERIC TURBULENCE RELATED EFFECTS	NO	ABD	NRL
WAVE TURBULENCE	NO	ABD	ONR
BURSTING BUBBLES/AEROSOL SOURCE FUNCTION	NO	ABD	ONR
VLSI DESIGN FOR SPACEBORNE APPLICATIONS	NO	ABD	NRL
ON-ORBIT ANNEALING OF SATELLITE SOLAR...	NO	ABD	NRL
ON-ORBIT ANNEALING OF SATELLITE SOLAR...	NO	ABD	NRL
T56-A-427 ENGINE FUEL NOZZLE MOD.	NO	ABD	NAWC-AIRCRAFT DIVISION
FORCE OVERRIDE RATE CONTROLLER F/REMOTE.	NO	ABD	NASA
...DURALCAN COMPOSITE MATERIALS	NO	ABD	DURALCAN-USA
...LARGE-SCALE USAF OPTIMIZATION MODELS	NO	ABD	AFOSR
MILITARY WORTH OF STAYING POWER	NO	ABD	NSWC-CARDEROCK DIVISION
...THERMOACOUSTIC HEAT TRANSPORT	NO	ABD	ONR
...DATABASE OF ULTRAVIOLET SIGNATURES...	NO	ABD	JOHNS HOPKINS UNIVERSITY
WAVELENGTH CONTROL OF...	NO	ABD	STANFORD UNIVERSITY
ATMOSPHERIC TURBULENCE RELATED EFFECTS..	NO	ABD	NRL
THERMOACOUSTIC LIFE SCIENCE REFRIGERATOR	NO	ABD	MARTIN MARIETTA SVC INC
IMPROVED...FOR THERMOACOUSTIC COOLERS	NO	ABD	ONR
THERMOACOUSTIC PIN STACKS	NO	ABD	ONR
PLASMA MOTOR GENERATOR DELTA	NO	ABD	NASA
BURSTING BUBBLES/AEROSOL SOURCE FUNCTION	NO	ABD	ONR
ATMOSPHERIC CHARACTERIZATION F/AIR FORCE	NO	ABD	PHILLIPS LAB
SPACE SYSTEMS STUDENTS THESIS RESEARCH..	NO	ABD	NRL

Mission Requirements (Cont.)

C. Other Military Support (Cont.)

TITLE	RELO CATE	REAS ON	SPONSOR
SPACE SYSTEMS ACADEMIC GROUP RESEARCH...	NO	ABD	SAF/FMBMB
...LARGE-SCALE OPTIMIZATION MODELS	NO	ABD	BOLLING AFB
TARGET DETECTION:..CLUTTER/SCINTILLATION	NO	ABD	ONR
...THERMOACOUSTIC HEAT TRANSPORT	NO	ABD	ONR
FIBER OPTIC TECHNOLOGY TRANSFER PROGRAM	NO	ABD	NAVSEA
THERMOACOUSTIC REFRIGERATION DESIGNS	NO	ABD	NRL
COATING MATERIALS/T56-A-427 FUEL NOZZLES	NO	ABD	NAWC-AIRCRAFT DIVISION
LIQUID METAL ION GUN FLIGHT EXPERIMENT	NO	ABD	NASA
STUDY OF TARGET DETECTION ALGORITHMS...	NO	ABD	ROME LABORATORY
..PETITE AMATEUR NAVY SATELLITE (PANSAT)	NO	ABD	U.S. ARMY ETL/ASTRO
...SHIPBOARD RECIPROCATING MACHINERY	NO	ABD	NAVSEADET (PERA CV)
INTELLIGENT HEAT TREATING:...	NO	ABD	NAWC-AIRCRAFT DIVISION
...BONDING IN Ti3A1 AND TiA1Nb (B2)	NO	ABD	WRIGHT-PATTERSON AFB
...MULTIPLEXED AND MULTISPECTRAL IMAGING	NO	ABD	NAVSEA
...GALLIUM ARSENIDE DYNAMIC LOGIC	NO	ABD	NRL
...STUDENT THESIS RESEARCH PROJECTS	NO	ABD	NRL
"...HY, HSLA AND ULCB STEEL WELDMENTS"	NO	ABD	NSWC-CARDEROCK DIVISION
"...HY, HSLA AND ULCB STEEL WELDMENTS"	NO	ABD	NSWC-CARDEROCK DIVISION
..STUDIES OF BONDING IN Ti3A1 AND TiA1Nb	NO	ABD	NAWC-AIRCRAFT DIVISION
THERMOACOUSTIC PIN STACKS	NO	ABD	ONR
IMPROVED...FOR THERMOACOUSTIC COOLERS	NO	ABD	ONR
COMPARISON OF IN-SITU/REMOTELY SENSED...	NO	ABD	NRL
BURSTING BUBBLES/AEROSOL SOURCE FUNCTION	NO	ABD	ONR
BURSTING BUBBLES/AEROSOL SOURCE FUNCTION	NO	ABD	ONR
MEDICAL FEL REVIEW	NO	ABD	ONR
LOW COST RADIATION HARDENING TECHNIQUES	NO	ABD	NCCOSC
HIGH POWER THERMOACOUSTIC REFRIGERATION	NO	ABD	ONR
JAVELIN/TUGV MODEL-TEST-MODEL	NO	ABDF	TRAC-MONTEREY
JAVELIN/TUGV MODEL-TEST-MODEL	NO	ABDF	TRAC-MONTEREY
AUDIO DETECTION ALGORITHM	NO	ABDF	TRAC-MONTEREY
STOCHASTIC HIERARCHICAL MODELING OF...	NO	ABDF	JOINT STAFF
...MODELING OF THEATER COMBAT	NO	ABDF	JOINT STAFF
...MODELING OF THEATER COMBAT	NO	ABDF	THE JOINT
STAFF			
...MODELING OF THEATER COMBAT	NO	ABDF	THE JOINT STAFF

Mission Requirements (Cont.)
C. Other Military Support (Cont.)

TITLE	RELO CATE	REAS ON	SPONSOR
...SMALL AUV NAVIGATION SYSTEMS (SANS)	NO	ABE	NCCOSC
IMAGING MONTEREY BAY WITH ACOUSTIC...	NO	ABE	MBARI
..CONTROL OF UNMANNED UNDERWATER VEHICLE	NO	ABE	NSF
...DoD DRUG DEMAND REDUCTION PROGRAMS	NO	ABF	NPRDC
...DoD DRUG DEMAND REDUCTION PROGRAMS:	NO	ABF	NPRDC
...DYNAMIC STALL OF OSCILLATING AIRFOILS	NO	ABH	USARO
CONTROL OF DYNAMIC STALL ...	NO	ABH	AFOSR
...DYNAMIC STALL OF OSCILLATING AIRFOILS	NO	ABH	USARO
COMPRESSIBILITY EFFECTS ON DYNAMIC STALL	NO	ABH	USARO
ARMS CONTROL COMPLIANCE: FUTURE ISSUES	NO	AC	NAVSEA
...SHIP ACTIVITY ON CLOUD PROPERTIES	NO	AC	ONR
F-14A/B UPGRADE SURVIVABILITY STUDY	NO	AC	NAWC-WEAPONS DIVISION
...MILSATCOM DECISION SUPPORT SYSTEMS	NO	AC	US SPACE COMMAND
...OPTICAL TELEMETRY OF ANTENNA SIGNALS	NO	AC	SPAWAR
PREPARATION...COALITION COMMAND/CONTROL	NO	AC	NATIONAL DEFENSE UNIV
NEAR-FIELD MEASURE./SHIPBOARD HF ANTENNA	NO	AC	SPAWAR
INVESTIGATION OF LASER WEAPONS SYSTEMS	NO	AC	NAVAIR
SURFACE MODE PROCESSING FOR TARGET...	NO	AC	HUGHES MISSILE SYSTEMS CO
BRAZIL'S NATIONAL STRATEGY: ...	NO	AC	NELO
SOVIET NAVY IN NEW MILITARY-POLITICAL...	NO	AC	NELO
...THE MILITARY-TECHNICAL REVOLUTION	NO	AC	OFC OF NET ASSESSMENT
EUROPE...NEW POLITICAL-MILITARY ENVIRON.	NO	AC	NELO
ANALYSIS OF UNDER-ICE AMBIENT NOISE...	NO	AC	NAVOCEANO
...NAVAL OCEAN PREDICTION SYSTEMS	NO	AC	NAVOCEANO
JT MISSION ASSESS/CAMP ANALYSIS SUPPORT	NO	AC	JOHNS HOPKINS UNIVERSITY
LITTORAL ZONE NAVAL OCEAN PREDICTION SYS	NO	AC	NAVOCEANO
AIRCRAFT COMBAT SURVIVABILITY	NO	AC	JTCR/AS
...SHIP ACTIVITY ON CLOUD PROPERTIES	NO	AC	ONR
ALGORITHMS...ANTI-SHIPPING PLATFORMS	NO	AC	NRL
SURVIVABILITY/LETHALITY ASSESSMENT CTR	NO	AC	NAVAIR
...POST-SOVIET SECURITY ENVIRONMENT	NO	AC	NSGSA
BRAZIL'S NATIONAL STRATEGY:...	NO	AC	NSGSA
..ARCTIC LOW-FREQUENCY AMBIENT NOISE MDL	NO	AC	NUWC-NEW LONDON LAB
INVITATIONAL TRAVEL	NO	AC	USAINSCOM
NPS AIRCRAFT SURVIVABILITY SUPPORT	NO	AC	NAVAIR

Mission Requirements (Cont.)

C. Other Military Support (Cont.)

TITLE	RELO CATE	REAS ON	SPONSOR
SUPPORT OF ISC's MODELLING PROJECT	NO	AC	OFC/TECH ASSESSMENT-ISC
COUNTERMEASURES AGAINST...MISSILES	NO	AC	NAVAIR
ROBOTIC APPLICATION/MINE COUNTERMEASURES	NO	AC	ONR
BRAZIL'S NATIONAL STRATEGY:...	NO	AC	NSGSA
MILITARY DOCTRINES & CAPABILITIES IN...	NO	AC	NSGSA
IMPACT OF...PERFORMANCE IN SHALLOW WATER	NO	AC	NAVSEA
IMPACT OF...PERFORMANCE IN SHALLOW WATER	NO	AC	NAVSEA
SONAR SIGNAL MODELING	NO	ACD	NUWC-NEWPORT DIVISION
SHIPBOARD SYSTEMS SURVIVABILITY:...	NO	ACD	NAVSEA
FEASIBILITY STUDY OF ACTIVE ANTENNAS...	NO	ACD	NSGC
COMMUNICATION SYSTEMS PERFORMANCE EVAL..	NO	ACD	NSGC
GUSTY ORIOLE	NO	ACD	SAF
ADVANCE SIGNAL PROCESSING STUDIES	NO	ACD	SAF
ADVANCED SIGNAL PROCESSING STUDIES	NO	ACD	SAF/FMBMB
PROJECT GUSTY ORIOLE...	NO	ACD	SAF/FMBMB
SIGNAL-TO-NOISE ENHANCEMENT PROGRAM	NO	ACD	NSGC
SHIPBOARD SYSTEMS SURVIVABILITY:...	NO	ACD	NAVSEA
SIGNAL-TO-NOISE ENHANCEMENT PROGRAM	NO	ACD	NSGC
COMBAT SYS EQUIP TO UNDERWATER EXPLOSION	NO	ACD	NAVSEA
...RESEARCH IN SUPPORT OF ALISS	NO	ACD	NSWC-CARDEROCK DIVISION
COMBAT SYSTEMS SURVIVABILITY	NO	ACD	NSWC-CARDEROCK DIVISION
NUMERICAL STUDY OF UNDEX PROBLEMS:	NO	ACD	DNA
FIELD STATION RESEARCH AND SUPPORT	NO	ACD	USAINSCOM
MULTI-SENSOR INTEGRATION...	NO	ACD	NAVSEA
...RESEARCH IN SUPPORT OF ALISS	NO	ACD	NSWC-CARDEROCK DIVISION
PROJECT GUSTY ORIOLE...SPACE APPLICATION	NO	ACD	SAF
COMBAT SYS ELECTROMAGNETIC ENGINEERING	NO	ACD	NAVSEA
SIGNAL-TO-NOISE ENHANCEMENT PROGRAM	NO	ACD	NSGC
RECURSIVE RAY ACOUSTICS F/3-D SOUND ...	NO	ACDE	NAVSEA
RECURSIVE RAY ACOUSTICS...	NO	ACDE	NAVSEA
...NAVY'S GRADUATE EDUCATION PROGRAMS	NO	ACF	NAVY PERS RESEARCH/DEV CT
...THE MK92 FIRE CONTROL SYSTEM	NO	AD	NSWC-PORT HUENEME DIV
...VORTEX/FREE-SURFACE INTERACTION	NO	AD	ONR
PROTOTYPE MONITOR ASSIGNMENT SUPPORT SYS	NO	AD	USMC

Mission Requirements (Cont.)

C. Other Military Support (Cont.)

TITLE	RELO CATE	REAS ON	SPONSOR
SO/LIC ACADEMIC CURRICULUM	NO	AD	NAVAL SPECIAL WARFARE CMD
...A FLEXIBLE SURGICAL ROBOTIC ARM	NO	AD	ARPA
ADMINISTRATIVE SCIENCES RESEARCH SUPPORT	NO	AD	NAWC-AIRCRAFT DIVISION
COST PER OUTPUT FOR RECRUITING AT USAR	NO	AD	USAREC
COST PER OUTPUT FOR RECRUITING AT USAR	NO	AD	USAREC
COST PER OUTPUT ANALYSIS FOR THE USAREC	NO	AD	USAREC
NPS RESEARCH SUPPORT FOR ARPERCEN	NO	AD	USARPERCEN
NPS SUPPORT FOR SLA-MANAGEMENT ACCOUNT	NO	AD	SLA
NSF PRESIDENTIAL YOUNG INVESTIGATOR	NO	AD	NSF
...COOLING OF THE E-2C AIRCRAFT	NO	AD	NAWC-AIRCRAFT DIVISION
...AIRCRAFT EMP TRANSIENT DATA	NO	AD	NAWC-AIRCRAFT DIVISION
COMPARABILITY ANALYSIS FOR MODEL-TEST...	NO	AD	TEXCOM
ORBIT PREDICITON ON PARALLEL COMPUTERS	NO	AD	NAVSPACE SURV CTR
EFFECTS OF CENTRIFUGAL INSTABILITIES...	NO	AD	NASA
..COOLED SUPERCONDUCTING MAGNETS	NO	AD	NSWC-CARDEROCK DIVISION
...MAJOR CALIBER AMMUNITION	NO	AD	NSWC-CRANE
DIVISION			
...COAST GUARD LAW ENFORCEMENT ASSESTS	NO	AD	COAST GUARD
OPTIMALLT STATIONING UNITS TO BASES	NO	AD	ARMY
QUANTITATIVE BIOASSAY METHODOLOGY ...	NO	AD	ARMY MEDICAL R&D COMMAND
QUANTITATIVE TOXICOLOGY/RISK ASSESSMENT	NO	AD	NAVAL MEDICAL RES INST
...RECRUITING RESOURCE PLANNING SYSTEM	NO	AD	USAREC
...RECRUITING RESOURCE PLANNING SYSTEM	NO	AD	USAREC
ANALYSIS OF RECRUITING BONUS PAYMENTS	NO	AD	USAREC
NPS SUPPORT FOR USAREC-MGMT ACCT (OMA)	NO	AD	USAREC
NPS SUPPORT FOR USAREC-MGMT ACCT (OMAR)	NO	AD	USAREC
...REALIGNMENT OF USAREC STATIONS (OMA)	NO	AD	USAREC
...REALIGNMENT OF USAREC STATIONS	NO	AD	USAREC
MODELS FOR TERRITORY REALIGNMENT	NO	AD	NAVY RECRUITING COMMAND
PUBLIC PERCEPTION OF ARMY NURSING CAREER	NO	AD	USAREC
DELAYED ENTRY PROGRAM...(OMA)	NO	AD	USAREC
FORECASTING THE CONDITIONAL DEP LOSS...	NO	AD	USAREC
...ACQUISITION ALTERNATIVE ANALYZER-RDA3	NO	AD	SLA
...U.S. ARMY ADVERTISING BUDGET (OMA)	NO	AD	USAREC

Mission Requirements (Cont.)

C. Other Military Support (Cont.)

TITLE	RELO CATE	REAS ON	SPONSOR
...U.S. ARMY ADVERTISING BUDGET (OMAR)	NO	AD	USAREC
...(RA) RECRUITERS (PHASE I: MDL DEVEL)	NO	AD	USAREC
SUPPORT FOR TENCAP SPACE CHAIR	NO	AD	NRL
SYNTHETIC APERTURE RADAR SATELLITE SYS.	NO	AD	NELO
ULTRA WIDEBAND RADAR SIGNAL PROCESSING	NO	AD	ONR
DESIGN/OPERATIONAL EVAL OF SLICE CONCEPT	NO	AD	ONR
COMPLEX TRACEABILITY TECHINIQUES	NO	AD	NSWC-DAHLGREN DIVISION
...AIR FORCE THROUGHPUT OPTIMIZATION MDL	NO	AD	DEPT OF AIR FORCE
NAVAL SPACE SYSTEMS ACADEMIC CHAIR	NO	AD	NAVSPACE
ULTRA WIDEBAND RADAR SIGNAL PROCESSING	NO	AD	ONR
ULTRA WIDEBAND RADAR SIGNAL PROCESSING	NO	AD	ONR
ATMOSPHERIC FORCING OF ICE AND OCEAN...	NO	AD	ONR
ATMOSPHERIC FORCING OF ICE AND OCEAN...	NO	AD	ONR
LONGBOW HELLFIRE DEVELOPMENTAL PROGRAM	NO	AD	U.S. ARMY MISSILE CMD
TOTAL SHIP SYSTEMS ANALYSIS/ASSESSMENT	NO	AD	NAVSEA
STRUCTURE/DYNAMICS OF COASTAL FILAMENTS	NO	AD	ONR
QUANTITATIVE TOXICOLOGY/RISK ASSESSMENT	NO	AD	NAVAL MED RESEARCH INST
...NAVY OPERATIONAL TEST AND EVALUATION	NO	AD	COMOPTEVFOR
COMPLEX TRACEABILITY TECHNIQUES	NO	AD	NSWC-DAHLGREN DIVISION
...DISTRIBUTED INTERACTIVE SIMULATION	NO	AD	TRAC-MONTEREY
BIOMECHANICAL STUDY OF HUMAN KNEE:...	NO	AD	OAKLAND NAVAL HOSPITAL
...AIRCRAFT EMP TRANSIENT DATA	NO	AD	NAWC
RESEARCH IN DATA COMPRESSION TECHNIQUES	NO	AD	SPAWAR
NUMERICAL MODELING OF MARINE AEROSOLS	NO	AD	NRL
...CONVECTIVE HEAT TRANSFER...	NO	AD	NSWC-CRANE DIVISION
PERSONNEL PLANNING	NO	AD	NSA
TROPICAL CYCLONE MOTION STUDIES...	NO	ADE	ONR
COASTAL REGION REFRACTION ASSESSMENTS	NO	ADE	NCCOSC-NRAD
FRONTAL MODELING	NO	ADE	NSF
...TROPICAL CYCLONE STRUCTURE CHANGE	NO	ADE	ONR
COASTAL MESOSCALE NUMERICAL MODELING	NO	ADE	NRL
EFFECTS OF ENLISTED INCENTIVES...	NO	ADF	USAREC
IMPACT COMMUTING DISTANCE ON RESERVE...	NO	ADF	USAREC
ZIPCODE QMA&I ESTIMATES	NO	ADF	USAREC
NPS RESEARCH SUPPORT FOR ARPERCEN	NO	ADF	USARPERCEN

Mission Requirements (Cont.)

C. Other Military Support (Cont.)

TITLE	RELO CATE	REAS ON	SPONSOR
... QMA ESTIMATES BY ZIPCODE	NO	ADF	NAVY RECRUITING COMMAND
...TACTICAL UNMANNED VEHICLE (TUGV)	NO	ADF	ARMY MISSILE COMMAND
VARIABLE RESOLUTION COMBAT SIMULATION	NO	ADF	SDIO
...AN EXTREMELY HIGH FREQUENCY ANTENNA	NO	ADF	NCCOSC
...ACQUISITION ALGORITHMS FOR JANUS (A)	NO	ADF	TRADOC
...ACQUISITION ALGORITHMS FOR JANUS (A)	NO	ADF	TRADOC
VERIFICATION OF MARINE AEROSOL MODELS	NO	AE	NCCOSC
..WEST COAST PICKET FENCE SPECIFICATIONS	NO	AE	NSF
COASTAL MESOSCALE MODELING STUDIES	NO	AE	NRL
MESOSCALE COASTALLY-TRAPPED RESPONSE...	NO	AE	ONR
GLOBAL AND TROPICAL CIRCULATIONS	NO	AE	NRL
REAL-TIME ENVIRONMENTAL INFO NET/REINAS	NO	AEB	UC-SANTA CRUZ
EVALUATING INDUSTRIAL SECURITY COSTS...	NO	AF	
...SAFETY OF FOREIGN NUCLEAR MATERIALS	NO	AG	DEPARTMENT OF ENERGY
3D TERRAIN VISUALIZATION F/JANUS MODEL..	NO	B	TRAC-MONTEREY
JANUS-DISTRIBUTIVE INTERACTIVE SIMULATIO	NO	B	TRAC-MONTEREY
JANUS-DISTRIBUTIVE INTERACTIVE SIMULATIO	NO	B	TRAC-MONTEREY
...DISTRIBUTED INTERACTIVE SIMULATION	NO	B	TOPOGRAPHIC ENG CTR
CIRCULATION STUDIES CONTINENTAL SHELF...	NO	B	EPA
...COASTAL ZONE REFRACTIVE CONDITIONS	NO	B	SPAWAR
...DISTRIBUTED INTERACTIVE SIMULATION	NO	B	DMSO
3D VISUAL SIMULATOR F/VIRTUAL WLD...YR 2	NO	BC	ARPA
NPSNET-HUMAN:...HUMAN INTO THE SYNTHETIC	NO	BCD	ARMY RESEARCH LABORATORY
POINT SUR FACILITY UPGRADE TO SUPPORT...	NO	BCDE	"NPS FOUNDATION, INC"
CALIFORNIA UNDERCURRENT STUDIES	NO	BE	ONR
THERMAL PLUME TRACKING WITH RAFOS FLOATS	NO	BE	NOAA/PM
NPSNET: INTERFACE DEV/MODSAF INTEGRATION	NO	BE	STRICOM
CALIFORNIA UNDERCURRENT STUDIES	NO	BE	ONR
EQUIPMENT FOR OPEN JANUS PROJECT	NO	BF	ARPA
JANUS TO DISTRIBUTIVE INTERACTION...	NO	BF	TRAC-MONTEREY
JANUS/DIS PROOF OF PRINCIPLE	NO	BF	USARO
...INTERACTIVE SIMUL WORLD MODELER - YR2	NO	BF	TRADOC ANALYSIS COMMAND
...INTERACTIVE SIMUL WORLD MODELER - YR2	NO	BF	TRADOC ANALYSIS COMMAND
TRANSIENT LOCALIZATION	NO	CD	NUWC

Mission Requirements (Cont.)
C. Other Military Support (Cont.)

TITLE	RELO CATE	REAS ON	SPONSOR
...COMBINING CHANGES TO SOFTWARE SYSTEMS	NO	D	USARO
...EVOLUTION OF SOFTWARE PROTOTYPES	NO	D	USARO
..AUTONOMOUS UNDERWATER WALKING ROBOTS	NO	D	NSF
IMPROVEMENTS TO RECRUITING QUOTA...(OMA)	NO	D	USAREC
IMPROVEMENTS TO RECRUITING QUOTA..(OMAR)	NO	D	USAREC
EXPERT SYSTEM FOR PROVISIONING	NO	D	NSWC-PORT HUENEME DIV
RAPID PROTOTYPING FOR DISTRIBUTED...	NO	D	NSF
SYS. DEVELOP. OF HARD REAL-TIME SOFTWARE	NO	D	NRL
CAPTION-BASED ACCESS TO MULTIMEDIA DB	NO	D	ONR
LINE-OF-SIGHT AND VISUAL ENHANCEMENTS...	NO	D	TEXCOM
...HETEROGENEOUS DATABASES AND SYSTEMS	NO	D	NAWC-WEAPONS DIVISION
ESTABLISH INFOSEC CENTER OF EXCELLENCE	NO	D	NATIONAL SECURITY AGENCY
EXPERT SYSTEMS FOR PROVISIONING	NO	D	NSWC-PORT HUENEME DIV
...COMBINING CHANGES TO SOFTWARE SYSTEMS	NO	D	USARO
RESEARCH AND TECHNICAL SUPPORT FOR CFII	NO	D	DISA
...ACCESS TO MULTIMEDIA DATABASES	NO	D	ARPA
A COMPUTER AIDED PROTOTYPING SYSTEM...	NO	D	ADA JOINT PROGRAM OFFICE
FORMAL METHODS FOR SOFTWARE DEVELOPMENT	NO	D	ONR
...ANALYSIS OF DEEP OCEAN CONVECTION	NO	D	ONR
INTELLIGENT COMPUTER-AIDED TRAINING SYS	NO	D	USA ARTIFICIAL INTELL CTR
REAL-TIME PROTOTYPE F/EVALUATING GPS...	NO	D	NSWC
FORMAL METHODS FOR SOFTWARE DEVELOPMENT	NO	D	ARPA
GEOACOUSTIC INVERSION TECHNIQUES...	NO	D	NCCOSC
FORMAL MODELS...IN SOFTWARE DEVELOPMENT	NO	D	USARO
AN INTELLIGENT TUTORING SYSTEM FOR ADA	NO	D	ARPA
NIGHT VISION ELECTRO-OPTICAL TRAINING...	NO	DF	NAVAIR
NPSNET-WISE: INTEGRATING THE INFANTRY...	NO	DF	ARMY RESEARCH LABORATORY
...INTEGRATION FOR THE JANUS MODEL	NO	DF	TRADOC ANALYSIS COMMAND
RENDERING F/ENVIRONMENTAL VISUALIZATION	NO	DF	TEXCOM
PARALLEL CLOUD AND OBSCURANT SIMULATION	NO	DF	ARMY RESEARCH LABORATORY
PARALLEL CLOUD AND OBSCURANT SIMULATION	NO	DF	ARMY RESEARCH LABORATORY
...GROUND EFFECTS/STRUT INTERFERENCE...	NO	DH	NASA
OCEAN CIRCULATION TO EAST OF FARALLON...	NO	E	INTERIOR-USGS

Mission Requirements (Cont.)

C. Other Military Support (Cont.)

TITLE	RELOCATE	REASON	SPONSOR
WAVE TRANSFORM/REFLECT F/MONTEREY BKWTR	NO	E	ARMY CORPS OF ENGINEERS
FARALLONES SHELF/SLOPE CIRCULATION STUDY	NO	E	ONR
DEEP OCEAN STORAGE OF INDUSTRIAL WASTES	NO	E	NRL
LAGRANGIAN MEASUREMENTS IN...	NO	EB	NSF
...THE IRON ENRICHMENT EXPERIMENT	YES		ONR
DATA ASSIMILATION MDLS & SYNOP DATA ANAL	YES		ONR
DATA ASSIMILATION MDLS & SYNOP DATA ANAL	YES		ONR
MOORED CURRENT MEASUREMENTS OVER THE...	YES		ONR
LAGRANGIAN MEASUREMENTS...CALIF CURRENT	YES		ONR
RESERVE RECRUITING IN THE 21ST CENTURY	YES		USAREC
ADMIN SCIENCES EDUCATION SUPPORT	YES		NDAC
SURFACE SHIP COMBAT SURVIVABILITY	YES		NAVSEA
...MODELING STUDIES OF LEEUWIN CURRENT	YES		NSF
DATA ASSIMILATION MODELS...	YES		ONR
..GPS RECEIVERS F/DMA MONITOR STATION...	YES		DEFENSE MAPPING AGENCY
...DEEP OCEANIC CONVECTION IN ARCTIC SYS	YES		NSF
LARGE-SCALE MEAN CONVERGENCE IN MIXED...	YES		ONR
LAGRANGIAN MEASUREMENTS/CALIF. CURRENT	YES		ONR
LAGRANGIAN MEASUREMENTS/CALIF. CURRENT	YES		ONR
THE POINT SUR TRANSECT (POST) PROGRAM	YES		ONR
ONR CHAIR/ARCTIC MARINE SCIENCE AT NPS	YES		ONR
"..""AMERICAN PRACTICAL NAVIGATOR"""	YES		DEFENSE MAPPING AGENCY
INTEROPERABLE DATABASE SYSTEMS	YES		NAWC-WEAPONS DIVISION
...OCEAN DIAGNOSTIC/PROGNOSTIC SYSTEM	YES		ONR
OPTIMIZATION OF MUNITIONS MODELING	YES		USAF/XOFW
OPTIMAL ANALYZED FIELDS/MIXED LAYER...	YES		ONR
OPTIMAL ANALYZED FIELDS/MIXED LAYER...	YES		ONR
OPTIMAL ANALYZED FIELDS/MIXED LAYER...	YES		ONR
JOINT C3 CHAIR PROFESSOR			DISA
ALTERNATIVE CONCEPTS OF OPERATION FOR...			DSPO
COMMON DATA LINKS (CDL) INTERFACE TO...			SAF/FMBMB
COMMUNICATIONS VULNERABILITY TO JAMMING			CNO

2. Describe the role this installation plays in support of wartime logistics and mobilization requirements, e.g., Logistics Support and Mobilization Plans. Are your facilities adequate to meet this requirement? If not, identify deficiencies.

Mission Requirements (Cont.)
C. Other Military Support (Cont.)

NPS provides graduate education to the military to enhance an officer's effectiveness during combat conditions. We do not train the students for a specific mobilization plan, but educate the officers to think more clearly and to be more effective decision-makers under the stress of combat conditions.

3. List any other military support missions currently conducted at/from this installation (e.g., port of embarkation for USMC personnel, other active duty/reserve personnel or logistics transfer missions).

N/A

4. Are any new military missions planned for this installation?

NPS is planning two new curricula programs that may assist military missions in the future. One new progrom is in JOINT WARFARE ANALYSIS and the second is in ENVIRONMENTAL PROGRAMS.

Mission Requirements (Cont.)

D. Other Non-Military Support

1. Does the installation have a role in a disaster assistance plan, search and rescue, or local evacuation plan? If so, describe.

Under the COMNAVBASE San Diego OPLAN for Emergency Management, the Superintendent, Naval Postgraduate School is assigned as Group Commander for a four county area of responsibility for all Navy personnel (ashore). With the exception of two recruiting offices, all personnel are located on the Monterey Peninsula. Under the NPS draft OPLAN, the Superintendent coordinates the efforts of NPS and tenant activities supported.

Disaster assistance planning has been developed with the FT Ord Red Cross station and the local civilian community mutual aid plans. NPS is not equipped to provide formal search and rescue and currently has no role in a local evacuation plan.

2. Does the installation provide any direct support to local civilian, governmental or military agencies? **YES** If so, describe.

The Dudley Knox Library provides access to, assistance in the use of, and machines for the photocopying of books, magazines, government documents, newspapers, standards, statistical publications, and other types of library-related material to all members of the public on the Monterey Peninsula and elsewhere who wish to come into the Library to use this material. Off-campus users include personnel from all services and DOD employees, retired military, and active duty Navy personnel who have a need to use the collections. As a recipient of publications distributed by the U.S. Government Printing Office, our collections of government documents must be open to the public.

The Dudley Knox Library is a member of the Monterey Bay Area Cooperative Library System, offering rapid delivery of books and free photocopies to the users of other libraries on the Monterey Peninsula. In addition, the Library provides approximately 800 books and photocopies each year to libraries throughout the United States through interlibrary loan.

3. Are any new civilian or other non-DoD missions planned for this installation? **YES** If so, describe.

The School is in the process of establishing an education Consortium with other universities in the Monterey Bay area. The Consortium will support education at NPS, at the associated civilian institutions and in the local schools. Planned areas for initial emphasis are:

environment
information systems
international affairs

Mission Requirements (Cont.)
D. Other Non-Military Support (Cont.)

The following NPS laboratory facilities will support the Consortium:

Library
Computer Center
visualization and virtual reality
environmental satellite down-links
environmental analysis and forecasting

Facilities

A. Training Facilities -- Academic Instruction Building (CCN 171-10)

1. Give the total gross square footage of academic instruction buildings at your activity. Provide the square footage by the general type of classroom (i.e., General Academic Classroom and Modified Academic Classroom as defined in NAVFAC P-80), and within each type, by the material condition of the facility (i.e., Adequate, Substandard, and Inadequate).

Classroom Type	Adequate	Substandard	Inadequate
General Academic	498,188 *	28,837	2,925
Modified Academic	-	-	-
TOTAL	498,188	28,837	2,925

* The numbers used in this table were taken from the 1992 NPS Master Plan, which were formulated during a 1991 Facilities Engineering Evaluation. The "Adequate" square footage has been adjusted upwards to reflect the most recent construction. Specifically, added were 98,023 square feet (SF) for the new academic building, Glasgow Hall; 34,009 SF for the new Mechanical Engineering Lab Building; and 45,000 for the recent library addition. These numbers are estimates based on the current use of these facilities.

2. In accordance with NAVFACINST 11010.44E, an inadequate facility cannot be made adequate for its present use through "economically justifiable means." For all the categories above where inadequate facilities are identified provide the following information:

a. Facility Type/Code:

Bldg No. 224; semi-permanent Academic Instruction Building/CCN, 171-10; only 2,925 SF. Constructed in 1952.

b. What makes it inadequate?

Primarily age and location. The facility is old and obsolete and has inadequate fire protection. It is located next to the school's boiler plant and main student parking lot; it has an incompatible land use.

c. What use is being made of the facility?

It is currently used as an oceanographic research/instruction area; for administrative offices; and a print plant.

Facilities (Cont.)

A. Training Facilities -- Academic Instruction Building (CCN 171-10) (Cont.)

d. What is the cost to upgrade the facility to substandard?

This information is not available. Due to incompatible land use, upgrade of this facility is not considered an alternative.

e. What other use could be made of the facility and at what cost?

N/A

f. Current improvement plans and programmed funding:

N/A

g. Has the facility's condition caused a "C3" or "C4" designation on your BASEREP?

No. Academic instruction area is too small to negatively impact NPS mission.

B. Training Facilities -- Applied Instruction Building (CCN 171-20)

1. Give the total square footage of applied instruction buildings at your activity. Break out the square footage by each type of facility listed in the below table (see NAVFAC P-80 for definitions) and within each type, by the material condition of the facility (i.e., Adequate, Substandard, and Inadequate). For special applied instruction, list each facility designed for training specialized functions.

Type of Applied Instruction Building	Adequate	Substandard	Inadequate
General Applied Instruction	77,994 *	1,287	10,168
Special Applied Instruction	-	-	-
TOTAL	77,994	1,287	10,168

*** The numbers used in this table were taken from the 1992 NPS Master Plan, which were derived from a 1991 Facilities Engineering Evaluation. There have been no adjustments for the recently completed construction projects, i.e., new academic building (Glasgow Hall), new Mechanical Engineering Lab building, and new library addition. These facilities have been accounted for under category codes (CCNs) 171-10 and the 300-XX series.**

2. In accordance with NAVFACINST 11010.44E, an inadequate facility cannot be made adequate for its present use through "economically justifiable means." For all the categories above where inadequate facilities are identified provide the following information:

Facilities (Cont.)

a. Facility Type/Code:

A. BLDG Nos. 223/224 (8,977 inadequate SF): Semi-permanent sheet metal buildings built in 1952/1953, respectively. CCN: 171-20.

B. BLDG No. 500 (1,191 inadequate SF): Temporary sheet metal building built in 1906. CCN 171-20.

b. What makes it inadequate?

A. BLDG Nos. 223/224 (8,977 inadequate SF): These buildings are attached to each other; Bldg No. 223 was built one year prior (1952) to Bldg No. 224. Their deficiencies are identical. They are old, obsolete and have incompatible land use; they are adjacent to the base's boiler plant and student parking lot. They have inadequate fire protection.

B. BLDG No. 500 (1,191 inadequate SF): This building is totally obsolete. It is old and has an incompatible land use, immediately adjacent to the base's boiler plant. It is outside the academic quad area.

c. What use is being made of the facility?

A. BLDG Nos. 223/224: These facilities are currently used as a student study area; for oceanographic research/instruction; as extra administrative offices; and a print plant.

B. BLDG No. 500: This facility is currently used as the Mechanical Engineering Lab Annex.

d. What is the cost to upgrade the facility to substandard?

This information is not available. Due to incompatible land use for all of these facilities, plus obsolescence and age, upgrade of these facilities was not considered as an alternative.

e. What other use could be made of the facility and at what cost?

N/A

f. Current improvement plans and programmed funding:

N/A

g. Has the facility's condition caused a "C3" or "C4" designation on your BASEREP?

No. These facilities are so small (relatively speaking) that they have minimal negative impact on the school's mission.

Facilities (Cont.)

C. Training Facilities -- Operational Trainer Facility (CCN 171-35)

1. Give the total square footage of operational trainer buildings at your activity. Break out the square footage by the type of trainer (be specific -- e.g., MK 41VLS weapons system trainer, CG 47 Propulsion Plant Trainer, boiler room full scale model, Polaris tube full scale mock-up, etc.); and within each type, by the material condition of the facility (i.e., Adequate, Substandard, and Inadequate).

Type of Operational Trainer Facility	Adequate	Substandard	Inadequate
N/A			
Total			

2. In accordance with NAVFACINST 11010.44E, an inadequate facility cannot be made adequate for its present use through "economically justifiable means." For all the categories above where inadequate facilities are identified provide the following information:

a. Facility Type/Code:

N/A

b. What makes it inadequate?

N/A

c. What use is being made of the facility?

N/A

d. What is the cost to upgrade the facility to substandard?

N/A

e. What other use could be made of the facility and at what cost?

N/A

f. Current improvement plans and programmed funding:

N/A

g. Has the facility's condition caused a "C3" or "C4" designation on your BASEREP?

N/A

Facilities (Cont.)
C. Training Facilities -- Operational Trainer Facility (CCN 171-35) (Cont.)

D. Training Facilities -- Other Training Buildings

1. Give the square footage of the training buildings listed in the below table that are at your activity. Break out the square footage by the material condition of the facility (i.e., Adequate, Substandard, and Inadequate).

CCN	Type of Training Building	Adequate	Substandard	Inadequate
171-15	Reserve Training Building	**N/A**	-	-
171-17	TV CTR/Instruction Matter	**N/A**	-	-
171-25	Auditorium	**35,320 ***	-	-
171-36	Radar Simulator Facility	**N/A**	-	-
171-40	Drill Hall	**N/A**	-	-
171-45	Mock-up and Training Aid Preparation Center	**N/A**	-	-
171-50	Small Arms Range - Indoor	**N/A**	-	-
171-60	Recruit Processing Building	**N/A**	-	-
171-77	Training Material Storage	**N/A**	-	-

*** Includes approximately 7,000 SF added on during the 1992 Auditorium Seismic/Expansion Project. This project added about 400 more seats (gallery seating) to the auditorium.**

2. In accordance with NAVFACINST 11010.44E, an inadequate facility cannot be made adequate for its present use through "economically justifiable means." For all the categories above where inadequate facilities are identified provide the following information:

a. Facility Type/Code:

N/A

b. What makes it inadequate?

N/A

c. What use is being made of the facility?

N/A

Facilities (Cont.)

d. What is the cost to upgrade the facility to substandard?

N/A

e. What other use could be made of the facility and at what cost?

N/A

f. Current improvement plans and programmed funding:

N/A

g. Has the facility's condition caused a "C3" or "C4" designation on your BASEREP?

N/A

Facilities (Cont.)

E. Training Facilities -- Training Facilities Other Than Buildings (CCN 179)

1. Using the below table, give the number of training facilities other than buildings that are at your activity. For each type of training facility, give the number of facilities that are in adequate, substandard, and inadequate condition.

CCN	Training Facilities	Number of Facilities		
		Adequate	Substandard	Inadequate
179-10	Aircraft Gunnery, Bombing and Rocket Range	N/A		
179-30	Surface Projectile Range	N/A		
179-35	Weapons Range Operations Tower	N/A		
179-40	Small Arms Range - Outdoor	N/A		
179-45	Training Mock-Ups	N/A		
179-50	Training Course	N/A	/	/
179-55	Combat Training Pool/Tank	N/A		
179-60	Parade and Drill Field	N/A	/	/
179-70	Radar Bomb Scoring Range	N/A		
179-71	Electronic Warfare Training Range	N/A		
179-72	Underwater Tracking/Training Range	N/A		

2. In accordance with NAVFACINST 11010.44E, an inadequate facility cannot be made adequate for its present use through "economically justifiable means." For all the categories above where inadequate facilities are identified provide the following information:

a. Facility Type/Code:

N/A

b. What makes it inadequate?

N/A

Facilities (Cont.)

E. Training Facilities -- Training Facilities Other Than Buildings (CCN 179) (Cont.)

c. What use is being made of the facility?

N/A

d. What is the cost to upgrade the facility to substandard?

N/A

e. What other use could be made of the facility and at what cost?

N/A

f. Current improvement plans and programmed funding:

N/A

g. Has the facility's condition caused a "C3" or "C4" designation on your BASEREP?

N/A

Facilities (Cont.)

F. Training Equipment

1. List any major or unique equipment, which in your opinion, would be cost prohibitive to replicate or move to a new site should you be required to close or relocate. Indicate if it is feasible to relocate the equipment, gross tonnage, cube and the estimated downtime for training if relocated.

Equipment	Relocatable (Y/N)	Gross tons*	Cube (ft^3)	Estimated Down Time
Research Ship	N			
NPS/NASA Institute	N			
Ocean Acoustic Tomography	Y	L		1 year
IUSS Array	N			
SMQ-11 Link	Y			purchase
Remotely Piloted Vehicle	Y	L		3 months
Doppler Radar	Y	L		3 months
Ocean Scan Radar	Y	L		3 months
FLTSATCOM	Y			6 months
Wind Tunnels	Y	B		2 years
Linear Accelerator	Y	R		2 years
Flash X Ray	Y	R		6 months
Turbo Propulsion	Y	B		2 years
AUV Tanks	N			
Rocket and Ramjet Test Cells	Y	B		1 year
Gas Dynamics	Y	B		1 year
Gas Turbine	Y	B		6 months
Computer Center	Y	B		6 months
Radar	Y	B		1 year
Infra Red Search and Track	Y	L		
Aviation Safety	Y			6 months

*** Gross tons not used.**
L indicates that a special location is needed, as described in the following paragraphs.
B indicates that special construction, or a separate building needs to be constructed.
R indicates that radiation shielding is needed.
Estimate Down Time is the time required to come back into operation after construction is completed on the room/building to house the facility.

The facilities listed in the above table are all laboratories which are described more completely in other sections of this response. Those special characteristics which make these particular facilities difficult or impossible to move are described below.

RESEARCH SHIP: Classes and research that use at-sea equipment are scheduled on a research ship that is berthed on the Monterey Bay. The operational Oceanography and Air-Ocean Science Curricula depend critically on the availability of a research ship. The ship is operated by a university consortium, of which NPS is a part. NPS is the major user of ship time, and also the major contributor to outfitting the ship.

NPS/NASA INSTITUTE: The Aeronautics program requires sophisticated computational fluid dynamics and experimental work on flow about high angle of attack air foils. Some, but not all, of the capabilities needed to carry on this work reside at NPS. NPS has expanded its capabilities by setting up a joint institute with NASA Ames (near San Jose). Professors in this institute reside both at NPS and Ames, and students do some class work at Ames.

OCEAN ACOUSTIC TOMOGRAPHY: Acoustics is used in this program to map fine scale ocean properties in the littoral zone, using Monterey Bay and the surrounding coastal area as the experimental area. The Monterey location is ideal because of the complexity of the region, the geographical location which has long acoustic paths from all over the world (it is a site for the international global warming project, with NPS participation), and nearby cooperating institutions.

IUSS ARRAY: The Point Sur array is located 30 miles south of NPS. Custody of this array and its operations building has been taken over by NPS. The data will now be acquired and managed by NPS for instruction and Navy research, and to support other institutions' research.

SMQ-11 LINK: This satellite down-link is crucial for real-time weather analysis and forcasting for instruction and research. The data link is currently supplied by FNMOC.

REMOTELY PILOTED VEHICLE: The aircraft requires an air field in a location where remotely piloted operations can be undertaken. A non-urban location is needed.

DOPPLER RADAR: The Doppler weather radar can be moved, but operational data links must be provided to the School's location. NPS programs require that it be installed and used in a coastal environment in order to support littoral zone instruction and research.

OCEAN SCAN RADAR: The radar can be moved , but requires an open ocean front location. In order to undertake relevant research, the location must be one that has complex undercurrent and wind structure, and a coast line that includes complex terrain.

GAS DYNAMICS: An 8000 cu ft dried air plant rated to 300 psi at 600 hp pumping capacity is required. The room must contain a supersonic wind tunnel, a free jet wind tunnel, and a shock tube. Acoustic shielding and a sound supression tower is needed, and internal acoustic supression for the control room.

GAS TURBINE: A test cell is required that can contain a full-size gas turbine engine, including the mountings, exhaust, and sound supression. An external control room is required.

COMPUTER CENTER: The computer center is described in the laboratory section of this report. Its installation requires approximately 150X200 ft of floor space for hardware and offices for operating personnel. The hardware requires adequate electrical power and air conditioning for the heat generated by the mainframe and associated equipment.

RADAR: The radar lab operates a large number of military and commercial radars, as described in the laboratory section. Mountings for the rotating antenna are required in an elevated location. The area must be such that personnel are protected from rf radiation.

INFRA RED SEARCH AND TRACK: The engineering development model of the Navy IRST is installed on the roof of the tallest NPS building. This location allows the sea surface to be scanned in order to acquire environmental background information that is used to update Navy infra red models. The system can be moved, but a coastal location with line of sight to the open ocean is required.

AVIATION SAFETY: Aviation Safety has a large collection of aircraft parts and assemblies that have been gathered from crashes. These materials are used as an integral part of class work and hands on laboratory investigations. Maintaining the integrity of these materials and preserving their state so that they are the same as during the crash site collection time is critically important. Moving the materials would require special handling and packing to preserve this intergity.

Facilities (Cont.)

G. Training Areas

1. Complete the following table for all training areas considered unusable (i.e., overgrown, impassable, etc.).

Training Area	Unusable Acres	Reason Unusable
N/A		

2. List the training areas where availability or use is limited by concurrent use of another training area or facility (i.e., proximity of live fire range, an LZ within a larger training area, etc.).

Training Area	Limitation(s) on Use or Availability
N/A	

3. For **each** training area with environmental restriction, describe the restriction, the impact on training (discuss any National Environmental Policy Act documents required prior to the commencement of the training), and any mitigation required.

TRAINING AREA: N/A
RESTRICTION: N/A
IMPACT ON TRAINING: N/A
MITIGATION REQUIRED: N/A

Facilities (Cont.)

H. Berthing Capacity

1. For each **Pier/Wharf** in your plant account list the following **structural characteristics**. Indicate the additional controls required if the pier is inside a Controlled Industrial Area or High Security Area. Provide the average number of days per year over the last eight years that the pier was out of service (OOS) because of maintenance, including dredging of the associated slip:

Table 1

Pier/ Wharf & Age[1]	CCN[2]	Moor Length (ft)	Design Dredge Depth[3] (ft) (MLLW)	Slip Width[4] (ft)	Pier Width (ft)[5]	CIA/Security Area? (Y/N)[6]	ESQD Limit[7]	# Days OOS for maint.
N/A								

[1] Original age and footnote a list of MILCON improvements in the past 10 years.
[2]Use NAVFAC P-80 for category code number.
[3]Comment if unable to maintain design dredge depth
[4]Water distance between adjacent finger piers.
[5]Indicate if RO/RO and/or Aircraft access. Indicate if pier structures limit open pier space.
[6]Describe the additional controls for the pier.
[7]Net explosive weight. List all ESQD waivers that are in effect with expiration date.

2. For each **Pier/Wharf** in your plant account list the following **ship support characteristics**:

Table 2

Pier/ Wharf	OPNAV 3000.8 (Y/N)	Shore Pwr (KVA) & 4160V (KVA)	Comp. Air Press. & Capacity[1]	Potable Water (GPD)	CHT (GPD)	Oily Waste[1] (gpd)	Steam (lbm/hr & PSI)[2]	Fendering limits[3]
N/A								

[1]List only permanently installed facilities.
[2]Indicate if the steam is certified steam.
[3]Describe any permanent fendering arrangement limits on ship berthing.

Facilities (Cont.)
H. Berthing Capacity (Cont.)

3. For each **pier/wharf** listed above state today's normal **loading**, the maximum capacity for berthing, maximum capacity for weapons handling evolutions, and maximum capacity to conduct intermediate maintenance.

Table 3

Pier/ Wharf	Typical Steady State Loading[1]	Ship Berthing Capacity	Ordnance Handling Pier Capacity[2]	IMA Maintenance Pier Capacity[3]
N/A				

[1]Typical pier loading by ship class with current facility ship loading.
[2]List the maximum number of ships that can be moored to conduct ordnance handling evolutions at each pier/berth without berth shifts. Consider safety, ESQD and access limitations.
[3]List the maximum number of ships that can be serviced in maintenance availabilities at each pier without berth shifts because of crane, laydown, or access limitations.

4. For each **pier/wharf** listed above, based on Presidential Budget 1995 budgeted **infrastructure improvements in the Presidential Budget 1995 through FY 1997 and the BRAC-91 and BRAC-93 realignments**, state the expected normal **loading**, the maximum capacity for berthing, maximum capacity for weapons handling evolutions, and maximum capacity to conduct intermediate maintenance.

Table 4

Pier/ Wharf	Typical Steady State Loading[1]	Ship Berthing Capacity	Ordnance Handling Pier Capacity[2]	IMA Maintenance Pier Capacity[3]
N/A				

[1]Typical pier loading by ship class with current facility ship loading.
[2]List the maximum number of ships that can be moored to conduct ordnance handling evolutions at each pier/berth without berth shifts. Consider safety, ESQD and access limitations.
[3]List the maximum number of ships that can be serviced in maintenance availabilities at each pier without berth shifts because of crane, laydown, or access limitations.

5.a. How much pier space is required to **berth and support ancillary craft** (tugs, barges, floating cranes, etc.) currently at your facility? Indicate if certain piers are uniquely suited to support these craft.

N/A

Facilities (Cont.)
H. Berthing Capacity (Cont.)

5.b. What is the average pier loading in ships per day due to **visiting ships** at your base. Indicate if it varies significantly by season.

N/A

5.c. Given **no funding or manning limits**, what modifications or improvements would you make to the waterfront infrastructure to increase the cold iron ship berthing capacity of your installation? Provide a description, cost estimates, and additional capacity gained.

N/A

5.d. Describe any **unique limits or enhancements** on the berthing of ships at specific piers at your base.

N/A

Facilities (Cont.)

I. Weapons and Munitions

Please answer the following questions if your activity performs any stowage or maintenance on any of the following ordnance commodities types:

ORDNANCE COMMODITY TYPES	
Mines	Expendables
Torpedoes	INERT
Air Launched	CADS/PADS
Threat	Strategic Nuclear
Surface Launched Threat	Tactical Nuclear

1. Provide present and predicted inventories (coordinate with inventory control manager) and maximum rated capability of all stowage facilities at each weapons storage location controlled by this activity. In predicting the out year facility utilization, distribute overall ordnance compliment to the most likely configuration. The maximum rated capability is also an out year projection taking into account any known or programmed upgrades that may increase current stowage capacity. When listing stowage facilities, group by location (e.g. main base, outlying field, special area).

Facility Number	PRESENT INVENTORY		PREDICTED INVENTORY FY 2001		MAXIMUM RATED CAPABILITY	
	TONS	SQ FT	TONS	SQ FT	TONS	SQ FT
	N/A					
TOTAL						

2. For each Stowage facility identified in question 1 above, identify the type of facility (specify if "igloo", "box", etc.). Identify the type of ordnance commodity (from the list above) which are currently stowed in that facility and all other ordnance types which, given existing restrictions, could be physically accommodated in that stowage facility. Specify below if such additional accommodation would require a modification of the facility (e.g. enhanced environmental controls, ESQD waiver).

- Identify the reason(s) for which this ordnance is stored at your facility from the following list: own activity use (training); own activity use (operational stock); Receipt/Segregation/ Stowage/Issue (RSSI); transhipment/awaiting issue; deep stow (war reserve); deep stow (awaiting Demil); other. Explain each "other" entry in the space provided, including ordnance stowed which is not a DON asset.

Facilities (Cont.)
I. Weapons and Munitions (Cont.)

Facility Number/Type	Currently Stowed Commodity Type(s)	Reason for Stowage at your Activity	Commodity Type(s) Which Can Be Stowed
N/A			

Additional comments: **NONE**

3. Identify the rated category, rated NEW and status of ESQD arc for each stowage facility listed above.

Facility Number / Type	Hazard Rating (1.1-1.4)	Rated NEW	ESQD Arc		
			Established (Y / N)	Waiver (Y / N)	Waiver Expiration Date
N/A					

4. Identify any restrictions which prevent maximum utilization of your facilities. If restrictions are based on facility conditions, specify reason, the cost to correct the deficiency, and identify any programmed projects that will correct the deficiency and/or increase your capability.

N/A

Facilities (Cont.)
I. Weapons and Munitions (Cont.)

5. Identify if your activity performs any of the following functions on any of the ordnance commodities previously listed. Technical support includes planning, financial, administrative, process engineering and SOP support. Within each related function identify each ordnance commodity type for which you provide these services and the total Direct Labor Man Hours (DLMHs) expended (FY 1994); identify only those DLMHs expended by personnel under your command.

Related Functions	Performed ? (Y / N)	Type of Commodity	DLMHs
Maintenance (specify level)	N/A		
Testing	N/A		
Manufacturing	N/A		
Outload	N/A		
Technical Support	N/A		

Facilities (Cont.)
I. Weapons and Munitions (Cont.)

J. Special Military Facilities

1. For airfields in your plant account, give the designation, length, width, load capacity, lighting configurations, and type of arresting gear for each runway.

Runway	Length (ft)	Width (ft)	Weight Bearing Capacity	Lighting				Arresting gear (Type)
				F	P	C	N	
N/A								

F -- Full Lighting (approach, runway edge, center, and threshold)
P -- Partial Lighting (less than full)
C -- Carrier Deck Lighting Simulated (embedded)
N -- No lighting

2. List all facilities and equipment that play a special role in military operations (e.g., radar, communications, command and control, oceanographic facilities) at the installation.

Type of Facility	Operational Mission of Facility
FNMOC *	Provide on an operational basis numerical meteorological oceanography products peculiar to the needs of Department of Defense

* The Fleet Numerical Meteorological Oceanographic Center (FNMOC) is the largest NPS tenant, residing in NPS facilities. They have one of the world's largest Cray supercomputers, which directly supports the fleet in weather and ocean state forecasting. FNMOC is directly supported by NPS.

K. Other Facilities

1. In the following table, indicate the available space and condition for each facility designated or used for the functions indicated. The basic unit of measure is KSF. However, categories may be expanded to accommodate different units of measure.

Facilities (Cont.)

Type of Facility	NAVFAC (P-80) category code	Unit of Measure	Adequate	Substandard	Inadequate	Total
Maintenance Facilities	210-xx	KSF	41.8	-	-	41.8 *
Production Facilities	220-xx	N/A	-	-	-	-
RDT&E Facilities	300-xx	KSF	227.0 **	10.9	6.3	244.2
Supply Facilities	400-xx	KSF	17.2	-	0.8	18.0
Dental Clinic (only)	500-xx	KSF	-	6.1	-	6.1
Administrative Facilities	600-xx	KSF	19.9	74.6	0.8	108.5
Utilities/Grounds ***	800-xx	$1000s	75.7	-	-	75.7

*** This number accounts for the recent demolition of most of the public works (PW) facilities and completion of the new PW complex (MILCON P-146), which added approximately 32 KSF.**

**** This number was derived from the 1992 NPS Master Plan, with most recent construction projects added in; specifically, 27,991 SF for the new Mechanical Engineering Lab building, and 9,977 SF for the new academic building, Glasgow Hall.**

***** The current plant value ($1,000s) was the only consistent unit of measure for this very broad category of facilities. Specific utility and parking capacity numbers are provided later in this data call.**

2. In accordance with NAVFACINST 11010.44E, an inadequate facility cannot be made adequate for its present use through "economically justifiable means." For all the categories above where inadequate facilities are identified provide the following information:

a. Facility type/code:

A. 300-XX: BLDG 224: This is a 1953 semi-permanent facility/CCN 310-37, Ocean Science Laboratory, 130 SF.

B. 300-XX: BLDG 500: This is a 1906 temporary building/CCN 310-15, Materials Lab (415 SF); CCN 310-19, Physics Lab (640 SF); CCN 310-23, Combined Research Lab (217 SF); CCN 319-15, RD&T Storage Lab (2,023 SF); CCN 320-10, Underwater Equipment Lab (899); and CCN 321-10, Technical Services Lab (2,007).

C. 400-XX: BLDG 194: This facility is used for chlorine storage in support of the NPS pool/CCN 441-40, Hazardous/Flammable storage (456 SF).

Facilities (Cont.)
J. Special Military Facilities (Cont.)

D. 400-XX: BLDG 335: This facility is a general storage shed/CCN 441-35 (396 SF).

E. 600-XX: BLDG 223: This is a semi-permanent administrative facility/CCN 610-10 (800 SF).

b. What makes it inadequate?

A. Building 224 is old, obsolete and in a poor location.

B. Building 500 is a 1906 facility; old, obsolete and poor location.

C. Building 194 is a 1954 temporary structure; poor physical condition.

D. Building 335 is in a poor location.

E. Building 224 is a 1952 old semi-permanent facility in a poor location.

c. What use is being made of the facility?

A. Building 224 is used as an oceanographic research/instruction area and a print plant.

B. Building 500 is the Mechanical Engineering Lab Annex Building.

C. Building 194 is a chlorine storage facility for the NPS swimming pool.

D. Building 335 is general bottled gas storage.

E. Building 223 is used as a student study area and as administrative office space.

d. What is the cost to upgrade the facility to substandard?

There are no cost estimates to upgrade any of these facilities; it is not considered economically feasible. The upgrade costs would exceed over 50% of the replacement cost in all cases. In addition, four of the five buildings are poorly situated; incompatible land use.

e. What other use could be made of the facility and at what cost?

N/A

f. Current improvement plans and programmed funding:

N/A

Facilities (Cont.)
J. Special Military Facilities (Cont.)

g. Has this facility condition resulted in c3 or c4 designation on your BASEREP?

No. None of the above listed facilities have directly caused a C3 or C4 rating in our BASEREP; they are all too small too negatively impact the school's mission.

Facilities (Cont.)

L. Maintenance, Repair, & Equipment Expenditure Data

1. Provide the **maintenance, repair, and equipment expenditure data** asked for in the table on the following page. Project expenditures to FY97. Do not include data on Detachments who have received this Data Call directly. The following definitions apply:

MRP: Maintenance of Real Property Dollars is a budgetary term used to gather the expenses or budget requirements for facility work including recurring maintenance, major repairs, and minor construction (non-MILCON) inclusive of all Major Claimant funded Special Projects. It is the amount of funds spent on or budgeted for maintenance and repair of real property assets to maintain the facility in satisfactory operating condition. For purposes of this Data Call, MRP includes all M1/R1 and M2/R2 expenditures.

CPV: Current Plant Value of Class 2 Real Property is the hypothetical dollar amount to replace a Class 2 facility in kind with today's dollars. Example: the cost today to replace a wood frame barracks with a wood frame barracks.

ACE: Acquisition Cost of Equipment is the total acquisition cost of all "personal property" equipment maintained at your activity which includes the cost of installed equipment directly related to mission execution, such as lab test equipment. Class 2 installed capital equipment that is an integral part of the facility will not be reported as ACE.

Facilities (Cont.)
K. Other Facilities (Cont.)

Fiscal Year	MRP ($M)	CPV ($M) *	ACE ($M)
FY1985	6.4	226	
FY1986	5.9	238	
FY1987	5.2	238	
FY1988	4.1	252	
FY1989	6.1	259	
FY1990	7.2	268	
FY1991	5.9	270	
FY1992	5.2	276	
FY1993	4.5	312	
FY1994	5.9	325 **	
FY1995	4.3	335 ***	
FY1996	4.1	345 ***	
FY1997	3.7	355 ***	

*** The CPV includes total current plant value for NPS, including land, utilities and buildings.**

**** The FY 94 figure has been adjusted to reflect the latest CPV figure from the September 30, 1993 report, plus all new construction completed within the last year.**

***** The out years have had an assumed 3% inflation adjustment index applied.**

M. Base Infrastructure and Investment

Facilities (Cont.)

1. List the project number, description, funding year, and value of the **capital improvements at your base completed (beneficial occupancy) during 1988 to 1994**. Indicate if the capital improvement is a result of BRAC realignments or closures.

Project	Description	Fund Year	Value
P-157	Applied Instruction Building	1990	$11M
P-097	Library Expansion	1990	$6.6M
P-146	Public Works Complex	1991	$3.8M
P-161	King Hall Expansion	1991	$2.3M
P-005	Addition to Bldg No. 700, FNMOC	1991	$1.0M
P-137	Child Care Center	1991	$1.9M
HC-5-80	Housing Office	1991	$0.4M
P-004	Meteorological Building, FNMOC	1992	$4.7M
P-139	Mechanical Engineering Lab Building	1992	$10.2M
P-162	Fire Protection, Herrmann Hall	1992	$1.2M

NOTE: None of the above listed projects are BRAC related.

2. List the project number, description, funding year, and value of the **non-BRAC related capital improvements planned** for years 1995 through 1997.

Project	Description	Fund Year	Value
P-152	Spanagel Hall Alterations	1997	$6.5M
P-151	Replace Gymnasium	1997	$4.1M

3. List the project number, description, funding year, and value of the **BRAC related capital improvements planned** for 1995 through 1999.

Project	Description	Fund Year	Value
N/A			

Location

1. Complete the following tables to show geographic area for male and female **recruits** attending each training center. Use the Navy Recruiting Area's for USN and the Marine Recruiting District's for USMC for the geographic areas. Responses should include numbers from training centers closed in previous BRAC's.

a. Incoming male recruits

Geographic Area	Number of Incoming Male Recruits		
	FY1992	FY1993	FY1994
N/A			

a. Incoming female recruits

Geographic Area	Number of Incoming Female Recruits		
	FY1992	FY1993	FY1994
N/A			

Location (Cont.)

2. Complete the following table to show the geographic destination of **Recruits** to either their Ultimate Duty Station (Fleet Unit/Shore Activity) or follow-on training.

Geographic Area	Destination of Outgoing Students by Number					
	Ultimate Duty Station			Follow-on Training		
	FY1992	FY1993	FY1994	FY1992	FY1993	FY1994
SoCal/SW	N/A					
No California	N/A					
PacificNW	N/A					
Hawaii	N/A					
GulfCst/FL	N/A					
FLA/GA	N/A					
SoCarolina	N/A					
NoCar/Virginia	N/A					
Northeast	N/A					
GrtLks/Tenn	N/A					
OUTUS(-HI)	N/A					
Other CONUS	N/A					
TOTALS						

Legend:

Southern California/SW:	San Diego, Pendleton, Twentynine Palms, Long Beach, Yuma
Northern California:	San Francisco area
Pacific Northwest:	Washington State
Hawaii:	HI
GulfCoast/Florida:	TX, LA, MS., AL, FLA (Panhandle), Key West
Florida/Georgia:	Jacksonville, Cecil Field, Mayport, Kings Bay
South Carolina:	Charleston, Beaufort, Parris Island
North Carolina/ Virginia:	Lejeune, Norfolk, National Capital Region
Northeast:	New England States, Pennsylvania, New York
Great Lakes/Tennessee:	NTC Great Lakes, Memphis, Millington
OUTUS:	Outside Continental US
Other CONUS:	CONUS locations not specifically listed

Location (Cont.)

3. Complete the following table to show the active duty customer base for **each** formal school/educational institution/CAX.

Educational Institution/Formal School/CAX: Naval Postgraduate School

Geographic Area	Number of Incoming Students		Destination of Outgoing Students			
			Fleet Units/Shore Activity		Follow on Training	
	FY1993	FY1994	FY1993	FY1994	FY1993	FY1994
SoCalif/SW	162	97	84	51	10	5
NoCalifornia	85	28	36	36	10	9
PacificNW	39	25	14	15	1	0
Hawaii	31	31	13	9	1	0
GulfCst/FL	55	28	22	21	5	1
FLA/GA	58	41	34	28	10	1
SoCarolina	31	8	15	4	0	2
NoCar/Virginia	150	93	206	120	17	8
Northeast	50	29	144	56	107	63
GrtLks/TENN	21	7	17	15	0	1
OUTUS(-HI)	163	97	104	57	5	3
Other CONUS	0	0	3	2	0	0
Totals	845	484	692	414	166	93

* Total students from all services.
* FY94 Numbers reflect year-to-date only.

Location (Cont.)

Educational Institution/Formal School/CAX: Curricula Conducted at Other Universities*

Geographic Area	Number of Incoming Students		Destination of Outgoing Students			
			Fleet Units/Shore Activity		Follow on Training	
	FY1993	FY1994	FY1993	FY1994	FY1993	FY1994
SoCalif/SW	26	4	10			
NoCalifornia	10	2	1			
PacificNW	15	1				
Hawaii	8	1				
GulfCst/FL	13		10			
FLA/GA	2		2			
SoCarolina	12					
NoCar/Virginia	30	3	20			
Northeast	15	4	5		4	
GrtLks/TENN	2		1			
OUTUS(-HI)	24	3	9			
Other CONUS						
Totals	157	18	124**	30***		

* Civilian Institutions and Legal Education Programs.

** Unknown for 66 outgoing students for FY93.

*** Unknown for 30 outgoing students for FY94 Year-to-date.

Location (Cont.)

Educational Institution/Formal School/CAX: Defense Resources Management Institute

Geographic Area	Number of Incoming Students		Destination of Outgoing Students			
			Fleet Units/Shore Activity		Follow on Training	
	FY1993	FY1994	FY1993	FY1994	FY1993	FY1994
SoCalif/SW						
NoCalifornia	2		2			
PacificNW						
Hawaii						
GulfCst/FL						
FLA/GA						
SoCarolina						
NoCar/Virginia	1	2	1	2		
Northeast						
GrtLks/TENN						
OUTUS(-HI)						
Other CONUS						
Totals	3	2	3	2		

* DRMI has few active-duty Navy students.

4. For training which has direct student input from fleet units or provides graduates to serve in fleet units (or both) provide the following information.

Type of Training	% Incoming Students < 50 miles from Trng Facility	% Graduates with Permanent Duty Station < 50 miles from Trng Facility	% Students whose Total Training Pipeline is < 20 weeks	% Graduates with follow-on trng < 50 miles from Training Facility
FO[a]	100%	100%	UNKNOWN	25%
PD[b]	100%	100%	UNKNOWN	47%
PD[c]	100%	100%	0%	0%
SP(0)[d]	0%	0%	100%	0%

[a]Aviation Safety Officer Course
[b]Aviation Safety Command Course
[c]NPS
[d]Practical Comptrollership Course

5. Is your installation located within 50 miles of a operational base? If yes, list the operational bases in your area.

No

6. Is your installation located within 50 miles of a major educational institution?

Yes

7. Does your location facilitate sea/shore rotation of instructors? (i.e., do instructors have the opportunity for multiple tours within 50 miles of your geographic location?)

No, but NPS has few military instructors.

8. Does the location of the installation permit any specialized training with other operational units (e.g. Battle Groups or Joint forces)? If so, provide details.

N/A

9. What civilian owned facilities located in the vicinity **currently** support your mission?

Facility Name	Training Use	Distance
Point Sur	Research Vessel	Varies

Location (Cont.)

Type of Training	% Incoming Students < 50 miles from Trng Facility	% Graduates with Permanent Duty Station < 50 miles from Trng Facility	% Students whose Total Training Pipeline is < 20 weeks	% Graduates with follow-on trng < 50 miles from Training Facility
FO[a]	100%	100%	UNKNOWN	25%
PD[b]	100%	100%	UNKNOWN	47%
SP(0)[c]	0	0	100	0

[a]Aviation Safety Officer Course
[b]Aviation Safety Command Course
[c]Practical Comptrollership Course

5. Is your installation located within 50 miles of a operational base? If yes, list the operational bases in your area.

No

6. Is your installation located within 50 miles of a major educational institution?

Yes

7. Does your location facilitate sea/shore rotation of instructors? (i.e., do instructors have the opportunity for multiple tours within 50 miles of your geographic location?)

No, but NPS has few military instructors.

8. Does the location of the installation permit any specialized training with other operational units (e.g. Battle Groups or Joint forces)? If so, provide details.

N/A

9. What civilian owned facilities located in the vicinity **currently** support your mission?

Facility Name	Training Use	Distance
Point Sur	Research Vessel	Varies
Monterey Bay Aquarium Research Institute	Oceanographic Research	12 miles

Moss Landing Marine Labs	Oceanographic Research	12 miles
Monterey Peninsula College	Teaching of some English courses	1 mile
Monterey Institute of International Studies	Research	2 miles
Hopkins Marine Station, Stanford University	Research	3 miles
U. C. Santa Cruz	Research	45 miles

10. What civilian owned facilities located in the vicinity **could** support your mission?

Facility Name	Potential Training Use	Distance
Cal State Monterey Bay[a]	Teaching, Research & Infrastructure	7 miles

[a]Just opened

11. List the advantages and disadvantages of your location for each type of training being conducted at your installation.

Most of the hours of training performed at NPS are in the category of Professional Development. This category requires long periods of concentrated education in sub-specialties and leading to accredited graduate degrees. For this type of training an educational environment is a necessity with library, laboratories and specialized faculty as well as family housing, good schools and a safe, clean, attractive environment. NPS has gradually acquired the unique human and physical capital that provides this advanced study atmosphere. To re-create it elsewhere would take years and be very expensive in the immediate future. Over the long term as well, this location had the following advantages:

a.. The Monterey Bay area has unique educational resources for a military university. The bay itself provides a laboratory for oceanographic and meteorological studies, ocean engineering and littoral experiments as well as an unusual underwater canyon which can be studied with the Monterey Aquarium Research Institute's autonomous underwater research vessel. In addition, an oceanographic research vessel is available at low cost through cooperative arrangements with other research institutions such as Stanford's Hopkins Marine Station in Monterey and the University of California, Santa Cruz. The Fleet Numerical Meteorology and Oceanography Center provides near real-time data on global environmental data that is used by students and faculty. The Defense Language

Location (Cont.)

Institute provides language training for some of the NPS students. The advent of the California State University Monterey Bay provides the ability to offer undergraduate courses for programs such as the CNO's "Sailor to Admiral" officer acquisition education.

b.. Monterey is a desirable, convenient place to live, both for students and faculty. For the faculty, the location partially makes up for the low government salaries and lack of benefits compared to civilian universities. For the students, it is an attraction for family living that supports the academic environment. The large number of opportunities for convenient and low-cost spousal education include Monterey Peninsula College, Monterey Institute of International Studies, Golden Gate University, Hartnell College and San Jose State in addition to those mentioned above. All students can be housed in government housing so housing costs are low.

c. A number of DoD institutions have grown up around the NPS to take advantage of the ability to interact with NPS, faculty and students. These include:

a. Defense Manpower Data Center
b. Defense Personnel Security Research Center
c. Defense Institute for Training Analysis
d. Defense Health Resources Study Center
e. Institute for Defense Education Analysis
f. Defense Business Management University
g. Defense Resources Management Institute
h. U.S. Army's TRADOC Monterey
i. Army Research Institute, Presidio of Monterey
j. Naval Research Laboratory, West
k. Fleet Numerical Meteorology and Oceanography Center
l. National Oceanic and Atmospheric Administration Ocean Applications Branch

The presence of these institutions make true professional education more feasible than without such convenient interaction.

d. The recent closure of Fort Ord has made available housing and facilities which make expansion of the educational programs at NPS quite feasible at low cost.

There are some corresponding disadvantages to this location for professional development education.

a. The location away from other Navy installations means that some costs are probably higher than if located at San Diego or Norfolk, the two concentrations of officers.

Location (Cont.)

b. The attractive location means that some costs (buying a house) are somewhat higher than elsewhere and spousal employment opportunities are somewhat limited.

c. The closure of Fort Ord reduces the local military infrastructure. In particular, the effects of the loss of the Silas B. Hayes Hospital have not been totally solved, although great progress has been made in meeting the medical needs of the active-duty personnel in the Monterey area.

The next largest volume of training at this location is the functional and skill progression training of the Aviation Safety School and the skill progression training of the Defense Resources Management Institute. The advantages and disadvantages for these are largely the same as above, but the Safety School and the Institute are advantaged by being colocated with the graduate programs, faculty and library and other assets at NPS.

Features and Capabilities

A. Weather

1. List training events by Course Identifier that can be impacted by weather. Indicate how many training hours were cancelled or rescheduled due to inclement weather.

Course Identifier	Hours Canx/ Resched Due to Weather	
	FY1992	FY1993
All	0	0

2. How many training days was the training center/school closed due to inclement weather?

Fiscal Year	Training Days Lost
1992	0
1993	0

3. Do the normal weather conditions at the most frequently used training areas pose a recurring problem for scheduling training? If so, list the alternate training areas and the CIN/CAX they support.

No weather problems to report.

Features and Capabilities (Cont.)

B. Encroachment

1. Do current estimates of population growth and development or environmental constraints pose problems for existing or planned mission?

No. There are no population growth programs which will impact our mission. Latest population projections from the City of Monterey reflect a current city population of 31,000 growing to an estimated 35,000 by the year 2015. The areas immediately adjacent to the base are residential areas with no possible expansion at this time. In addition, no current environmental constraints pose any serious problem to existing or planned mission.

2. Provide a copy of the current and proposed land development plans for the area surrounding the installation (i.e., the local government's comprehensive land-use plan).

A copy of the City of Monterey's General Plan is attached.

Features and Capabilities (Cont.)

C. Unique Features

1. Do the geographic location and the associated natural features of this installation contribute to the quality of training or detract from the quality of training at the installation? Explain.

The Naval Postgraduate School has curricular programs and associated research which require an ocean environment. These are:

Operational Oceanography Curriculum
Air-Ocean Science Curriculum
Oceanography Curriculum
Ocean Acoustic Tomography research
Coastal Upwelling research
Near Shore Processes instruction and research
Ocean Infrared Signatures research
Ocean Acustics using the existing Point Sur IUSS array

The School operates a research ship in the Monterey Bay region in support of these programs. The ocean location and the unique locality with complex bottom and current features make this region ideal to carry out a wide range of Navy relevant programs. It would be much more costly to run these programs from another location.

Because of its unique ocean environment, the location also contains a number of education and research instutions devoted to ocean research. Interactions with them enhance the NPS programs. If the School were to move it would have to be to a similar environment or the oceanographic programs would suffer a considerable loss of viability, with subsequent degradation of officer education and Navy research.

2. What other factors beyond your control have affected training over the past five years? Describe the resulting impact.

N/A

3. Identify any unique (one of a kind) features (function, equipment, ranges, etc.) possessed by this training installation that have not been previously mentioned. Please list each feature separately and provide a narrative explanation of the importance of the unique feature.

N/A

Features and Capabilities (Cont.)

D. Quality of Life

1. Military Housing

(a) Family Housing:

(1) Do you have mandatory assignment to on-base housing?

NO

(2) For military family housing in your locale provide the following information:

Type of Quarters	Number of Bedrooms	Total number of units	Number Adequate	Number Substandard	Number Inadequate
Officer	4+	131	131	-	-
Officer	3	686	686	-	-
Officer	1 or 2	74	74	-	-
Enlisted	4+	N/A	-	-	-
Enlisted	3	N/A	-	-	-
Enlisted	1 or 2	N/A	-	-	-
Mobile Homes		N/A	-	-	-
Mobile Home lots		N/A	-	-	-

NOTE: In addition to the above listed, NPS "owned" assets; NPS also has assignment rights to 600 military family housing units at the Presidio of Monterey Annex (the old Fort Ord). These units are earmarked to support approximately 150 enlisted NPS personnel and 450 more officers, students and staff, attached to NPS.

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

(3) In accordance with NAVFACINST 11010.44E, an inadequate facility cannot be made adequate for its present use through "economically justifiable means". For all the categories above where inadequate facilities are identified provide the following information:

a. Facility Type/Code:

Bldg No. 224; semi-permanent Academic Instruction Building/CCN, 171-10; only 2,925 SF. Constructed in 1952.

b. What makes it inadequate?

Primarily age and location. The facility is old and obsolete and has inadequate fire protection. It is located next to the school's boiler plant and main student parking lot; it has an incompatible land use.

c. What use is being made of the facility?

It is currently used as an oceanographic research/instruction area; for administrative offices; and a print plant.

d. What is the cost to upgrade the facility to substandard?

This information is not available. Due to incompatible land use, upgrade of this facility is not considered an alternative.

e. What other use could be made of the facility and at what cost?

N/A

f. Current improvement plans and programmed funding:

N/A

g. Has the facility's condition caused a "C3" or "C4" designation on your BASEREP?

No. Academic instruction area is too small to negatively impact NPS mission.

(4) Complete the following table for the military housing waiting list.

Pay Grade	Number of Bedrooms	Number on List[3]	Average Wait
O-6/7/8/9	1	N/A	N/A
	2	N/A	N/A
	3	0	0
	4+	0	0
O-4/5	1	N/A	N/A
	2	N/A	N/A
	3	1	14 Days
	4+	0	90 Days
O-1/2/3/CWO	1	N/A	N/A
	2	3	60 Days
	3	6	14 Days
	4+	1	90 Days
E7-E9	1	N/A	N/A
	2	N/A	N/A
	3	N/A	N/A
	4+	N/A	N/A
E1-E6	1	N/A	N/A
	2	N/A	N/A
	3	N/A	N/A
	4+	N/A	N/A

[3]As of 31 March 1994.

Features and Capabilities (Cont.)

(5) What do you consider to be the top five factors driving the demand for base housing? Does it vary by grade category? If so provide details.

	Top Five Factors Driving the Demand for Base Housing
1	Cost of Off Base Housing; prices of homes in Monterey are high
2	Availability of Housing; minimal waiting for a unit
3	Close proximity to NPS and elementary school
4	Strong family environment; outstanding security
5	Public School System

(6) What percent of your family housing units have all the amenities required by "The Facility Planning & Design Guide" (Military Handbook 1190 & Military Handbook 1035-Family Housing)?

100%

(7) Provide the utilization rate for family housing for FY 1993.

Type of Quarters	Utilization Rate
Adequate	95.5%
Substandard	N/A
Inadequate	N/A

(8) As of 31 March 1994, have you experienced much of a change since FY 1993? If so, why? If occupancy is under 98% (or vacancy over 2%), is there a reason?

The answer to both questions is "Yes". With the recent closure of Fort Ord, an adjacent Army base, NPS has had the unique opportunity to request as much military family housing as needed. In July '93, NPS first entered an inter-service support agreement (ISSA) for the assignment rights of 450 units. Today, we are on the verge of amending that ISSA for the assignment rights of 600 units. Simultaneously, we are having to leave vacant NPS units in support of two major Navy housing projects, i.e., structural repairs to 65 townhouses and a whole house repair of 102 wherry units. These factors have contributed to a lower than normal occupancy rate.

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

(b) BEQ:

(1) Provide the utilization rate for BEQs for FY 1993.

Type of Quarters	Utilization Rate
Adequate	80%
Substandard	58%
Inadequate	N/A

(2) As of 31 March 1994, have you experienced much of a change since FY 1993? If so, why? If occupancy is under 95% (or vacancy over 5%), is there a reason?

There are fewer personnel assigned than rooms (excess rooms)

(3) Calculate the Average on Board (AOB) for geographic bachelors as follows:

AOB = (# Geographic Bachelors x average number of days in barracks) / 365

Enlisted GB AOB = 10

(4) Indicate in the following chart the percentage of geographic bachelors (GB) by category of reasons for family separation. Provide comments as necessary.

Reason for Separation from Family	Number of GB	Percent of GB	Comments
Family Commitments (children in school, financial, etc.)	16	100%	Navy personnel only
Spouse Employment (non-military)	0	0	
Other	0	0	
TOTAL	16	100	

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

(5) How many geographic bachelors do not live on base?

4

(c) BOQ:

(1) Provide the utilization rate for BOQs for FY 1993.

Type of Quarters	Utilization Rate
Adequate	0
Substandard	86%
Inadequate	N/A

(2) As of 31 March 1994, have you experienced much of a change since FY 1993? If so, why? If occupancy is under 95% (or vacancy over 5%), is there a reason?

Lower utilization is due to DRMI and ASO scheduling of classes. Also, the two-week bi-annual school intersessional breaks add to lower utilization figures.

(3) Calculate the Average on Board (AOB) for geographic bachelors as follows:

AOB = (# Geographic Bachelors x average number of days in barracks) / 365

AOB Officer GB = 4

(4) Indicate in the following chart the percentage of geographic bachelors (GB) by category of reasons for family separation. Provide comments as necessary.

Reason for Separation from Family	Number of GB	Percent of GB	Comments
Family Commitments (children in school, financial, etc.)	25	60%	Navy personnel only, does not include other services/intn'l students
Spouse Employment (non-military)	8	20%	

Other	8	20%	
TOTAL	41	100	

(5) How many geographic bachelors do not live on base?

17 However, 19 USN and 2 non-Navy GBs currently reside in diverted Navy Family Housing designated as alternate BOQ facilities.

2. For on-base MWR facilities[4] available, complete the following table for each separate location. For off-base government owned or leased recreation facilities indicate distance from base. If there are any facilities not listed, include them at the bottom of the table.

LOCATION: Naval Postgraduate School **DISTANCE: 0**

Facility	Unit of Measure	Total	Profitable (Y,N,N/A)
Auto Hobby	Indoor Bays	0	N/A
	Outdoor Bays	0	N/A
Arts/Crafts	SF	0	N/A
Wood Hobby	SF	0	N/A
Bowling	Lanes	0	N/A
Enlisted Club	SF	2730	Y
Officer's Club	SF	50701	Y
Library **	SF	0	N/A
Library **	Books	0	N/A
Theater	Seats	0	N/A
ITT	SF	1994	Y
Museum/Memorial	SF	0	N/A

[4]Spaces designed for a particular use. A single building might contain several facilities, each of which should be listed separately.

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

Facility	Unit of Measure	Total	Profitable (Y,N,N/A)
Pool (indoor)	Lanes	0	N/A
Pool (outdoor)	Lanes	8	N
Beach	LF	0	N/A
Swimming Ponds	Each	0	N/A
Tennis CT	Each	12	N
Volleyball CT (outdoor)	Each	2	N
Basketball CT (outdoor)	Each	1	N
Racquetball CT	Each	3	N
Golf Course	Holes	18	Y
Driving Range	Tee Boxes	14	Y
Gymnasium	SF	13668	N
Fitness Center	SF	3200	N
Marina *	Berths	8	N
Stables	Stalls	0	N/A
Softball Fld	Each	3	N
Football Fld	Each	0	N/A
Soccer Fld	Each	1	N
Youth Center	SF	4500	N

*** The Marina is located at the Coast Guard Pier, one mile from the base.**

**** The main campus library, Dudley Knox Library, contains a collection of fiction and general level material for leisure reading, which is available for loan. It also contains a very large special collection on the history of the sea, both fiction and non-fiction, in support of campus recreation.**

NPS DC #23

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Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

3. Is your library part of a regional interlibrary loan program?

The Dudley Knox Library participates extensively in interlibrary loan programs, supplying and obtaining approximately 1700 books and photocopies each year from regional libraries and other libraries throughout the U.S. and the world.

4. Base Family Support Facilities and Programs

a. Complete the following table on the availability of child care in a child care center on your base.

Age Category	Capacity (Children)	SF			# of PN on Wait List	Avg Wait (Days)
		Adequate	Substandard	Inadequate		
0-6 Mos	16	414			0	0
6-12 Mos*	*	*			*	*
12-24 Mos	20	414			0	0
24-36 Mos	28	514			0	0
3-5 Yrs	72	828			0	0
5 Yrs #	14#	162			0	0

Note: * Figures for 6-12 mos are consolidated with 0-6 mos.
 # Before/after school care program at CDC for 5 yr olds.

b. In accordance with NAVFACINST 11010.44E, an inadequate facility cannot be made adequate for its present use through "economically justifiable means." For all the categories above where inadequate facilities are identified provide the following information: N/A

c. If you have a waiting list, describe what programs or facilities other than those sponsored

REVISED BY NPS [CAPT JON SCHMIDT] ON 10/11/94
SUBMITTED BY LT Ben D. Rim - FLD SUPT
10/14/94

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

3. Is your library part of a regional interlibrary loan program?

The Dudley Knox Library participates extensively in interlibrary loan programs, supplying and obtaining approximately 1700 books and photocopies each year from regional libraries and other libraries throughout the U.S. and the world.

4. Base Family Support Facilities and Programs

a. Complete the following table on the availability of child care in a child care center on your base.

Age Category	Capacity (Children)	SF			# of PN on Wait List	Avg Wait (Days)
		Adequate	Substandard	Inadequate		
0-6 Mos	16	X			0	
6-12 Mos*	*	*			*	
12-24 Mos	20	X			0	
24-36 Mos	28	X			0	
3-5 Yrs	24	X			13	
5 Yrs #	14#	X#			0	120#

Note: * Figures for 6-12 mos are consolidated with 0-6 mos.
 # Before/after school care program at CDC for 5 yr olds.

b. In accordance with NAVFACINST 11010.44E, an inadequate facility cannot be made adequate for its present use through "economically justifiable means." For all the categories above where inadequate facilities are identified provide the following information: N/A

c. If you have a waiting list, describe what programs or facilities other than those sponsored by your command are available to accommodate those on the list.

Home Care Providers

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

d. How many "certified home care providers" are registered at your base?

14

e. Are there other military child care facilities within 30 minutes of the base? State owner and capacity (i.e., 60 children, 0-5 yrs).

U.S. Army CDC facility at the Defense Language Institute. Capacity: 125, 0-5 yrs

f. Complete the following table for services available on your base. If you have any services not listed, include them at the bottom.

Service	Unit of Measure	Qty
Exchange	SF	28,663
Gas Station	SF	42,020
Auto Repair	SF	2,223
Auto Parts Store	SF	754
Commissary	SF	N/A
Mini-Mart	SF	2,804
Package Store	SF	6,811
Fast Food Restaurants	Each	N/A
Bank/Credit Union	Each	1
Family Service Center	SF	740
Laundromat	SF	N/A
Dry Cleaners/Tailor	Each	1,122
ARC	PN	N/A
Chapels (2)	PN	300
FSC Classrm/Auditorium	PN	N/A
Bookstore	SF	4,360
Beauty Shop	SF	847
Barber Shops (2)	SF	600
Optical Shop	SF	221

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

5. Proximity of closest major metropolitan areas (provide at least three):

City	Distance (Miles)
Salinas	30
Santa Cruz	30
San Jose	50

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

6. Standard Rate VHA Data for Cost of Living:

Paygrade	With Dependents	Without Dependents
E1	251.15	140.52
E2	251.15	157.94
E3	239.02	176.12
E4	266.55	186.03
E5	298.20	208.20
E6	361.48	246.07
E7	423.89	294.46
E8	385.49	291.43
E9	432.65	328.44
W1	377.03	286.34
W2	436.32	342.22
W3	466.49	379.21
W4	487.92	432.61
O1E	364.33	270.25
O2E	398.81	310.79
O3E	451.47	381.95
O1	333.48	245.73
O2	360.27	281.59
O3	365.58	307.79
O4	449.06	390.50
O5	478.14	395.41
O6	448.74	371.42
O7	382.94	311.13

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

7. Off-base housing rental and purchase

(a) Fill in the following table for average rental costs in the area for the period 1 April 1993 through 31 March 1994.

Type Rental	Average Monthly Rent		Average Monthly Utilities Cost
	Annual High	Annual Low	
Efficiency	$ 600	$ 450	$ 37
Apartment (1-2 Bedroom)	700	495	50
Apartment (3+ Bedroom)	1100	895	60
Single Family Home (3 Bedroom)	2000	1000	100
Single Family Home (4+ Bedroom)	2300	1100	120
Town House (2 Bedroom)	900	650	55
Town House (3+ Bedroom)	1100	890	70
Condominium (2 Bedroom)	1200	1000	60
Condominium (3+ Bedroom)	1400	1200	80

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

(b) What was the rental occupancy rate in the community as of 31 March 1994?

Note: These data are not available in the format requested. The California Department of Finance and the Monterey-Salinas Association of Realtors calculate only overall (not by size or type of unit) housing vacancy rates by city, incorporated/unincorporated areas, or by county. The most current figures are from 1 January 1994, and place the local housing vacancy rate at 14.9%, up from less than 2% three years ago. This increase in vacancy rate is attributed to the closure of Fort Ord.

Type Rental	Percent Occupancy Rate
Efficiency	*see note above
Apartment (1-2 Bedroom)	
Apartment (3+ Bedroom)	
Single Family Home (3 Bedroom)	
Single Family Home (4+ Bedroom)	
Town House (2 Bedroom)	
Town House (3+ Bedroom)	
Condominium (2 Bedroom)	
Condominium (3+ Bedroom)	

(c) What are the median costs for homes in the area?

Type of Home	Median Cost
Single Family Home (3 Bedroom)	309,000
Single Family Home (4+ Bedroom)	425,000
Town House (2 Bedroom)	171,000
Town House (3+ Bedroom)	210,000
Condominium (2 Bedroom)	171,000
Condominium (3+ Bedroom)	210,000

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

(d) From the local MLS listings provide the number of 2, 3, and 4 bedroom homes available for purchase. Use only homes for which monthly payments would be within 90 to 110 percent of the E5 BAQ and VHA for your area.

Month	Number of Bedrooms		
	2	3	4+
January	0*	0*	0*
February	0	0	0
March	0	0	0
April	0	0	0
May	0	0	0
June	0	0	0
July	0	0	0
August	0	0	0
September	0	0	0
October	0	0	0
November	0	0	0
December	0	0	0

***NOTE: E5 with dependents BAQ & VHA = $713.70**
90% = 642.33
110% = 785.07

There are no homes available for purchase on the Monterey Peninsula within the E5 BAQ and VHA specified price range.

(e) Describe the principle housing cost drivers in your local area.

The Monterey Peninsula has high home costs because it is a resort/tourist area. The area is consistently rated in the top 5 most expensive real estate markets in the country.

8. For the top five sea intensive ratings in the principle warfare community your base supports, provide the following:

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

(d) From the local MLS listings provide the number of 2, 3, and 4 bedroom homes available for purchase. Use only homes for which monthly payments would be within 90 to 110 percent of the E5 BAQ and VHA for your area.

Month	Number of Bedrooms		
	2	3	4+
January	0*	0*	0*
February	0	0	0
March	0	0	0
April	0	0	0
May	0	0	0
June	0	0	0
July	0	0	0
August	0	0	0
September	0	0	0
October	0	0	0
November	0	0	0
December	0	0	0

***NOTE: E5 with dependents BAQ & VHA = $713.70**
90% = 642.33
110% = 785.07

There are no homes available for purchase on the Monterey Peninsula within the E5 BAQ and VHA specified price range. However, it should be noted that the enlisted compliment assigned to NPS and its tenant commands is relatively small: 667 personnel, of which only 71 are married E5s.

(e) Describe the principle housing cost drivers in your local area.

The Monterey Peninsula has high home costs because it is a resort/tourist area. The area is consistently rated in the top 5 most expensive real estate markets in the country.

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

8. For the top five sea intensive ratings in the principle warfare community your base supports, provide the following:

Rating	Number Sea Billets in the Local Area	Number of Shore billets in the Local Area
MM2	0	2
DC2	0	1
OS2	0	2
BM1	0	1
BM2	0	2

NOTE: NPS provides education to all warfare communities. The unique nature of our mission, and the requirement for technical ratings to operate laboratories for graduate student personnel results in 17 different sea intensive ratings assigned to the command for shore duty.

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

9. Complete the following table for the average one-way commute for the five largest concentrations of military and civilian personnel living off-base.

Location by County	% Employees	Distance (mi)	Time(min)
Monterey	98.1	7.6	13
Santa Clara	0.7	80	85
Santa Cruz	0.5	46	55
San Benito	0.4	25	30
San Mateo	0.2	80	100

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

10. Complete the tables below to indicate the civilian educational opportunities available to service members stationed at the installation and their dependents:

(a) List the local educational institutions which offer programs available to dependent children. Indicate the school type (e.g. DODDS, private, public, parochial, etc.), grade level (e.g. pre-school, primary, secondary, etc.), what students with special needs the institution is equipped to handle, cost of enrollment, and for high schools only, the average SAT score of the class that graduated in 1993, and the number of students in that class who enrolled in college in the fall of 1994.

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

INA = information not available
WND = would not disclose

Institution	Type	Grade Level	Special Education Available	Annual Enroll-ment Cost per Student	1993 Avg SAT/ ACT Score	% HS Grad to Higher Educ	Source of Info
Carmel USD	public	k-12	yes	5677	957	85%	CUSD
Mtry Pen USD	public	k-12	yes	4240	980	80%	MPUSD
Pacific Gr USD	public	k-12	yes	2493	976	INA	PGUSD
RLS Carmel	private	p-12	no	6700-20250	WND	100%	RLSS
San Carlos	parochial	p-8	no	2365	INA	INA	SCS
Santa Catalina	private	p-12	no	4000-18000	1095	99%	SCS
The York School	private	8-12	no	10175	SAT 1200	100%	TYS
All Saints Episcopal	private	p-8	no	6400-8450	INA	INA	ASE
Mtry Bay Christian	private	k-7	no	2500-3960	INA	INA	MBCS
Peninsula Adventist	parochial	1-8	no	1700-2200	INA	INA	PAS
Salinas UHSD	public	7-12	yes	5300	INA	INA	SUHSD
Monterey Penin-sula Christian	private	k	no	4576	INA	INA	MPCS
Marina Chistian	private	k	no	3900	INA	INA	MCS

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

Institution	Type	Grade Level	Special Education Available	Annual Enroll-ment Cost per Student	1993 Avg SAT/ ACT Score	% HS Grad to Higher Educ	Source of Info
Little Ones Preschool	private	p-k	no	4080	INA	INA	LOP
Kinder Haus	private	p-k	no	4800	INA	INA	KH
Possibility House	private	k	yes	4140	INA	INA	PHS
St. Angela's	parochial	p-8	no	4980	INA	INA	STAS
Salvation Army	non-profit	p-8	yes	income based	INA	INA	SA
Bayview Children's	private	p-k	some	4440	INA	INA	BCC
Deseret Montessori	private	p-k	no	4440	INA	INA	DMS
One World	private	7-14 yrs/8th	yes	INA	INA	INA	OWS

(b) List the educational institutions within 30 miles which offer programs off-base available to service members and their adult dependents. Indicate the extent of their programs by placing a "Yes" or "No" in all boxes as applies.

Institution	Type Classes	Program Type(s)				
		Adult High School	Vocational/ Technical	Undergraduate		Graduate
				Courses only	Degree Program	
Monterey Peninsula College	Day **Y**	N	Y	N	Y	N
	Night **Y**					
Chapman College	Day **N**	N	Y	N	Y	Y

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

	Night **Y**					
Central Coast College	Day **Y**	N	Y	N	Y	N
	Night **Y**					
Heald Business College	Day **Y**	N	Y	N	Y	N
	Night **Y**					
Shoreline Goodwill	Day **Y**	N	Y	N	N	N
	Night **N**					
Golden Gate University	Day **N**	Y	N	N	Y	Y
	Night **Y**					
Hartnell College	Day **Y**	N	Y	Y	Y	N
	Night **Y**					
Monterey College of Law	Day **N**	N	N	N	Y	Y
	Night **Y**					
Monterey Inst of Int'l Studies	Day **Y**	N	N	Y	Y	Y
	Night **N**					
U.C. Santa Cruz	Day **Y**	N	N	Y	Y	Y
	Night Y					
San Jose State Mtry Campus	Day **Y**	N	N	Y	Y	Y
	Night **Y**					
Chartwell School	Day **Y**	N	Y	N	N	N
	Night **N**					
Regional Occupat. Prog.	Day **Y**	Y	Y	N	N	N
	Night **Y**					

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

(c) List the educational institutions which offer programs on-base available to service members and their adult dependents. Indicate the extent of their programs by placing a "Yes" or "No" in all boxes as applies.

NOTE: With the closure of Fort Ord, there are no longer any on-base educational programs offered from non-Naval Postgraduate School educational institutions.

Institution	Type Classes	Program Type(s)				
		Adult High School	Vocational/ Technical	Undergraduate		Graduate
				Courses only	Degree Program	
	Day					
	Night					
	Corres-pondence					

11. Spousal Employment Opportunities

Provide the following data on spousal employment opportunities.

Skill Level	Number of Military Spouses Serviced by Family Service Center Spouse Employment Assistance			Local Community Unemployment Rate
	1991	1992	1993	
Professional	86	91	88	*
Manufacturing	0	0	0	*
Clerical	22	16	7	*
Service	0	0	0	*
Other				

*** Note: The local community does not break down unemployment figures by skill level. Overall annual Monterey County unemployment figures:**

1991- 10.9%
1992- 12.2%
1993- 12.3%

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

12. Do your active duty personnel have any difficulty with access to medical or dental care, in either the military or civilian health care system? Develop the why of your response.

The medical care delivery system in Monterey for active duty personnel is somewhat unique. There are approximately 5000 active duty personnel in this region, with the nearest local military hospital in Oakland. Additionally, responsibility for providing medical care to all active duty personnel belongs to the Army. Medical care is delivered out of the Presidio of Monterey (POM) Army Health Clinic which is located approximately three miles away for the Naval Postgraduate School (NPS). It is staffed primarily with family practice physicians whose main responsibility is for the health care of active duty populations defined by Social Security Number. Civilian physicians have been contracted to provide services for specific high-volume speciality care. Contracts have also been made with local low-volume medical specialities and ancillary services. Access to care after normal working hours, weekends, and holidays is accomplished by calling the POM clinic and speaking to a military physician who determines whether to see the patient that night, refer to the local hospital's emergency room or have the patient be seen the next day. For medical care beyond the scope of the POM, clinic referrals are made to Oakland Naval Hospital. When necessary medical care is purchased from the local economy, Navy medicine pays the bills. NPS has designated a liaison to work with the Army Commander of the California Medical Detachment, Senior Medical Officer of the POM clinic and the OIC of the Naval Medical Administrative Unit to ensure maximum cooperation of services.

Dental care for NPS students and staff continues to be provided at NPS by the Branch Dental Clinic. For further information refer to BRAC data call for Naval Dental Center, San Francisco.

13. Do your military dependents have any difficulty with access to medical or dental care, in either the military or civilian health care system? Develop the why of your response.

With the closure of Fort Ord's Silas B. Hays Army Community hospital, medical care for family members and retirees younger than 65 years of age and their family members is obtained through one of the TRICARE options, or on a space available basis at the POM clinic. In the Prime program the number and location of primary care and specialities in Aetna's network meet or exceed all the contractual requirements of the managed care contract. The majority of transition problems associated with moving from one contractor to another and with the closure of the Fort Ord Army hospital have been resolved or have been identified and appropriate action is in progress. Customer satisfaction data are being gathered through local military and civilian initiatives in addition to that provided in the Health Affairs "Health Beneficiary" surveys. Through the efforts of a nonprofit corporation called Monterey Regional Health Development Group significant coordination with local civilian leaders has facilitated the Monterey region's health care providers and DoD beneficiaris in their transition to a managed care model. Well established lines of communication have been developed with

representatives of Aetna and NPS to identify and resolve any issues that could hinder access or quality of care to beneficiaries in the Monterey region.

Access to dental care is provided throuth the Delta Dental Program. There has been no indication of any problems regarding access, cost, or quality.

14. Complete the table below to indicate the crime rate for your installation for the last three fiscal years. The source for case category definitions to be used in responding to this question are found in NCIS - Manual dated 23 February 1989, at Appendix A, entitled "Case Category Definitions." Note: the crimes reported in this table should include 1) all reported criminal activity which occurred on base regardless of whether the subject or the victim of that activity was assigned to or worked at the base; and 2) all reported criminal activity off base.

Crime Definitions	FY 1991	FY 1992	FY 1993
1. Arson (6A)			
Base Personnel - military	0	5	2
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	1	1	0
2. Blackmarket (6C)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	0	0
3. Counterfeiting (6G)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	0	1
4. Postal (6L)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	0	0

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

5. Customs (6M)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	0	0
6. Burglary (6N)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	1	18	4
7. Larceny - Ordnance (6R)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	0	0
8. Larceny - Government (6S)			
Base Personnel - military	0	0	3
Base Personnel - civilian	0	0	5
Off Base Personnel - military	0	0	1
Off Base Personnel - civilian	8	39	12
9. Larceny - Personal (6T)			
Base Personnel - military	0	0	1
Base Personnel - civilian	0	0	1
Off Base Personnel - military	0	0	2
Off Base Personnel - civilian	6	74	27
10. Wrongful Destruction (6U)			
Base Personnel - military	0	17	0
Base Personnel - civilian	0	6	1
Off Base Personnel - military	0	1	0
Off Base Personnel - civilian	8	28	25
11. Larceny - Vehicle (6V)			

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

Base Personnel - military	0	1	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	3	0
12. Bomb Threat (7B)			
Base Personnel - military	2	4	0
Base Personnel - civilian	0	0	2
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	6	0
13. Extortion (7E)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	0	0
14. Assault (7G)			
Base Personnel - military	0	5	2
Base Personnel - civilian	0	2	1
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	1	1
15. Death (7H)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	0	0
16. Kidnapping (7K)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	0	0
18. Narcotics (7N)			
Base Personnel - military	0	0	0

Features and Capabilities (Cont.)
D. Quality of Life (Cont.)

Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	1	1
19. Perjury (7P)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	0	0
20. Robbery (7R)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	4	0
21. Traffic Accident (7T)			
Base Personnel - military	8	17	11
Base Personnel - civilian	1	8	7
Off Base Personnel - military	0	1	2
Off Base Personnel - civilian	0	3	3
22. Sex Abuse - Child (8B)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	0	0
23. Indecent Assault (8D)			
Base Personnel - military	0	1	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	0	0
24. Rape (8F)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0

Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	1	0
25. Sodomy (8G)			
Base Personnel - military	0	0	0
Base Personnel - civilian	0	0	0
Off Base Personnel - military	0	0	0
Off Base Personnel - civilian	0	0	0

Features and Capabilities (Cont.)

E. Ability for Expansion

1. Does the operational infrastructure (e.g., classrooms, administrative facilities, fuel and munitions storage, warehouse space, hangar space) provide capabilities for future expansion or change in mission? If yes, explain why.

Yes. General consensus among the academic staff is that NPS has a capacity for about 2,300 graduate students. This number is based on providing a graduate education; the capacity may be somewhat larger for other types of training/education. With an average student load of approximately 1,800 students, there appears to be capacity for another 500 students. There is adequate classroom space to accommodate this growth.

Physical expansion of the campus is constrained by a number of factors; namely limited acreage, finite water and power supply, and lack of parking. While it is estimated that NPS has approximately 20 undeveloped acres, most of this could never be built up due to local environmental concerns; trees are a valued commodity on the Monterey peninsula. (Further expansion in outlying areas is also feasible and is addressed below.) It is estimated that less than five acres ever have any chance for future development on NPS proper. This space constraint aggravates the School's parking shortfall. Any future expansion would also require additional parking areas and/or stronger alternative transportation programs.

The School's electrical capacity is currently being used. An upgrade of our primary in-coming station transformer would be required to increase the capacity in the event of campus expansion. This is feasible, and the local power company is prepared to assist with such an upgrade. Additional personnel loading only would not require such an upgrade. Similarly, the School's water usage is nearing capacity, with about 60 acre-feet of annual usage to spare. This water allowance could allow for an estimated 1,000 additional personnel or 250,000 SF of new academic space, or some mix thereof.

2. What is the availability of off-station acreage for possible future installation development?

There are a couple off-station areas possible for future installation development; one is NPS "owned" and the other is at a nearby DOD activity, the Defense Language Institute. It appears possible that approximately 15-20 acres could be further developed at our current golf course. This land is relatively clear of trees and is outside the AICUZ area of the adjacent Monterey Airport. This development would negatively impact our largest MWR revenue generator, reducing our golf course from 18 holes to 9. Another possibility would be an extension of our campus on the property of the Defense Language Institute (DLI). Liaison with DLI indicated as much as 166 acres are available for future development. A conservative estimate of 50 acres dedicated for future NPS development does not appear infeasible. (The NPS public works department is currently preparing to provide full facility maintenance/

repair support to all of DLI and its outlying areas, effective 1 October 1994.) Finally, while there is no longer any available "developable" property on the Fort Ord land to be retained by DLI, there is plenty of building space at Fort Ord available for future use. Estimates provided by DLI indicate as much as 200,000 SF of barracks space (convertible to academic space) and 4-5 times this in administrative space, are available at the Fort Ord enclave.

3. Provide the following information for installation infrastructure related facilities and functions. If these or other base infrastructure attributes may be a determining factor for base loading and expansion, provide additional comments and capacity measures as appropriate.

Type of Facility or Capability	On Base Capacity	Off Base Long Term Contract	Normal Steady State Load	Peak Demand
Electricity (KWH)	2,640	N/A	2,300	2,640
Water (GPD)	3,600,000 *	N/A	65,000	160,000
Sewage (GPD)	250,000	N/A	60,000	140,000
Natural Gas (CFH)	40,000	N/A	10,000	25,000
Short Term Parking	263			
Long Term Parking	1,454			

NOTE: The utility information provided above applies only for the main NPS campus area; the School's housing, beach, recreation/lab, and Annex areas are not included.

*** The maximum capacity of water for NPS is dictated by the infrastructure capacity, which is the number provided above, and by the water allowance announced by the regional water board. Due to perennial draughts, water allocation has become mandatory. These flow rates are for the main station only, not the housing area. (Revised 7/94)**

4. Identify in the table below the real estate resources which have the potential to facilitate future development and for which you are the plant account holder or into which, though a tenant, your activity could reasonable expect to expand. Complete a separate table for each individual site, i.e., main base, outlying airfields, special off-site areas, off base housing, etc. Unit of measure is acres. Developed area is defined as land currently with buildings, roads, and utilities that prevent it from being further developed without demolition of existing infrastructure. Include in"Restricted" areas that are restricted for future development due to environmental constraints (e.g. wet lands, landfills, archaeological sites), operational restrictions (e.g. ESQD arcs, HERO, HERP, HERF, AICUZ,

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Features and Capabilities (Cont.)
E. Ability for Expansion (Cont.)

repair support to all of DLI and its outlying areas, effective 1 October 1994.) Finally, while there is no longer any available "developable" property on the Fort Ord land to be retained by DLI, there is plenty of building space at Fort Ord available for future use. Estimates provided by DLI indicate as much as 200,000 SF of barracks space (convertible to academic space) and 4-5 times this in administrative space, are available at the Fort Ord enclave.

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NOTE: The utility information provided above applies only for the main NPS campus area; the School's housing, beach, recreation/lab, and Annex areas are not included.

*** The maximum capacity of water for NPS is not dictated by the infrastructure capacity, which is the number provided above, but by the water allowance announced by the regional water board. Due to perennial draughts, water allocation has become mandatory. Estimated "spare" capacity for NPS is approximately 60 acre-feet annually, at this time.**

4. Identify in the table below the real estate resources which have the potential to facilitate future development and for which you are the plant account holder or into which, though a tenant, your activity could reasonable expect to expand. Complete a separate table for each individual site, i.e., main base, outlying airfields, special off-site areas, off base housing, etc. Unit of measure is acres. Developed area is defined as land currently with buildings, roads, and utilities that prevent it from being further developed without demolition of existing infrastructure. Include in"Restricted" areas that are restricted for future development due to environmental constraints (e.g. wet lands, landfills, archaeological sites), operational restrictions (e.g. ESQD arcs, HERO, HERP, HERF, AICUZ,

Features and Capabilities (Cont.)

ranges) or cultural resources. Identify the reason for the restriction when providing the acreage in the table below. Specify any other entry in "Other" (e.g. submerged lands).

Site Location: NPS; Campus Proper

NOTE: The information provided below is based on engineering estimates; there has never been a real estate assessment or breakdown outlining this information.

Land Use	Total Acres	Developed	Available for Development	
			Restricted	Unrestricted
Operational	10	3	-	7
Training	28	7	-	21
Maintenance	8	2	-	6
Research & Development	0	-	-	-
Supply and Storage	2	1	-	1
Admin	1	1	-	0
Housing	15	15	-	0
Recreational	7	7	-	0
Navy Forestry Program	0	-	-	-
Navy Agricultural Outlease Program	0	-	-	-
Hunting/fishing Programs	0	-	-	-
Other	65	18	16 (wetlands)	31
TOTAL	136	54	16	66 *

*** This figure is high. Actual acres eligible for development is considered significantly lower, perhaps less than 5 acres, due to the extreme environmental concerns inherent in the local**

community. There is much resistance to reduction in "green" space, and removal of each and every tree undergoes intense scrutiny. Monterey is a pristine area, and the local residents work hard to maintain it that way.

Site Location: NPS; Recreation/Lab Area

NOTE: The information provided below is based on engineering estimates; there has never been a real estate assessment or break down outlining this information.

Land Use	Total Acres	Developed	Available for Development	
			Restricted	Unrestricted
Operational	-	-	-	-
Training	-	-	-	-
Maintenance	-	-	-	-
Research & Development	10	5	3 (AICUZ)	2
Supply and Storage	-	-	-	-
Admin	-	-	-	-
Housing	-	-	-	-
Recreational	99	2	84 (AICUZ)	13
Navy Forestry Program	-	-	-	-
Navy Agricultural Outlease Program	-	-	-	-
Hunting/fishing Programs	-	-	-	-
Other	-	-	-	-
TOTAL	109	7	87	15

5. Identify the features of this installation that make it a strong candidate for supporting other types of training or operational units in the future.

Features and Capabilities (Cont.)
E. Ability for Expansion (Cont.)

NPS is the military's major source for a broad range of professional specialists. As detailed in the School's response to the first BRAC-95 data call, NPS: a) has the world-class faculty and technical facilities capable of preparing additional officers and civilians from all Services and nations in existing subspecialties and some not currently offered, and b) can provide unique career-length continuing education opportunities for the current set of subspecialties. Both of these expansions of the education programs at NPS are discussed below:

a) NPS has well-established programs in the military sciences. The School also has access to other higher education institutions in the Monterey area. The School can develop educational programs with the other nearby institutions to expand the offerings into new areas. Historically, the warfare curricula at NPS were developed as interdisciplinary programs. Inter-institutional programs can also be developed for additional areas of knowledge as they emerge.

If requested, NPS can offer specialized graduate military education in virtually all fields except music, medical, legal, and a few others. In addition to its own courses, through recently introduced legislation, NPS students will be able to take classes for credit at a number of conveniently located institutions of higher education located in the Monterey area. These institutions include: the University of California, Santa Cruz's Fort Ord Campus, Stanford's Hopkins Marine Station in Monterey, California State University, Monterey Bay, the Monterey Institute of International Studies, the Marine Laboratories of the California State University System, and Monterey Peninsula College. New programs could be structured with the cooperation of these institutions to allow additional single-location subspecialty education.

NPS can also expand its educational programs by more fully using its up-to-date library, state-of-the-art computers, unexcelled classified library holdings, and laboratories.

Currently, neither the Army nor the Air Force uses all of the existing educational programs. Additional students (both military and civilian) could be cost-effectively added to the existing NPS classes, ~~since NPS tuition to other Services is higher than the marginal cost to NPS, lower than what the Army pays on average at civilian schools, and significantly lower than the average full cost at AFIT.~~ Alternatively, as noted in the School's response to the first BRAC-95 Data Call, NPS might become a DoD graduate school, funded by OSD, and under the executive agency of the Department of the Navy.

Additional officers from other nations could also be profitably added to the existing classes at NPS--if those nations can provide funds--since Congress requires billing them at a level above the School's marginal cost.

NPS could support about 2300 to 2400 students in the School's existing curricula. The previous high enrollment at NPS was a few more than 2000 officers in 1990. Since then, approximately 300 additional (net) classroom seats have been added to the facilities.

BP - DELETED BY LT Ben D. Price PER ATTACHED NPS CERTIFIED REVISIONS WITH RATIONALE. 10/14/94. NAVAUDIT FINDING.

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Experience at NPS and other universities shows that, in aggregate across a campus, approximately one classroom seat is required for each student. This rule of thumb is so simple that it draws questions--but the rule seems to work rather well.

Housing of additional officers is now possible because of the closure of Fort Ord and the availability of up to 600 housing units at Fort Ord. These housing units supplement the 877 housing units already available at the School's La Mesa Village housing area.

b) NPS's depth in military education and research is such that it can support career-length specialty education to prepare military officers for the technologically and politically complex profession of arms in the 21st century. NPS can offer "cradle to grave" educational preparation for officers. This expands the NPS role to new areas in professional development education and to areas such as officer acquisition, skills progression, and functional training.

Officer Acquisition Programs
NPS has recently been asked to support Officer Acquisition education through the creation of the CNO's "Seaman to Admiral Program". NPS can provide accredited undergraduate education, and has awarded more than 6,000 BA/BS degrees since 1946. The Monterey area's consortium schools mentioned above would be used to offer courses in some of the required course areas, e.g., English.

Professional Development Education
NPS has begun, under International Military Education and Training (IMET) funding, a curriculum for officers from emerging democracies. This burgeoning educational need requires faculty with special knowledge and skills, and it is a field in which NPS has decades of solid experience through its Defense Resources Management Institute (DRMI). DRMI has provided mid-career short-course education for over 19,800 officers and civilians from the US and 120 other countries since the Institute was established by the Secretary of Defense in 1965. These curricula at NPS have strong Congressional and OSD support, and can be expected to expand.

Skill Progression Training and Functional Training for Officers
NPS can provide skill progression and functional training as well as professional development. At the request of the Navy, NPS built a faculty and laboratory for aviation safety training that is required for all operational squadrons. More than 14,000 aviators have graduated from these programs to date. NPS stands ready to provide its expertise for similar programs of officer skill progression and functional training in a wide range of fields. Cost of these programs would be minimal because of the existence of the basic capabilities for teaching and research.

All this career education need not take place at NPS. The School has been offering shortcourses on topics such as Aircraft Survivability, Corrosion, and Gas Turbine Technology both on- and off-campus. In March of this year, the School offered, in conjunction with the National Defense University, a two-week Joint Professional Military Education, Level-2 course, for over 100 reserve officers from all of the Services. The two-week course made extensive use of video-teleconferencing (VTC). The School's VTC capability allows NPS to engage in world-wide video-teleconferences. This capability will be valuable for students at the School, and will enable faculty at the School to use VTC to provide teaching and consulting to distant sites.

Distance Learning

On 05 July 1994, the School will begin offering distance learning. The first course will be offered to personnel of the Naval Air Systems Command in Arlington, Virginia. Several months after that, the School will be capable of simultaneously offering distance learning to several sites, e.g., Crystal City, Patuxent River and China Lake. The distance learning facility at NPS features regular classrooms which are also equipped with interactive aural and video technology. By 1996, the Department of Aeronautical and Astronautical Engineering at NPS expects to offer annually 12 different courses via distance learning.

The School's Departments of Computer Science, Electrical and Computer Engineering, and Systems Management all expect to launch distance learning courses in 1994. NPS will be able to offer many of its unique courses using distance learning technology.

Defense Acquisition Workforce Improvement Act Training

NPS is now beginning to provide career education at all of the three levels required by the Defense Acquisition Workforce Improvement Act (DAWIA) for the Acquisition Workforce. Officers from all Services' acquisition corps who are now attending NPS graduate education programs in acquisition specialties will acquire DAWIA certification as part of their curricula. Students will be able to obtain their subspecialty education and graduate degrees while also fulfilling all the DAWIA requirements they need for their careers. The integration of DAWIA work into the School's curricula makes programs at NPS even more cost effective, and will attract additional officers and civilians from the other Services.

The School has been assigned a leadership role by the Defense Acquisition University (DAU) for five of the DAU shortcourses which will fulfill DAWIA requirements. The student throughputs for these five courses are expected to total over 1,000 in FY95, and over 2,000 beginning in FY97. NPS can expand its course offerings to cover other subject matter areas required by DAWIA.

Joint Warfare Analysis

A new area for NPS is the Joint Warfare Analysis (JWA) education and research program requested by Congress in the FY94 Appropriations Conference Report. All the Services have supported the need to operate jointly at all levels. The JWA initiative is attracting high-level

support, including from the CINCs who have been briefed about the program. Discussions about JWA have begun with the VCJCS, ADM Owens. NPS already has two existing jointly-sponsored curricula: Joint-C3, and Special Operations and Low-Intensity Conflict (SOLIC). Soon, JWA options will be available in several curricula, and a new JWA masters degree curriculum is being planned. Because of the experience and depth of NPS in military technical education, JWA programs offered at NPS will be unique and of great value to the Department of Defense. NPS is currently seeking Joint Professional Military Education, Level-1 (JPME-1) equivalence for several of its National Security Affairs curricula. As JWA education evolves, it is likely that the JWA curricula could also fulfill some, or perhaps all, of the requirements for Joint Professional Military Education (JPME). Officers attending JWA programs at NPS would be able to complete their subspecialty educations while also fulfilling some or all JPME requirements, thus increasing the cost-effectiveness of the School.

Joint Professional Military Education
The recent emergence of the School's National Security Affairs Department as a major national asset, coupled with the School's JWA program, could in time lead to the ability to provide Joint Professional Military Education, Level-1 to students in most of the curricula at NPS, increasing the cost-effectiveness of NPS even more. Although additional military faculty would probably be necessary at NPS, the School has sufficient instructional space and housing units to accommodate Professional Military Education (PME) efforts.

There are at least two reasons why the Navy may wish to move programs or organizations to the Monterey area. First, the CNO decided at the November 1993 Graduate Education Review Board (GERB) that the Navy will have a Postgraduate School, and that it will be in Monterey. (A decision consonant with a number of hearings and actions taken by the Congress in 1946 and 1947). Second, the availability of hundreds of thousands of square feet of buildings in the post-BRAC-93 Fort Ord footprint would allow relocation of organizations, which would be particularly desirable if the missions of those organizations complemented the mission of NPS. Additionally, as mentioned earlier, NPS now has 877 units at its LaMesa family housing area and an additional 600 family housing units at Fort Ord.

6. For each educational institution, formal school, or CAX, what are the limiting factors in your surge capability? How many students can you surge above your 1993 AOB? Explain any assumptions on which these limitations are based.

1) If this question refers only to emergency mobilization, NPS has no formal educational role during mobilization. The School has often supplied technical advice in support of contingencies and operations, e.g., DESERT STORM, from the base of the School's expertise in the military sciences. Such services can be delivered quickly and easily at low cost at NPS because of existing security clearances, secure communication facilities, etc. If the mobilization were of

short duration, student numbers at NPS could be expected to decline sharply; if the mobilization were long, student numbers at NPS would rebound somewhat.

2) If this question refers to how quickly NPS could take additional students due to re-organization or change in mission, the School believes that it could accept 2300 to 2400 students with current facilities, under the following assumptions:

a. Electrical power and water requirements can be fulfilled. (See question 4 above.)
b. Normal formal working hours for faculty and students are maintained.
c. The current mix of class sizes is maintained.

This level of expansion would require shifting faculty out of existing research programs for the 1-2 years required to select additional faculty.

BRAC-95 CERTIFICATION

Reference: SECNAVNOTE 11000 of 08 December 1993

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

T. A. MERCER
NAME (Please type or print)

T A Mercer
Signature

Superintendent
Title

2 JUNE '94
Date

Naval Postgraduate School
Monterey, CA
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print) _____ Signature _____

Title _____ Date _____

Activity _____

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print) _____ Signature _____

Title _____ Date _____

Activity _____

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

ROBERT W. THORNETT _____ Signature _____

NAME (Please type or print)

Director _____ 7 June 1994

Title Date

Field Support Activity

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

R.R. SAREEHAM _____ Signature _____

NAME (Please type or print)

ACTING _____ 6/15/94

Title Date

BRAC - 95 CERTIFICATION

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained here is accurate and complete to the best of my knowledge and belief."

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I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

THOMAS A. MERCER
NAME (Please type or print)

Thomas A. Mercer
Signature

SUPERINTENDENT
Title

10/11/94
Date

NAVAL POSTGRADUATE SCHOOL
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print)	Signature
Title	Date
Activity	

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print)	Signature
Title	Date
Activity	

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

Mr. Robert W. Thornett NAME (Please type or print)	 Signature
Director Title	10/14/94 Date
Field Support Activity Activity	

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W.A. EARNER NAME (Please type or print)	 Signature
Title	10/21/94 Date

RESPONSES RE. BRAC DATA CALL

#23

A.3.d.p.9. Dean Elster, Dean of Instruction (Elster is not the Dean of Students as reported by the audit team) believes the degrees in the five listed curricula are unique. Not only would it require a massive effort to prove those degree programs can't be obtained anywhere else in the world; it is, in fact, impossible to prove nonexistence (of anything).

A.5.a.p.11 NPS concurs with the figures of the Naval Audit Service:

- o 76 Secret courses
- o 15 Top Secret courses
- o 15 SCI courses

A.5.b.p.11 On 06 October 1994, measurement of the SCIF and counting of seats in the SCIF showed:

- o a classroom of 900 square feet with 30 seats;
- o a study room of 600 square feet with 15 seats;
- o one 900 square foot laboratory (used by students and faculty);
- o and 1300 other square feet of offices, entryway and hallway

E.5.5th para.p.113

NPS concurs; the statement: "NAVPGSCOL tuition to other Services is higher than marginal cost of NAVPGSCOL" should be deleted.

Rationale: Whether or not tuition exceeds marginal costs depends upon the curriculum and upon whether or not the current classes are already filled with students; when seats are already filled, tuition charged other Services may not cover marginal cost.

NPS concurs: the statement: "NAVPGSCOL tuition is lower than what the Army pays on the average at civilian schools, and significantly lower than the average full cost at AFIT" should be deleted.

Rationale: The Postgraduate School has not been able to obtain up-to-date information about Army tuition payments or the costs of AFIT.

SUPPORTING INFORMATION
PROVIDED BY NAVAL POSTGRADUATE SCHOOL
10/13/94
REVISED & DOCUMENTED BY LT [redacted] 10/14/94
FLO SUPPORT

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BRAC - 95 CERTIFICATION
DATA CALL #23

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

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I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

THOMAS A. MERCER
NAME (Please type or print)

Thomas A. Mercer
Signature

SUPERINTENDENT
Title

12/16/94
Date

NAVAL POSTGRADUATE SCHOOL
Activity

R

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print) _____ Signature _____

Title _____ Date _____

Activity _____

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print) _____ Signature _____

Title _____ Date _____

Activity _____

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

Mr. Robert W. Thornett
NAME (Please type or print) Signature

Director
Title 12/20/94
Date

Field Support Activity
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER
NAME (Please type or print) Signature

Title 1/5/95
Date

BRAC - 95 CERTIFICATION

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

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The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

THOMAS A. MERCER
NAME (Please type or print)

Thomas A. Mercer
Signature

SUPERINTENDENT
Title

1/25/95
Date

NAVAL POSTGRADUATE SCHOOL
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print)	Signature
Title	Date
Activity	

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print)	Signature
Title	Date
Activity	

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

Mr. Robert W. Thornett	Signature
NAME (Please type or print)	
Director	27 Jan '95
Title	Date
Field Support Activity	
Activity	

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER	
NAME (Please type or print)	Signature
	2/6/95
Title	Date

FLTSATCOM: This is a fully operational engineering development satellite. A large room with a high overhead to accommodate the antennas is required. A data link to the test center in Port Hueneme is currently in operation to allow that organization to test commands before applying them to in-orbit satellites; this data link must be available in any new location.

WIND TUNNELS: Three large wind tunnels are in operations for the Aerodynamics instruction and research programs. The tunnels require a room of approximately 100X100 feet and 40 feet high ceiling. High load mounts are need for the tunnels and drive machinery, and exit vents are needed for the flow. Shipment would require completely dismantling and reassembling the tunnels.

LINEAR ACCELERATOR: The linear accelerator produces a 100 million electron-volt beam of electrons. The accelerator and the beam target area must have considerable radiation shielding for safety purposes. The accelerator is powered by high voltage magnetrons, which are an electrical hazard. The whole installation requires an area of approximately 50X75 feet. Floor mountings are required that allow for precise alignment of the sections of the accelerator. A control room is needed and shielding is required between the accelerator and this room.

FLASH X-RAY: This accelerator produces a high energy, high current, beam of electrons that is used to produce radiation damage in semiconductors and high energy electromagnetic pulses. The beam exit/experimental area requires a room that is shielded against both ionizing and electromagnetic radiation.

TURBO PROPULSION: A structure/building of about 50X50 feet is needed to contain the largest cascade wind tunnel in the world, the associated 700hp fan, a 6000 lb overhead crane, and associated equipment. High load, high torque, floor mountings are required. In addition to this building, three test cells for transsonic turbines are also required. The cells must be explosion proof, allow remote operation, and 1200 hp electrical supplies are needed for each cell.

AUV TANKS: The School has three very large tanks, 127 ft long by 35 ft wide by 20 ft deep, on its beach front property. Two of the tanks will be covered and outfitted for autonomous underwater vehicle research. It would be prohibitively expensive to construct new tanks.

ROCKET AND RAMJET TEST CELLS: Small engines are fired and their plumes tested for optical emissions and for burning efficiency. A location is required where the engines can be exhausted and the exhaust will not cause a safety hazard. Three test cells that are large enough to accommodate the rockets and associated equipment, and a control room are required.

Document Separator

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DATA CALL 63
FAMILY HOUSING DATA

Information on Family Housing is required for use in BRAC-95 return on investment calculations.

Installation Name:	NAVPGSCOL MONTEREY CA
Unit Identification Code (UIC):	N62271
Major Claimant:	CNO

Percentage of Military Families Living On-Base:	50 45 8Bo CW
Number of Vacant Officer Housing Units:	0
Number of Vacant Enlisted Housing Units:	0
FY 1996 Family Housing Budget ($000):	~~164.6~~ 165.8 CW
Total Number of Officer Housing Units:	~~8.9~~ 9 CW
Total Number of Enlisted Housing Units:	0 2 CW

Line 4, Percentage of Military Families Living on Base, is taken from DD Form 1377.
Lines 7-9, represents the activitys' "fair share" of the complex total of the family housing budget and inventory of officer and enlisted units. This data was provided by COMNAVFACENGCOM.
This UIC contains 54 personnel entitled to BAQ W/Dependents out of a complex total of 1677 personnel entitled to BAQ W/Dependents.

There are 32 activities identified within this complex.

Note: All data should reflect figures as of the beginning of FY 1996. If major DON installations share a family housing complex, figures should reflect an estimate of the installation's prorated share of the family housing complex.

CW 7/13
Chris Ward
7/13/94
NAVFAC 52JCW

Enclosure (1)

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

J. E. BUFFINGTON, RADM, CEC, USN
NAME (Please type or print)

Signature

COMMANDER
Title

7/20/94
Date

NAVAL FACILITIES ENGINEERING COMMAND
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER
NAME (Please type or print)

Signature

Title

7/25/94
Date

BRAC-95 CERTIFICATION

Reference: SECNAV NOTE 11000 of 8 Dec 93

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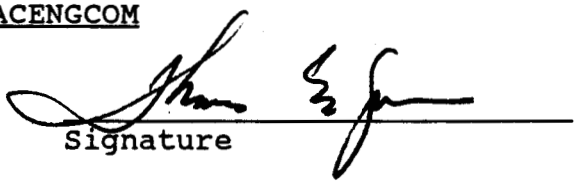
I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

SOUTHWESTNAVFACENGCOM

THOMAS E. GUSS
Name (Please type or print)


Signature

COMMANDING OFFICER
Title

7/13/94
Date