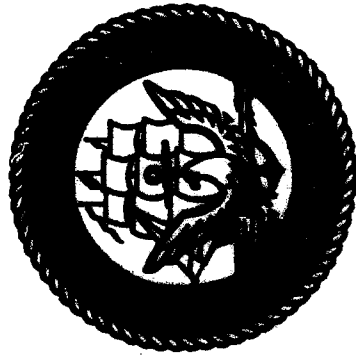


AD-A246 843



DEPARTMENT OF THE NAVY
AMENDED FY 1992/FY 1993 BIENNIAL BUDGET ESTIMATES



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JUSTIFICATION OF ESTIMATES
SUBMITTED TO CONGRESS JANUARY 1992

OTHER PROCUREMENT, NAVY

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Other Procurement, Navy

Justification of Estimates for The Amended FY 1992/FY 1993 President's Biennial Budget

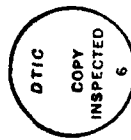
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OTHER PROCUREMENT, NAVY

For procurement, production, and modernization of support equipment and materials not otherwise provided for, Navy ordnance (except ordnance for new aircraft, new ships, and ships authorized for conversion); the purchase of not to exceed [651] 602 passenger motor vehicles of which [621] 574 shall be for replacement only; expansion of public and private plants, including the land necessary therefor, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; [\$6,432,463,000] \$5,868,813,000, to remain available for obligation until September 30, [1994] 1995. [Provided, That funds appropriated in this paragraph for procurement of the Enhanced Modular Signal Processor may be obligated for such procurement under a multiyear contract, in accordance with the requirements of section 8013 of this Act].

BUDGET ACTIVITY 1: SHIP SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(\$ In Thousands)
Procurement Actions Programmed)

BUDGET PLAN
(Amounts for Procurement Actions Programmed)

	FY 1991 Actual	FY 1992 Estimate	FY 1993 Initial Estimate	FY 1993 Change	FY 1993 Amended Estimate
SHIP PROPULSION EQUIPMENT	\$22,364	\$53,730	\$35,241	-2,771	32,470
GENERATORS AND PUMPS	18,405	35,673	36,382	-2,119	34,263
AIR COMPRESSORS	492	184	6,082	-239	5,843
PROPELLERS	7,614	13,870	38,451	-30,868	7,583
NAVIGATION EQUIPMENT	7,621	12,731	13,886	-2,572	11,314
UNDERWAY REPLENISHMENT EQUIPMENT	18,513	29,044	36,889	-1,924	34,965
PERISCOPES	13,023	12,278	16,024	-3,623	12,401
OTHER SHIPBOARD EQUIPMENT:					
SHIP SILENCING	17,604	23,804	33,963	-693	33,270
STRATEGIC PLATFORM SUPPORT	57,395	37,844	37,579	-1,486	36,093
DEEP SUBMERGENCE	9,583	4,813	4,988	-196	4,792
SURFACE IMA	7,780	7,117	7,803	3,454	11,257
MINESWEEPING EQUIPMENT	4,081	2,380	5,670	-2,583	3,087
SAFETY EQUIPMENT	58,358	35,972	41,269	-3,428	37,841
MISCELLANEOUS	129,544	109,137	147,795	-36,363	111,432

	<u>FY 1991 Actual</u>	<u>FY 1992 Estimate</u>	<u>FY 1993 Initial Estimate</u>	<u>FY 1993 Change</u>	<u>FY 1993 Amended Estimate</u>
REACTOR PLANT EQUIPMENT	350,184	323,570	328,233	-42,588	285,645
OCEAN ENGINEERING	7,342	9,854	14,184	-481	13,703
STANDARD BOATS	10,385	20,313	20,534	-2,309	18,225
TRAINING EQUIPMENT	8,904	6,263	2,359	-1,097	1,262
PRODUCTION FACILITIES EQUIPMENT	23,135	23,244	24,500	-472	24,028
MODERNIZATION SUPPORT	683,115	1,029,622	697,210	-24,161	673,049
TOTAL BUDGET PLAN	\$1,455,442	\$1,791,443	\$1,549,042	-\$156,519	\$1,392,523

BUDGET ACTIVITY 1: SHIPS SUPPORT EQUIPMENT

	(\$ In Thousands)
FY 1993 Amended Estimate	\$ 1,392,523
FY 1993 Change	\$ -156,519
FY 1993 Initial Estimate	\$ 1,549,042
FY 1992 Estimate	\$ 1,791,443
FY 1991 Actual	\$ 1,455,442

Purpose and Scope of Work

Budget Activity 1 programs include Shipboard Components, Reactor Cores and Reactor Plant Components, support of the Deep Submergence, Trident and Standard Boat procurement programs, and Production Facilities and Training equipment. Installation costs have been incorporated into the end item procurement costs across Budget Activities 1, 2, 3, 4 and 7 commencing in FY 1991. In addition, Budget Activity 1 reflects costs for design services, nuclear alterations, program support and other modernization support efforts.

Shipboard components, as well as nuclear components and standard boats, are procured for direct support or installation on Active Fleet ships as part of a planned maintenance replacement program or as part of an improvement program. These components are also procured to fill authorized stock requirements. Funding for the Deep Submergence program is aimed at expanding the Navy's capability to live, work, explore, and perform rescue missions in deep ocean areas.

Justification of Funds

Ship Propulsion Equipment (P-1 Line Items 1-4)

	(\$ In Thousands)
FY 1992	
<u>FY 1993</u>	<u>\$32,470</u>

These funds will provide for the procurement and installation of equipment designed to improve the reliability, maintainability, fuel efficiency, power output, and durability of the LM 2500 Gas Turbine Engines. The LM 2500 engines were introduced into the Fleet through the DB-963 and FFG-7 Class construction programs and the Allison 501K Gas Turbine Engine was introduced into the Fleet

through the DD-963 and DDG-993 Class ships. These improvements will be accomplished through procurement and installation of modifications identified as a result of the Component Improvement Program. Existing 1200 and 600 PSI Steam Plants require sufficient funds to modify and improve reliability through the procurement of steam plant inspection tooling, high pressure waterjet equipment, boiler hydro test tools, and boiler tube hydraulic removal and expansion equipment. Funds requested will also procure secondary propulsion motors, shaft seal housing, modification kits for M831-800 engines, support for LCAC gas turbines, support for marine diesel engines, clutch retrofit kits, and outfitting for boiler test centers and a depot modernization program for SSN 688 class submarines.

Generators and Pumps (P-1 Line Items 5 and 6)

(\$ In Thousands)	
FY 1992	FY 1993
<u>\$35,673</u>	<u>\$34,263</u>

Funding requested for these programs will provide for continuation of programs to replace obsolescent, unsupportable, underpowered, and unreliable generators and pumps of various capacities and sizes. These programs also procure equipment to support programmed SHIPALTS. Types of equipment procured include an arcing fault detector for SSN and SSBN overhauls; 60/400 Hz motor generator sets for CG, CGN and DDG class overhauls; 1,000 KW ship service diesel generator rotor replacements for FFG-7 class overhauls; 400 Hz static frequency converters for replacement of those on FFG-7 class ships; maintenance pumps; trim and drain pumps for SSN's and SSBN's; centrifugal main feed pumps for CVs/CVNs; and portable power pumps, variable capacity centrifugal pumps, and insurance item material for the surface ship phased maintenance program.

Air Compressors (P-1 Line Item 7)

(\$ In Thousands)	
FY 1992	FY 1993
<u>\$ 184</u>	<u>\$ 5,843</u>

These funds will provide for the procurement and installation of greater capacity and more reliable high pressure air compressors than those currently installed in the Active Fleet. Several machinery alterations will be procured in FY 1992 and FY 1993, as well as, modified drain systems to replace unreliable and unmaintainable systems on the 30 CFH air compressors. Funding in FY 1993 will finance MACHALTS for engineering change proposals.

Propellers (P-1 Line Items 8-9)

(\$ In Thousands)	
FY 1992	FY 1993
\$13,870	\$ 7,583

The requested funding will provide for the procurement and installation of propellers to reduce the noise signature on FFM and attack submarines and as replacements for those propellers currently installed as casualties occur. Funds are also required for replacement of blades, shafts, and hubs in support of active fleet ships as damage or failure occurs, as well as for support inventories for the newer classes of ships such as FFG-7s, DD-963s, CG-47s, LSD-41s, and the DDG-51s.

Navigation Equipment (P-1 Line Items 10-11)

(\$ In Thousands)	
FY 1992	FY 1993
\$12,731	\$11,314

These funds will procure and install Electrically Suspended Gyro Navigator field change kits, modification kits and documentation. Funds are also budgeted for maintenance items and newly developed improvements for the AN/MSN-5 Inertial Navigation Sets, plotters, gyro compasses, and for documentation. These improvements provide more precise fire control computation and improved accuracy in support of sophisticated missile systems and for safety.

Underway Replenishment Equipment (P-1 Line Item 12)

(\$ In Thousands)	
FY 1992	FY 1993
\$29,044	\$34,965

The equipment procured under this program is required to provide the Active Fleet with new or improved underway replenishment-at-sea capability. This equipment is used to transfer fuel, cargo, ammunition, and missiles by both alongside and vertical replenishment techniques. The equipment being procured supports the following objectives: personnel/equipment safety, reduction in maintenance costs, and reduction in alongside time, to minimize ship vulnerability to enemy action.

Major equipment includes highline spanwire winches, sliding padeyes, sliding block slip clutches, flotation devices, and Burton Navy standard spanwire winches, vertical conveyors, saddle winches, crane improvements, tension rigging winches, cargo delivery stations, and elevator improvements.

Periscopes (P-1 Line Items 13 and 14)

(\$ In Thousands)	
FY 1992	FY 1993
\$12,278	\$12,401

These funds will provide for the procurement of Type 18 periscope related material and other periscopes and accessories. The Type 18 periscope equipment includes eyepiece boxes and masts required to establish an inventory of these parts based on actual/predicted failure rates and turn around times and Automatic Direction Finding (ADF) modifications to provide ADF capability on SSN-637 and 688 class submarines. Funds are required to procure a Submarine Satellite Information Exchange reception capability on Type 18 periscopes. Type 18 periscope systems will also be procured to establish a rotatable pool of ready-for-issue assets in support of the depot modernization program for SSN 688 class submarines. Field change kits are being procured to implement approved changes on previously procured Type 18 periscopes. Equipment to provide additional shore/tender based components for other type periscopes is also required to ensure that an issuable periscope is always available as a replacement for damaged units on SSN-637 class ships. This requirement is based on past demand experience and repair turnaround time. Modifications for Type 8 periscopes to incorporate solid state amplifiers, twelve-channel rotary joints, and improved slip ring assemblies, noise source and sapphire heated head window assemblies will be procured and installed. Type 8 Mod 3 periscopes are funded for installation on SSN-637/688's. The improvement over existing equipment is enhanced imaging and communications. Funding will also provide for support and improvement of the Type 2 and 15 series periscopes for all Active Fleet submarines.

Other Shipboard Equipment (Ship Silencing) (P-1 Line Items 18 and 19)

(\$ In Thousands)	
FY 1992	FY 1993
\$23,804	\$33,270

The requested funds will provide for the procurement and installation of equipment required to implement the high priority Submarine Silencing program on existing nuclear submarines and for the acoustic quieting of radiated noise and sonar self-noise for surface ships. The submarine silencing equipment incorporates technology developed under RDT&E,N programs for improving detection capability and reducing the detectability of the submarine. The surface ship silencing program will make use of the extensive silencing technology already developed under the Submarine Silencing program. FY 1992 and FY 1993 funding for the submarine silencing program includes procurement of equipments supporting the east and west coast acoustic measurement facilities and the noise vibration alert and monitoring system. In addition, FY 1992 and FY 1993 funding for surface ships provides for the procurement of cascade orifices for FFG-7 class ships; fluid acoustic filters and flexible hose couplings for installation in ship service diesel generator piping on FFG-7 class ships; sound isolation kits for DD-963/DDG-993/FFG-7 class ships to reduce radiated noise; portable hydrophone arrays and passive acoustic monitoring systems for DD-963/DDG-993/CG-47 class ships; acoustic damping materials and treatments to reduce unacceptable airborne noise levels to prevent hearing loss; allow effective communication and improve habitability; hull coating for CGN-38 class ships; sonar dome baffles for DD-963 and DDG-993 class ships; and instrumentation for the Surface Ship Silencing/Trials program.

Other Shipboard Equipment (Strategic Platform Support) (P-1 Line Item 21)

(\$ In Thousands)	
FY 1992	FY 1993
\$37,844	\$36,093

Funding for this program provides for hull, mechanical, and electrical equipment required to support maintenance tasks for Trident submarines. The equipment is required to support the operating tempo of FBM submarines and includes funding to develop stock levels for Trident plant equipment and repair (TRIPER) equipments to achieve the required operational availability and to

achieve a depot availability period which does not exceed one year; alteration/modification packages for TRIPER equipment to maintain standardization and interchangeability of offsets; long lead material equipment for the advanced equipment replacement program, main shaft seal mating rings, and alteration/modification packages for hull, mechanical and electrical equipment.

Other Shipboard Equipment (Deep Submergence) (P-1 Line Item 22)

	(\$ In Thousands)
FY 1992	<u>FY 1993</u>
\$ 4,813	\$ 4,792

The requested funds will provide for the procurement and installation of hardware to improve/modify Deep Submergence Vehicles to provide the Navy with the capability to rescue personnel from craft disabled on the ocean floor. It also will improve the capability to perform manned underwater search, inspection and recovery missions.

Other Shipboard Equipment (Surface IMA) (P-1 Line Item 27)

	(\$ In Thousands)
FY 1992	<u>FY 1993</u>
\$ 7,117	\$11,257

This program will procure equipment necessary to achieve operational availability and provide funds to upgrade facilities both ashore and afloat (industrial plant and tenders) in order to improve and expand intermediate level maintenance by the surface forces. Shipboard maintenance will emphasize modular replacement with repairables being returned to Intermediate Maintenance Activities and Depot Overhaul Points for repair or rework and return to stock.

Other Shipboard Equipment (Minesweeping Equipment) (P-1 Line Item 25)

(\$ In Thousands)	
FY 1992	FY 1993
\$ 2,380	\$ 3,087

This program will provide for the procurement of minesweeping cables necessary to counter moored and influence mines. These funds will procure neutralization system vehicles, and the single ship deep sweep system which will allow MHC Class ships to sweep moored mines at various depths.

Other Shipboard Equipment (Safety Equipment) (P-1 Line Items 15, 29, and 31)

(\$ In Thousands)	
FY 1992	FY 1993
\$35,972	\$37,841

These funds procure and install equipment which supports shipboard fire fighting operations, fuel tank inspection, and other activities which can involve the exposure of lungs to noxious substances. Funding will provide the Navy with the latest available safety equipment in order to perform assigned tasks without risking personal injury, provide for the protection of personnel from exposure to nuclear weapons radiation and provide ships of the active fleet with the capability to detect chemical warfare agents before ship contamination occurs. FY 1992 and FY 1993 funding will provide Halon 1301 Fire Fighting systems to complement the existing Aqueous Film Forming Foam/Purple K Dry Chemical Powder hose reel systems in machinery spaces as well as procurement of this system in a mobile/portable form; Oxygen-Breathing Apparatus Voice Amplifiers to improve communications between fire fighting team members; damage control wire free communication systems; shielding which will be affixed to bulkheads and to cradles containing individual weapons on CVs, SSN-688s, non-FBM ASs and at shore facilities; support for the Radiological Affairs Support Office, and chemical warfare directional detectors, chemical agent point detector systems and chemical agent monitors.

Other Shipboard Equipment (Miscellaneous) (P-1 Line Items 16, 17, 20, 23, 24, 26, 28, 30 & 32)

(\$ In Thousands)	
FY 1992	FY 1993
\$109,137	\$111,432

These funds provide for; procurement and installation of Combat System Command and Control Switchboards; equipment which will enable the Navy to comply with Federal law and DOD environmental pollution control regulations; replacement batteries for all active submersible craft/submarines; procurement and positioning of special equipment for merchant ships to provide them with the capability to perform Naval auxiliary roles; provision of specialized equipment to assure reliable repair of electronic modules at selected shore, surface and subsurface fleet activities; air conditioners and equipment for submarines; degaussing equipment for surface ships; and modifications/replacements for equipment which costs less than \$2,000,000 by category.

Reactor Plant Equipment (P-1 Line Items 33 and 34)

(\$ In Thousands)	
FY 1992	FY 1993
\$323,570	\$285,645

These provide for the procurement of one replacement reactor power unit in FY 1992, and other reactor plant components and equipment in FY 1992 and FY 1993. Replacement cores and power units are the assemblies of nuclear fuel and necessary associated structural and reactivity control equipment required for the periodic refueling of nuclear powered ships. The procurement of these units is accomplished by the Department of Energy (DOE). The DOE has developed production lines within the civilian nuclear industry to fabricate these units. The funds requested are required to meet the refueling needs of the Navy in a manner most efficient to the government, while ensuring adequate workload to support the industrial base. The reactor component line item includes the components, equipment, and material required to provide minimum support needed for the continued safe and reliable operations of naval nuclear propulsion plants. Funds are programmed for acquisition of replacement components for ship alterations and specialized equipment necessary for refueling of nuclear powered ships.

Ocean Engineering (P-1 Line Items 35 & 36)

(\$ In Thousands)	
FY 1992	FY 1993
\$ 9,854	\$13,703

These programs provide for the procurement of equipment to support safety requirements at the existing depth capabilities and mission duration restriction imposed on the working diver, equipment to improve the Navy's diving capabilities and maintain sufficient levels of critical salvage items, and improved equipment developed as part of Swimmer Support Systems for Underwater Demolition Teams, and Inshore Undersea Warfare Groups. FY 1992 and FY 1993 funds will procure the lightweight diving systems; portable recompression chambers; synthetic line; sonar systems for the unmanned submersibles ORION, DEEP DRONE, and CURV III; salvage air compressors; underwater non-destruction test systems; reverse osmosis water purification unit marinization kits; fly away deep ocean salvage systems; 30KW generators; underwater breathing apparatus support packages; underwater remotely operated vehicles; expendable ordnance disposal inflatable craft; chemical warfare protective diving suits; Special Warfare group, and Naval Forces dry suits outfitting; dry deck shelter improvements; rigid inflatable boats; night vision equipment; communications and navigation equipment; and radar beacon transponders.

Standard Boats (P-1 Line Item 37)

(\$ In Thousands)	
FY 1992	FY 1993
\$20,313	\$18,225

Standard boats procured with these funds will be used to fill new or revised allowances, to replace obsolete wooden boats now in service, and to replace boats of fiberglass or steel construction which are beyond economical repair. Types of boats to be procured with these funds include the 50' workboat and utility boat; 22' utility boat; 33' utility boat; 26' motor whaleboat; 40' plane personnel and rescue boat; 65' Explosive Ordnance Disposal Craft and and 56' range support boat.

Training Equipment (P-1 Line Item 38)

(\$ In Thousands)	
FY 1992	FY 1993
\$ 6,263	\$ 1,262

This program provides equipment for the support of initial training requirements developed through the Navy Training Plan process and sustaining training requirements developed by the Chief of Naval Education and Training.

Production Facilities Equipment (P-1 Line Items 39 & 40)

(\$ In Thousands)	
FY 1992	FY 1993
\$23,244	\$24,028

These programs provide for the procurement of replacement cranes for the floating dry dock at Norfolk Naval Shipyard, funding required for industrial plant equipment and other shop equipment necessary to support Navy managed facilities; machine tools, industrial plant equipment and other plant equipment necessary to support the Fleet Operations Program.

Modernization Support (P-1 Line Items 41 & 42)

(\$ In Thousands)	
FY 1992	FY 1993
\$1,029,622	\$673,049

Commencing in FY 1991 installation costs have been incorporated into the end item procurement costs. The funding remaining in Other Ship Support will fund design services for shipboard alterations, program support, and nuclear alteration and other modernization support efforts costs.

BUDGET ACTIVITY 2: COMMUNICATIONS AND ELECTRONIC EQUIPMENT
SUMMARY OF BUDGET PLAN
(\$ In Thousands)

BUDGET PLAN (Amounts For Procurement Actions Programmed)					
	<u>FY 1991</u> <u>Actual</u>	<u>FY 1992</u> <u>Estimate</u>	<u>FY 1993</u> <u>Initial</u> <u>Estimate</u>	<u>FY 1993</u> <u>Change</u>	<u>FY 1993</u> <u>Amended</u> <u>Estimate</u>
SHIP RADARS	109,483	78,861	86,271	-8,042	78,229
SHIP SONARS (SURFACE SHIPS)	292,191	341,265	197,904	-7,903	190,001
SHIP SONARS (SUBMARINES)	136,377	154,010	184,986	-2,825	182,161
SHIP SONARS (GENERAL SUPPORT)	31,175	43,451	44,403	199	44,602
ANTI-SUBMARINE WARFARE ELECTRONICS (SURFACE SHIPS)	53,146	25,944	47,824	-1,511	46,313
ANTI-SUBMARINE WARFARE ELECTRONICS (SUBMARINE)	113,625	61,602	167,185	-120,708	46,477
ANTI-SUBMARINE WARFARE ELECTRONICS (AVIATION)	4,020	37,353	25,669	-143	25,526
ANTI-SUBMARINE WARFARE ELECTRONICS (SURVEILLANCE)	44,650	105,390	137,552	-20,332	117,220
ELECTRONIC WARFARE EQUIPMENT	121,415	180,741	170,080	12,887	182,967
RECONNAISSANCE EQUIPMENT	15,823	31,735	29,978	-1,625	28,353
SUBMARINE SURVEILLANCE EQUIPMENT	25,510	21,104	26,778	-1,181	25,597
OTHER SHIPBOARD ELECTRONIC EQUIPMENT	368,760	431,350	344,226	29,407	373,633
TRAINING EQUIPMENT	19,743	7,291	8,977	-277	8,700
AVIATION ELECTRONIC EQUIPMENT	38,500	91,270	68,450	-2,487	65,963
OTHER SHORE ELECTRONIC EQUIPMENT (COMM & CONTROL)	29,555	45,058	61,418	-1,274	60,144
OTHER SHORE ELECTRONIC EQUIPMENT (MISCELLANEOUS)	62,745	64,968	71,181	-2,534	68,647
SHIPBOARD COMMUNICATIONS	39,016	139,886	186,084	-6,713	179,371

	<u>FY 1991</u> <u>Actual</u>	<u>FY 1992</u> <u>Estimate</u>	<u>FY 1993</u> <u>Initial</u> <u>Estimate</u>	<u>FY 1993</u> <u>Change</u>	<u>FY 1993</u> <u>Amended</u> <u>Estimate</u>
SUBMARINE COMMUNICATIONS	8,388	19,518	33,664	-17,617	16,047
SATELLITE COMMUNICATIONS	140,151	186,509	172,638	36,464	209,102
SHORE COMMUNICATIONS	22,711	44,343	40,892	-3,667	37,225
CRYPTOGRAPHIC EQUIPMENT	131,582	117,959	142,847	-19,166	123,681
CRYPTOLOGIC EQUIPMENT	1,030	5,884	7,760	-304	7,456
OTHER ELECTRONIC SUPPORT	3,847	8,389	8,482	-335	8,147
DRUG INTERDICTION SUPPORT	875				
TOTAL BUDGET PLAN	\$1,814,318	\$2,243,881	\$2,265,249	-\$139,687	\$2,125,562

BUDGET ACTIVITY 2: COMMUNICATIONS AND ELECTRONIC EQUIPMENT

	(\$ In Thousands)
FY 1993 Amended Estimate	\$ 2,125,562
FY 1993 Change	\$ -139,687
FY 1993 Initial Estimate	\$ 2,265,249
FY 1992 Estimate	\$ 2,243,881
FY 1991 Actual	\$ 1,814,318

Purpose and Scope of Work

Budget Activity 2 programs include the procurement and installation of shipboard shore communications and electronic equipment for the Active Fleet and training activities. Improved shipboard surface and air search radars are designed to enhance the military capability of combatant ships. Anti-Submarine Warfare Electronics equipment will furnish surface ships, submarines and special shore activities with equipment used for detection, tracking localization and classification of submarines. Special sonars are procured for employment in Fleet Ballistic Missile submarines. This budget activity also supports the procurement of equipment which will provide the Fleet with the capability of deceiving, intercepting, and analyzing airborne, electromagnetic and underwater radiation for the purpose of executing an effective surveillance and intelligence collection capability. Also procured in this budget activity is equipment required to support drug interdiction efforts.

Justification of Funds

Ship Radars (P-1 Line Items 43-48)

	(\$ In Thousands)
FY 1992	FY 1993
\$78,861	\$78,229

These Ship Radar procurements provide the active fleet with detection, tracking and identification equipment to meet the challenge of high speed attack capabilities of low-flyers, anti-ship missiles and modern aircraft. Specific radars and radar equipment improvements to be procured include the AN/SPS-40 radar system improvements which are designed to increase detection capability in hostile, cluttered, or low-flyer threat environments through improved system

availability and automation techniques (FY 1992 \$21.5 million; FY 1993 \$18.0 million); the AN/SPS-48 radar, a three-coordinate air search radar which has a primary function of providing target position data to a weapon system (FY 1992 \$20.1 million; FY 1993 \$9.9 million); the AN/SPS-49 radar, a narrow beam, very long-range two dimensional, air search radar (FY 1992 \$1.3 million; FY 1993 \$20.5 million); the Integrated Automatic Detection and Tracking System (AN/SYS-()) which provides the capability to correlate contact data from up to three radars, determine target tracks, and provide a single target output to the ship's command and decision system automatically (FY 1992 \$7.4 million; FY 1993 \$3.6 million) and the MK-23 Target Acquisition System, a rapid reaction, fully automatic, electronic counter-measure capable radar system developed as the target acquisition system for the Improved Point Defense Missile System (FY 1992 \$19.6 million; FY 1993 \$19.0 million). This request also includes funding for procurement of various radar support items (FY 1992 \$9.0 million; FY 1993 \$7.3 million).

Ship Sonars (Surface Ships) (P-1 Line Items 49, 50, and 52)

	(\$ In Thousands)
FY 1992	\$341,265
FY 1993	\$190,001

Funds requested for Surface Ship Sonars include \$15.4 million in FY 1992 and \$22.3 million in FY 1993 for procurement of AN/SQS-26/53/53A sonar improvements. \$318.1 million in FY 1992 and \$137.3 million in FY 1993 provides for procurement and installation of the AN/SQQ-89 Surface ASW Combat System. In FY 1992, equipment will be budgeted to complete AN/SQQ-89 upgrades for eight ships. In FY 1993, equipment is budgeted to complete two ships. \$7.8 million budgeted in FY 1992 and the \$12.4 million budgeted in FY 1993 provide for the procurement of emergency replacement windows and domes for the AN/SQS-26/53, AN/SQQ-23, AN/SQS-38 sonar systems.

Ship Sonars (Submarines) (P-1 Line Items 51 and 55)

	(\$ In Thousands)
FY 1992	\$154,010
FY 1993	\$182,161

These funds provide for continued procurement and installation of AN/BQQ-5 modification kits required to upgrade previously procured and installed AN/BQQ-5 systems onboard SSN-637 and SSN-688 class submarines and maintenance trainers (FY 1992 \$151.8 million; FY 1993 \$179.9 million). These

funds also provide for procurement of AN/BQR-23 Improved Processors and Memory, AN/BQR-15 array modification shipalts, AN/BQQ-9 systems and various other alterations for installation on SSBN class submarines (FY 1992 \$2.2 million; FY 1993 \$2.3 million).

Ship Sonars (General Support) (P-1 Line Items 53 and 54)

(\$ In Thousands)	
FY 1992	FY 1993
\$ 43,451	\$ 44,602

These funds procure upgrade equipment for the Transducer Repair Facilities, including Towed Line Array (TLA) plant equipment for the TB-16, AN/SQS-18A(V)1, and engineering changes for the AN/BQS-14 including the upgrade of the Forward Look portion of this sonar, and AN/BQS-15 (FY 1992 \$15.3 million; FY 1993 \$11.5 million). This request also includes resources to continue procurement of TR-317 transducers for the AN/BQS-11/12/13 and AN/BQQ-5 sonars for use on SSN-637 and SSW-688 class submarines; new TR-313 transducers for the AN/SQS-26 Sonar; and Electronic Scanning Switches required to support replacement of unreliable mechanical switches with electronic switches on both surface ships and submarines (FY 1992 \$28.2 million; FY 1993 \$33.1 million).

Anti-Submarine Warfare Electronics (Surface Ships) (P-1 Line Items 57 and 61-63)

(\$ In Thousands)	
FY 1992	FY 1993
\$ 25,944	\$ 46,313

This funding provides for the procurement and support of major ASW electronics systems for installation on deploying ships and those in the Naval Reserve Force. This request includes procurement of AN/SLQ-25 (NIXIE) engineering field change kits in FY 1992 and FY 1993 (FY 1992 \$25.9 million; FY 1993 \$46.3 million).

Anti-Submarine Warfare Electronics (Submarine) (P-1 Line Items 56, 58 and 59)

(\$ In Thousands)	
FY 1992	FY 1993
\$ 61,602	\$ 46,477

The request includes \$20.3 million in FY 1992 and \$25.4 million in FY 1993 for Submarine Acoustic Warfare Systems (SAMS) which will provide an enhanced survival capability for submarines to use against enemy torpedoes and a means to reduce the effectiveness of enemy sensors. These funds also provide for procurement of AN/FLR-14/BQR-15 Interface Engineering Changes, procurement of the Acoustic Device Countermeasure (ADC) MK-1 and MK-2 NAE Beacons (MK-3), AN/BQH-7 engineering changes and expendable probes, AN/WRL-9/12 engineering changes and the Countermeasure Set Acoustic (CSA) MK-2 Mod 0 for SSBNs and CSA MK Mod 1 for SSN-637 class submarines, AIR display engineering changes, ADC MK-3, associated SHIPALTS/ECPS and production support. \$40.7 million in FY 1992 is budgeted for an AN/BSY-1 software maintenance facility, compiler, organic repair, facility and team trainer. In FY 1993 \$29.3 million is budgeted for AN/BSY-1 module screening and repair activity, organic repair depot, module redesign, and other support. In addition, \$.2 million in FY 1992 and in FY 1993 are requested for the Acoustic Communications system, a multi-phase program which provides improved tactical acoustic communications systems for the three primary Anti-Submarine Warfare platforms (aircraft, surface ships and submarines).

Anti-Submarine Warfare Electronics (Aviation) (P-1 Line Items 65 and 66)

(\$ In Thousands)	
FY 1992	FY 1993
\$ 37,353	\$ 25,526

These funds will procure reliability and operability improvements to tactical ADP equipment and will provide for continued production of UYQ-21 displays in FY 1990 and FY 1991 as well as continued procurement of improvements to the Acoustic Analysis subsystem and UYQ-21 displays. All of these subsystems and displays are components of the Carrier ASW Module of the Carrier Combat Direction System (FY 1992 \$9.9 million; FY 1993 \$6.0 million). The request also includes resources to support procurement of various equipments which support the ASW Operations Center (ASWOCs) which is the land based terminal for ASW area commanders in the overall Navy Command Control System (NCCS). (FY 1992 \$27.5 million; FY 1993 \$19.5 million).

Anti-Submarine Warfare Electronics (Surveillance) (P-1 Line Items 60 and 64)

(\$ In Thousands)	
FY 1992	FY 1993
\$105,390	\$117,220

These funds will support the Sound Surveillance System (SOSUS) and Surveillance Towed Array Sensor (SURTASS) programs. Specific items to be procured in SOSUS include ship improvement equipment, cable replacement and engineering, trainer hardware and configuration changes, shore electronics backfit, fiber optic array systems and surveillance director system, special projects and associated equipment installation. (FY 1992 \$77.7 million; FY 1993 \$87.0 million). The FY 1992 and FY 1993 SURTASS funds will procure field change/modifications, block upgrade equipment for shipboard and land base application and associated installation of equipment. FY 1992 funds also procure the last increment of Shore Electronics equipment. (\$27.7 million in FY 1992; \$30.2 million in FY 1993).

Electronic Warfare Equipment (Surveillance) (P-1 Line Items 67 - 73)

(\$ In Thousands)	
FY 1992	FY 1993
\$180,741	\$182,967

The FY 1992 and FY 1993 Electronic Warfare Equipment procurement provides the Fleet with systems that have the capability of detecting overt electromagnetic emissions through passive means. Specific systems to be procured include the AN/SLQ-32, a family of modular shipborne electronic warfare equipments to be installed in most combatants and auxiliaries in the surface Navy. Funding of \$129.5 million in FY 1992 will procure four AN/SLQ-32(V)3 systems and Electronic Warfare improvements as follows: Processing upgrades, AN/SLQ-32(V)2 to AN/SLQ-32(V)3 upgrades and advanced capability. Funding of \$126.9 million in FY 1993 will procure four AN/SLQ-32(V)3 systems, and EW Improvements. The Integrated Cover and Deception System (ICADS) provides electronic equipment for coordinated cover and deception capabilities to the Battle Group Commanders. A total of \$5.8 million budgeted in FY 1992 and \$2.4 million budgeted in FY 1993 are for the modernization of the AN/SSQ-74 and AN/SLQ-33 systems, for the procurement of an AN/SLQ-33 towed body and the final procurement of AN/ULQ-13 Signal Enhancement Sources. The Electronic Warfare Support Equipment procures equipment and devices to (1) maintain the integrity of USN C3 networks and targeting systems by preventing adversary access,

(2) assess the performance and stability of USN communications links/networks, radars and electronic countermeasures for airborne and shipboard electromagnetic systems, and (3) simulate hostile electronic countermeasures and weapons targeting functions. The \$9.9 million budgeted in FY 1992 and \$6.7 million in FY 1993 procure reprogrammable terminals, processors and printers, replacement equipment for permanently manual Ship Signal Exploitation Spares (SSES) and associated installation and production support efforts. \$24.8 million budgeted in FY 1992 and \$32.0 million in FY 1993 are for procurement of Chaff Buoys and DLF-1/2 Buoys. The \$7.5 million budgeted in FY 1992 and \$14.9 million budgeted in FY 1993 provide for the procurement of WLR-8 field change kits. Additionally, in FY 1992 \$3.3 million is budgeted for AN/WLR-1 modification kits.

Reconnaissance Equipment (P-1 Line Items 74-76)

(\$ In Thousands)	
FY 1992	FY 1993
\$ 31,735	\$ 28,353

This funding will provide the tactical capability to detect, locate and identify hostile targets at long range and input this information into the ship's Tactical Data Systems. A total of \$10.0 million budgeted in FY 1992 and \$10.3 million in 1993 are for the procurement of Combat Direction Finding Systems. Additional funding of \$16.2 million budgeted in FY 1992 and \$9.5 million budgeted in FY 1993 provide for procurement of equipment to update the intelligence centers in Aircraft Carriers, other Ships and training centers. Other funds totaling \$5.5 million budgeted in FY 1992 and \$8.6 million budgeted in FY 1993 provide for the procurement of Direction Finder and signal acquisition modernization kits for the OUTBOARD system, installation efforts and associated production support.

Submarine Surveillance Equipment (P-1 Line Items 77-80)

(\$ In Thousands)	
FY 1992	FY 1993
\$21,104	\$25,597

The funding requested provides for special equipment in support of submarine surveillance operations. A total of \$10.4 million budgeted in FY 1992 and \$18.9 million budgeted in FY 1993 are for procurement of modifications to the existing AN/WLQ-4(V) and Mini-N-Suites signal intelligence

augmentation modification kits, both installed on the SSN-637 Class submarines. Another \$2.2 million budgeted in both FY 1992 and FY 1993 are for support of the AN/WLQ-4 intermediate maintenance activity. \$3.6 million budgeted in FY 1992 and \$4.5 million in FY 1993 provide for the procurement of unique equipments that are maintained in limited quantities at Submarine Surveillance Equipment Program Support Facilities for use onboard nuclear attack submarines. In FY 1992, \$4.9 million is budgeted for AN/BLD-1 systems.

Other Shipboard Electronic Equipment (P-1 Line Items 81-89)

(\$ In Thousands)	
FY 1992	FY 1993
\$431,350	\$373,633

The request includes \$54.3 million budgeted in FY 1992 and \$54.0 million budgeted in FY 1993 provides for the procurement of improvements to the Navy Tactical Data System (NTDS) which permits major warships rapid integration of ship sensor information, analysis and display of tactical information and designation of weapon systems to force threats. The request includes \$165.8 million budgeted in FY 1992 and \$131.0 million budgeted in FY 1993 are for electronic equipment for the Trident Training Facility (TRITRAFAC), in addition to upgrading the AN/BQQ-6 sonars to the AN/BQQ-5E configuration and to add Compact VLF receivers to the submarine radio rooms. The request also includes resources to support procurement of equipment for the Armed Forces Radio and Television Service (AFRTS) which operates radio and television outlets for the shipboard information training and entertainment of United States servicemen and their dependents at sea or shore (FY 1992 \$7.8 million; FY 1993 for \$6.8 million). \$21.4 million budgeted in FY 1992 and \$21.6 million budgeted in FY 1993 are for procurement of mine hunting sonars for Minesweeping Boats (MSBs), route survey sonars for Ocean going Minesweepers (MSOs), and precise navigation equipment. Funding of \$91.2 million in FY 1992 and \$62.9 million in FY 1993 will procure the AN/UYS-2A(V) Modular Signal Processor. These will be multiyear procurements for use in the AN/SQQ-89, SURTASS, P-3 Aircraft and Airborne Low Frequency Sonar programs. \$16.9 million budgeted in FY 1992 and \$13.2 million budgeted in FY 1993 provide for procurement of the NAVSTAR Global Positioning System (GPS) for shipboard installation and for procurement of hand held Precision Lightweight GPS Receivers (PLGR). This joint service program will provide a continuous, world-wide three-dimensional positioning/navigation capacity to the operational forces. The request also includes \$2.1 million budgeted in FY 1992 and \$1.3 million budgeted in FY 1993 are for procurement of replacement Data Terminal Sets (DTS) for the High Frequency Link - 11 System. \$30.9 million budgeted in FY 1992 and \$39.8 million budgeted in FY 1993 are for procurement of Tactical Flag Command Center (TFCC) systems which support the tactical commander by receiving and

displaying information on the current tactical situation. These funds also provide for associated installation and production support. The request also includes \$40.8 million in FY 1992 and \$43.0 million in FY 1993 will procure Link 16 terminals that will provide the Navy with a more secure, higher data rate system for tactical data and voice communications.

Training Equipment (P-1 Line Items 90)

	(\$ In Thousands)
FY 1992	
\$ 7,291	
FY 1993	
\$ 8,700	

A total of \$7.3 million budgeted in FY 1992 and \$8.7 million budgeted in FY 1993 provide for procurement of equipment to satisfy initial training requirements developed through the Navy Training Plan process. This equipment will give the Navy the capability to train officer, operator and maintenance personnel on new, significantly modified equipment for which no Navy training is currently available. It also satisfies requirements to expand the Navy training capability on existing equipment to meet heavier needs for trained personnel in the fleet.

Aviation Electronic Equipment (P-1 Line Items 91-98)

	(\$ In Thousands)
FY 1992	
\$91,270	
FY 1993	
\$65,963	

The FY 1992 and FY 1993 request for Aviation Electronic Equipment provides for procurement of electronic equipment to support Naval and Marine aviation shore activities, shipboard aircraft control equipment and secure identification systems. The Marine Air Traffic Control and Landing System (MATCALS) will provide a fully automatic air traffic control and landing system. The request includes \$4.1 million budgeted in FY 1992 and \$3.7 million budgeted in FY 1993 are for the procurement of various Marine squadron support equipment. The Shipboard Air Traffic Control (SATC) program will improve air traffic control operations in the Fleet. SATC funding of \$11.2 million in FY 1992 and \$8.4 million budgeted in FY 1993 for procurement of three Amphibious Air Traffic Control (AATC) Direct Altitude Identify Radiate (DAIR) systems for LPHs and LHAs. Two Amphibious Air Traffic Control field change kits will be procured in FY 1993 to backfit existing Carrier Air Traffic Control Center (CATCC) systems to provide commonality. The \$34.2 million budgeted in FY 1992 and \$15.1 million budgeted in

FY 1993 in the Automatic Carrier Landing System are required for procurement of four AN/SPN-46(V) systems to replace aging AN/SPN-42A Automatic Carrier Landing Systems and four AN/SPN-35 solid state field change kits. Another \$2.2 million budgeted in FY 1992 and \$1.9 million budgeted in FY 1993 are for procurement of Tactical Air Navigation (TACAN) equipment for Navy ships. \$13.7 million budgeted in FY 1992 and \$8.7 million budgeted in FY 1993 in the Identification Systems line are for procurement of various equipment to improve the MK XII Identification Friend or Foe air traffic control radar system used as a secure identification system on all major combatant ships, selected auxiliaries, patrol craft and selected Coast Guard ships. Major items planned for procurement include 81 AN/UPM MK XII test sets and various AN/UPX-29 modifications to improve range coverage and processor capabilities. The Air Station Support Equipment program addresses air traffic control requirements and enhances flight safety at Navy and Marine Corps Air Stations. The budget request includes \$24.1 million in FY 1992 and \$15.5 million in FY 1993 to procure a wide array of equipments and systems for the Navy's shore-based air traffic control air stations and aviation facilities. Specific systems include the Integrated Voice Communications Switching System (IVCCS) to replace 20-year old mechanical switching equipment with more advanced and capable systems; the Visual Communications Control Systems (VISCOM), a safety of flight of systems; the Television Microwave Links (TML) to convey air traffic control radar signals to remote sites in lieu of procuring separate radars for those sites; and the Range Airspace Surveillance System (RASS) to improve air traffic control at NAS Fallon. Another \$2.2 million budgeted in FY 1992 and \$3.3 million budgeted in FY 1993 in the Microwave Landing System line are to complete upgrades to extend the life of the AN/FPN-63 Precision Approach Radar to keep it operational until replaced by the Microwave Landing System (MLS). Another \$1.6 million in FY 1992 and \$12.3 million budgeted in FY 1993 are for procurement of Fleet Area Control and Surveillance Facilities (FACSFAC) communication modernizations for various sites; FY 1993 funds will begin the conversion to the Advanced Combat Direction System and will procure a FACSFAC scheduling system to interface with the Military Airspace Management System.

Other Shore Electronic Equipment (Command and Control) (P-1 Line Items 99 - 102)

(\$ In Thousands)	
FY 1992	FY 1993
\$45,058	\$60,144

The funds budgeted for Tactical Receive Equipment (TRE), \$9.3 million in FY 1992 and \$8.5 million in FY 1993, will provide designated platforms with the capability to receive near real-time contact data reports via a UHF Communications Link called Tactical Data Information Exchange System B (TADIXS-B). FY 1992 and FY 1993 funds will also procure electronic equipment for replacement of obsolete equipment of the Navy Space Surveillance System. This system provides unaltered real-time detection of non-radiating satellites and other objects which pass through multistatic continuous wave radar beams (FY 1992 \$2.9 million and FY 1993 \$1.1 million). Additional funding includes resources to support the Space System Processing System. This includes procurement of special computer hardware and software necessary to improve information processing and generation of highly classified reports for use by Operational Navy Command (FY 1993 \$4.4 million). Resources are also requested to procure correlation upgrade equipment, replacement equipments, and associated installation efforts for the Navy Command and Control System (NCCS) Ashore program which provides for the coordination and integration of shore based command centers and their respective systems. (\$32.8 million in FY 1992 and \$47.2 million in FY 1993).

Other Shore Electronic Equipment (Miscellaneous) (P-1 Line Items 103-109)

(\$ In Thousands)	
FY 1992	FY 1993
\$64,968	\$68,647

Funding of \$2.7 million in FY 1992 and \$2.8 million in FY 1993 provides for continued production support efforts required to support final delivery of the Relocatable Over the Horizon Radars (ROTHR) which were procured in FY 1988 and FY 1989. The request also includes \$7.6 million budgeted in FY 1992 and \$7.4 million budgeted in FY 1993 for Radiation Detection Indication and Computation Equipment Program (RADIAC) to detect and measure nuclear and ionizing radiation and to convert these measurements into meaningful terms so that Navy personnel can adequately control personnel exposure to those radiations. Funds in the amount of \$21.7 million in FY 1992 and \$22.9 million in FY 1993 are for the procurement of General Purpose Electronic Test Equipment (GPETE) for initial outfitting

of new or modified Fleet and shore electronic equipment. Funding of \$4.9 million in FY 1992 and \$4.8 million in FY 1993 is for procurement of equipment required for the Integrated Combat System Test Facility (ICSTF), located at San Diego, California, the only permanent Navy Test facility for integrated shipboard combat system certification and for continuation of engineering for modification of combat systems in existing ships. Funding of \$9.0 million budgeted in FY 1992 and \$8.2 million in FY 1993 is for procurement of a new generation of signal generators and oscillator calibrators capable of calibrating up to 18 GHz to support test equipment for FFG-7 and DD-963 class ships and Trident submarines and up to 40 GHz to support test equipment for SSN-637 and SSN-688 class submarines. Funding of \$11.8 million in FY 1992 and \$11.7 million in FY 1993 is for procurement of emergency field change kits and hardware devices to solve Electromagnetic Interference (EMI) problems in electronic systems and equipments throughout the operating forces. The FY 1992 and FY 1993 requests also include resources to support procurement of replacements for deteriorating and obsolete management equipment, for facilitization of the AN/UYS-1 and 2 hardware (FY 1992 \$7.2 million; FY 1993 \$10.9 million).

Shipboard Communications Equipment (P-1 Line Items 110-114)

(\$ In Thousands)	
FY 1992	FY 1993
\$139,886	\$179,371

Funding of \$58.7 million in FY 1992 and \$82.7 million in FY 1993 is for procurement of replacement High Frequency (HF) equipment to update the capability aboard ships. Funds in the amount of \$14.9 million in FY 1992 and \$22.6 million in FY 1993 are for procurement of portable specialized radios to support the unique air, sea and land environment of the Explosive Ordnance Disposal (EOD) and the portable contingency communications package missions. Funding of \$43.3 million in FY 1992 and \$42.0 million in FY 1993 provides for procurement of communication systems to automate message processing and distribution functions for procurement aboard ship. Funding of \$23.1 million in FY 1992 and \$28.7 million in FY 1993 provides for completion of communications suites aboard ship. Funding of \$3.4 million in FY 1992 and \$2.5 million in FY 1993 provides for the procurement of flight deck communications systems.

Submarine Communications Equipment (P-1 Line Items 115-117)

	(\$ In Thousands)
FY 1992	
\$19,518	
FY 1993	
\$16,047	

These resources will procure communications equipment for Command and Control of the Fleet Ballistic Missile (FBM) and Attack Submarine Forces. Funds in the amount of \$5.9 million in FY 1992 and \$4.0 million in FY 1993 are for procurement of shore Low Frequency/Very Low Frequency (LF/VLF) communications service life extension, additional hardware for the strategic communications center and associated installation. Funding of \$1.3 million in FY 1992 and \$4.7 million in FY 1993 provide for procurement of the Integrated Submarine Automated Broadcast Processing System II and Integrated VERDIN Transmit Terminals. These requirements are part of the VERDIN VLF communications system. Funding of \$12.3 million in FY 1992 and \$7.4 million in FY 1993 provides for procurement of submarine communications equipment consisting of antenna modifications, mast assemblies and associated installation efforts.

Satellite Communications Equipment (P-1 Line Items 118-119)

	(\$ In Thousands)
FY 1992	
\$186,509	
FY 1993	
\$209,102	

FY 1992 and FY 1993 Satellite Communications procurements provide for adequate command, control and communications among shore stations, ships, submarines and selected aircraft through the Ultra High Frequency (UHF), Super High Frequency (SHF), and Extremely High Frequency (EHF) bands. Funding of \$186.5 million in FY 1992 and \$209.1 million in FY 1993 provides for procurement of Demand Assigned Multiple Access (DAMA) systems; Submarine Satellite Communications (SATCOM) equipment; Battle Group SATCOM terminals consisting primarily of Officer in Tactical Command Information Exchange Subsystem (OTCIXS) and Tactical Data Information Exchange Subsystem (TADIXS); support equipment for the SHF shipboard terminals; and EHF jam resistant low probability of intercept connectivity terminals, replacement coder equipment to make Navy ships interoperable with Army and Air Force Secure Voice Systems and associated installation efforts.

Shore Communications Equipment (P-1 Line Items 120-127)

(\$ In Thousands)	
FY 1992	FY 1993
\$44,343	\$37,225

Funding of \$2.4 million budgeted in FY 1992 and \$2.3 million requested in FY 1993 provides for the procurement of the Joint Service Modernization of the Joint Chiefs of Staff (JCS) Communications equipment. Funding of \$5.5 million in FY 1992 and \$6 million in FY 1993 is for procurement of emergency generators and Uninterruptable Power Systems for installation at various Naval Communication activities worldwide. Funding of \$15.5 million in FY 1992 and \$16.8 million in FY 1993 provides for procurement of program upgrades and replacement High Frequency antennas, transmitters and receivers at various shore sites. Funding of \$4.0 million in FY 1992 and \$2.8 million in FY 1993 provides for procurement of replacement and upgrade equipment at various technical control facilities. Funding of \$11.6 million in FY 1992 and \$6.3 million in FY 1993 provides for procurement of various communication equipment which supports the Worldwide Military Command and Control System (WMMCCS). \$9.7 million in FY 1992 and \$7.8 million in FY 1993 provide for the procurement of Navy standard teletypes as replacements for the 30 year old model 28 teletypes at shore activities, other shore communication automation upgrade equipment. Funding of \$7 million in FY 1992 and \$6 million in FY 1993 is for procurement of various other low dollar value items to support numerous Naval Shore Telecommunications Programs.

Cryptographic Equipment (P-1 Line Items 128-142)

(\$ In Thousands)	
FY 1992	FY 1993
\$117,959	\$123,681

The FY 1992 and FY 1993 request will procure sufficient equipment to provide secure voice equipment to provide secure voice protection to an additional share of Navy's identified critical narrowband/wideband secure voice requirements. Funding of \$61.3 million in FY 1992 and \$77.0 million in FY 1993 provides for procurement secure voice systems and associated installation. This includes procurement of STU-III equipments which will provide subscriber expansion and improvement over the secure voice capability presently provided by AUTOSEVOCOM I. New features include digital transmission, end-to-end secure voice with conferencing, a better voice quality, and lower bit rate.

Also being procured are Advance Narrowband Digital Voice Terminals (ANDVTs) which satisfy requirements for secure narrowband communication which cannot be met by existing equipment. Funding of \$49.1 million in FY 1992 and \$33.9 million in FY 1993 provides for procurement of Secure Data Systems and associated installation efforts. This includes procurement of the TSEC/KG-84, a general purpose key generator capable of satisfying a wide variety of requirements and which is designed to serve as the future standard link encryption device for low to medium speed record and/or data system, and the KI-III and KIK III equipment which provides multilevel security capability to support command and control systems. \$4.7 million in FY 1992 and \$9.8 million in FY 1993 provide for the procurement of Navy Key Distribution System (NKDS) equipment required to change the form factor of the cryptographic variables to an electronic form, for procurement of the Data Transfer Device which will replace the KIX-13 and KIX-15 for common fill devices and for procurement of other Secure Data devices. Funding of \$2.4 million in FY 1992 and \$2.6 million in FY 1993 provides for the procurement of various low dollar value items that are needed to meet special Communication Security operated requirements.

Cryptologic Equipment (P-1 Line Items 143-147)

(\$ In Thousands)	
FY 1992	FY 1993
\$5,884	\$7,456

These resources provide equipment to support Tactical Cryptologic missions and functions. Funding of \$2.6 million in FY 1992 and \$2.9 million in FY 1993 continues procurement of AN/UYA-7 Replacement Suites which allow shipboard and Navy shore sites to be interoperable with Air Force Communications networks that will pass Airborne derived reconnaissance via HF. Funding of \$2.0 million in FY 1992 and \$1.7 million in FY 1993 continues procurement of various low cost replacement and cryptologic training equipments for use at U.S. Navy shore sites, training commands, and aboard U.S. Navy combatants. Funding of \$1.7 million in FY 1992 and \$1.5 million in FY 1993 continues procurement of cryptologic systems for use at U.S. Navy ashore reserve training sites to insure that cryptologic technicians maintain proficiency in various languages and manual Morse. Funding of \$1.5 million in FY 1992 and \$1.6 million in FY 1993 continues procurement of cryptologic systems to be installed at various worldwide shore sites which are used in conjunction with afloat cryptologic systems to ensure that accurate tactical data bases are maintained.

Other Electronic Support (P-1 Line Items 148 and 149)

(\$ In Thousands)	
FY 1992	FY 1993
\$8,389	\$8,147

This funding will procure critical repairable equipment in support of planned maintenance schedules and corrective maintenance actions for the FFG (LO-MIX) and DD (Engineering Operation Cycle) class ships, dedicated test stations, industrial plant equipment, and test jigs and fixtures for selected depot rework facilities in support of new maintenance strategies for the FFG and DD (EOC) Class ships (FY 1992 \$8.4 million; and FY 1993 \$8.1 million).

BUDGET ACTIVITY 3: AVIATION SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(In Thousands)

Budget Plan (Amounts for Procurement Actions Programmed)					
	FY 1991 Actual	FY 1992 Estimate	FY 1993 Initial Estimate	FY 1993 Change	FY 1993 Amended Estimate
Sonobuoys	\$160,000	\$68,267	\$72,751	3,043	75,794
Airborne Expendable Countermeasures	48,812	61,971	55,039	8,734	63,773
Miscellaneous Ordnance and Support	24,495	36,974	53,625	-11,295	42,330
Weapons Range Support Equipment	57,854	58,645	54,426	-2,972	51,454
Aircraft Launching and Recovery Equipment	20,549	55,229	64,613	1,613	66,226
Aircraft Rearming Equipment	12,275	14,050	12,946	320	13,266
Airborne Mine Countermeasures Equipment	7,988	3,085	4,591	6,447	11,038
LAMPS MK III Shipboard Equipment	5,413	4,175	46,974	-34,414	12,560
Other Aviation Support	54,710	59,952	54,973	9,440	64,413
Total Budget Plan	\$392,096	\$362,348	\$419,938	-\$19,084	\$400,854

BUDGET ACTIVITY 3: AVIATION SUPPORT EQUIPMENT

	(\$ in Thousands)
FY 1993 Amended Estimate	\$ 400,854
FY 1993 Change	\$ -19,084
FY 1993 Initial Estimate	\$ 419,938
FY 1992 Estimate	\$ 362,348
FY 1991 Actual	\$ 392,096

Purpose and Scope of Work

Budget Activity 3 finances air launched anti-submarine warfare (ASW) sensors, general support equipment associated with aircraft and other aviation support which includes ground electronics equipment, aircraft launching and retrieving equipment, photographic equipment, reconnaissance and electronic warfare processing and analysis equipment and miscellaneous other categories.

Justification of Funds

Sonobuoys (P-1 Line Item 151-155)

	(\$ in Thousands)
FY 1992	\$68,267
FY 1993	\$75,794

The FY 1992 and FY 1993 Sonobuoy procurement has been computed considering the number of ASW carrier air groups and shore based ASW patrol squadrons to be supported, actual and planned peace-time usage for these forces and the necessary training allowance requirements. User aircraft include the S-3A, P-3, SH-2D, and SH-3 series. Specific sonobuoys to be procured in FY 1992 and FY 1993 include: the AN/SSQ-62 (DICASS) Sonobuoy, an active directional sonobuoy, the AN/SQQ-36 Bathythermograph Sonobuoy, an air-dropped bathythermograph transmitting set that provides a vertical water temperature profile and the AN/SSQ-77 (VLAD) Sonobuoy, a passive directional sonobuoy utilizing a line array of omni-directional hydrophones and a DIFAR element. The directional beam patterns are formed from the line array to discriminate against noise and the DIFAR enables determination of the bearing of detected sound. The FY 1993 request also includes funding to support procurement of Signal Underwater Sound (SUS) devices which are expendable, high energy acoustic sources (FY 1993 \$1.8 million). The MK-84 is a non-explosive, electro-acoustic device

which is launched from aircraft and transmits acoustic tones after water entry. The MK-84 SUS is used for training and exercise signaling to submarines.

Airborne Expendable Countermeasures (P-1 Line Item No. 158)

	(\$ in Thousands)
FY 1992	
\$61,971	
	FY 1993
	\$63,773

The Airborne Expendable Countermeasures line provides funding for procurement of electronic countermeasure self-protection devices for all Navy tactical aircraft, including air-launched chaff, infra-red (IR) flares, and expendable jammers. A major new item being procured in FY 1992 is the Generic Expendable Decoy (GEN-X), which enhances existing radio frequency countermeasures capabilities and complements present and future electronic warfare suites. Funds requested in FY 1993 will be used to continue procurement of the GEN-X, the MJU-8A/B fixed-wing aircraft IR decoy flare and Simulator Tactical Use Flare (STUF). The STUF will be procured as a low cost training flare to satisfy approximately twenty percent of flare training requirements. Various types of expendable chaff are also scheduled for procurement in FY 1992 and FY 1993 including RR-129 chaff, RR-144 chaff, RR-184 BOL chaff, RR-181 AIRBOC chaff, RR-179 Glass Rovings chaff, and RR-188 chaff.

Miscellaneous Ordnance and Support (P-1 Line Item Nos. 156, 157, 159-161)

	(\$ in Thousands)
FY 1992	
\$ 36,974	
	FY 1993
	\$ 42,330

Budgeted procurements in this category include various ordnance and ordnance support items. Funding of \$15.3 million in FY 1992 and \$21.0 million in FY 1993 is for procurement cartridges used to eject air-launched weapons and other cartridge-actuated devices. Funding of \$6.1 million in FY 1992 and \$5.6 million in FY 1993 is for rocket motors and catapults used for ejecting aircrewmembers from disabled aircraft. Funding of \$7.9 million in FY 1992 and \$9.0 million in FY 1993 is for Jet-Assisted Take Off (JATO) rockets used to launch aircraft and targets and to propel sleds used in testing. The request also includes \$6.4 million requested in FY 1992 and \$5.9 million in FY 1993 are to procure Marine Location Markers which are required for location of sonobuoys in anti-submarine operations and for other general applications. The remaining \$1.2 million in FY 1992

and \$0.8 million in FY 1993 are for procurement of Defense Nuclear Agency Material including nuclear trainers and trainer components, test and handling equipment, and modernization equipment.

Weapons Range Support Equipment (P-1 Line Item No. 162)

(\$ in Thousands)	
FY 1992	FY 1993
\$ 58,645	\$51,454

This line provides the resources to implement the Navy Fleet Training Range Instrumentation Program Plan. Procurements in FY 1992 include the following: (1) \$7.5 million for Aircrew Electronic Warfare Training Range systems at Pinecastle, FL, and Fallon, NV; (2) \$4.5 million for the procurement of System Replacement and Modernization equipment; (3) \$7.6 million for expansion of the Cherry Point Tactical Aircrew Combat Training System (TACTS) range and for procurement of nine TACTS Display and Debriefing Subsystems for four sites; (4) \$13.2 million for in-water instrumentation replacements for the Barking Sands Tactical Underwater Range (BARSTUR); (5) \$9.9 million for equipment replacements and upgrades of the Atlantic Fleet Weapons Training Facility (AFWTF) microwave systems; (6) \$3.8 million for Range Electronic Warfare Simulators (REWS) for the Pacific Missile Range Facility (PMRF); and (7) \$8 million for procurement of Range Operation Control Systems replacements. In addition, \$11.3 million is required for production engineering, integrated logistics support (ILS) efforts, and equipment installation. Funds requested in FY 1993 will procure Aircrew Electronic Warfare Training Range systems at Cherry Point, NC, Fallon, NV and Yuma, AZ (\$7.6 million), System Replacement and Modernization equipment (\$4.2 million), 24 remote TACTS systems for Fallon, NV (\$13.2 million), a Large Area Tracking Range System for the Southern California (SOCAL) range (\$9.9 million); and product improvements for the Mobile Sea Range, Anti-Submarine Warfare (\$4.0 million). In addition, \$12.6 million is required for production engineering, ILS efforts, and equipment installation.

Aircraft Launching and Recovery Equipment (P-1 Line Item Nos. 163 and 165)

(\$ in Thousands)	
FY 1992	FY 1993
\$55,229	\$66,226

Catapult, Arresting Gear, and Visual Landing Aids Support for the Navy's aircraft carriers and other air-capable ships, and the Marine Corps' Expeditionary Airfield (EAF) systems are funded under

this program. Funding of \$50.5 million in FY 1992 and \$59.9 million in FY 1993 is for the procurement and installation of major catapult, arresting gear and visual landing aids equipment for aircraft carriers and other aircraft capable ships. Funding of \$4.8 million in FY 1992 and \$6.3 million in FY 1993 is for EAF support equipment to enhance maintainability, reliability and safety of flight operations, and to keep pace with advanced aircraft requirements by correcting known deficiencies and by modernizing EAF equipment.

Aircraft Rearming Equipment (P-1 Line Item No. 164)

(\$ in Thousands)	
FY 1992	FY 1993
\$14,050	\$13,266

The Aircraft Rearming Equipment program provides armament support equipment (ASE) and weapons support equipment (WSE) for use ashore and afloat to load and/or download air-launched weapons and to perform maintenance on aircraft-installed armament systems. WSE equipment is used to transport and to perform maintenance on weapons and explosive ordnance components. ASE and WSE are utilized to accomplish the improved rearming rate (IRR) of A-6, EA-6, F/A-18, and AV-8 aircraft. The use of this equipment permits the rapid weapons loading and reloading of strike aircraft with a minimum number of flight deck personnel.

Airborne Mine Countermeasures Equipment (P-1 Line Item 169)

(\$ in Thousands)	
FY 1992	FY 1993
\$ 3,085	\$11,038

This program funds various mine countermeasures equipment operated by RH/CH-53D/MH-53E helicopters. Funds budgeted in FY 1992 and FY 1993 will procure airborne mine countermeasures (AMCM) hardware modifications and the AN/AQS-14 sonar computer aided detection equipment.

LAMPS MK III Shipboard Equipment (P-1 Line Item 170)

	(\$ in Thousands)
FY 1992	
<u>\$ 4,175</u>	
FY 1993	
<u>\$12,560</u>	

Equipment to be installed in existing ships being backfitted with the LAMPS MK III weapon system is procured in this line item. Funds budgeted in FY 1992 and FY 1993 are to procure one and five AN/SMQ-4 units, respectively, shipboard terminal data transmission devices. Other requirements include a system integration efforts, \$2.8 million in FY 1992 and \$2.2 million in FY 1993, various production engineering and integration logistics support items, and equipment installation.

Other Aviation Support (P-1 Line Items 166-168, 171-173)

	(\$ in Thousands)
FY 1992	
<u>\$59,952</u>	
FY 1993	
<u>\$64,413</u>	

Funds budgeted include the procurement of Meteorological equipment and Aviation Life Support equipment. Meteorological equipment to be procured in both FY 1992 and FY 1993 provides a cost effective means to receive, process, and disseminate meteorological/oceanographical data and support an on-site, real time geographical capability to determine environmental factors currently affecting fleet and shore activities. Specifically, the equipment to be procured includes the AN/SMQ-11 Meteorological Data Satellite Receiver-Recorder and the Tactical Environmental Support System (TESS)/Shipboard Meteorological Oceanographic Observing Systems (SMOOS) and the shorebased TESS, SMOOS sensors, Automated Surface Observing System (ASOS) and ancillary equipment for the Navy Oceanographic Data Distribution and Expansion System (NODDES). The funds requested in FY 1993 (\$31.8 million) provide for the continued procurement of AN/SMQ-11, SMOOS and TESS/SMOOS system upgrades. The \$6.1 million budgeted in FY 1992 and the \$12.5 million requested in FY 1993 for Aviation Life Support Equipment will finance procurement of Chemical/Biological Aircrew Protective Assemblies, PRC-112 Aircrew Survival Radios and related support equipment, integrated logistics support and production support. The \$1.7 million budgeted in FY 1992 and the \$1.6 million requested in FY 1993 for the Reconnaissance Electronic Warfare, Special Operations and Naval Intelligence (RENSON) program will procure replacement film processors and new digital image processors that utilize state-of-the-art reconnaissance sensors coming into the Navy inventory. The Other

Photographic Equipment line provides imaging and laboratory equipment in support of 62 fleet and 205 shore-based sites. The \$1.3 million budgeted in FY 1992 and \$0.9 million in FY 1993 will procure printing and processing equipment (mini-labs), black and white paper automatic processors, and other commercial, off-the-shelf investment equipment. The Stock Surveillance equipment line provides funds for procurement of equipment needed to monitor, measure, and assess the condition of current Navy stocks of air-launched missiles and air-launched ordnance and ammunition (\$2.2 million in FY 1992 and in FY 1993). Seventy-five percent of the funds support missile inventory quality evaluation (surveillance) efforts and twenty-five percent support air-launched ordnance evaluation, including bombs, rockets, and cartridge actuated devices. Material readiness factors such as reliability and serviceability are measured by this effort. The Other Aviation Support Equipment line funds miscellaneous programs (\$18.0 million in FY 1992 and \$15.4 million in FY 1993). Included are funds for procurement of fleet telemetry equipment which is used to receive, record and analyze missile telemetry performance data providing information to evaluate training/test exercises; collateral equipment in support of the Naval Air Systems Command and its field activities; a computerized Tactical Aircraft Mission Planning System (TAMPS) planned for installation in aviation-capable ships, air stations, aviation training sites, support facilities and deployed aviation units. Finally, this line provides capital maintenance of the government-owned, contractor-operated Sonobuoy test facility at St. Croix, U.S. Virgin Islands and deployed aviation units.

**BUDGET ACTIVITY 4: ORDNANCE SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(\$ In Thousands)**

**BUDGET PLAN
(Amounts for Procurement Actions Programmed)**

	<u>FY 1991 Actual</u>	<u>FY 1992 Estimate</u>	<u>FY 1993 Initial Estimate</u>	<u>FY 1993 Change</u>	<u>FY 1993 Amended Estimate</u>
SHIP GUN SYSTEMS EQUIPMENT	13,107	15,216	15,846	728	16,574
SHIP MISSILE SYSTEMS EQUIPMENT	253,717	279,299	470,970	-43,148	427,822
FPM SUPPORT EQUIPMENT	50,170	82,754	56,781	-13,540	43,241
ASW SUPPORT EQUIPMENT	88,113	92,666	126,323	-18,072	108,251
OTHER ORDNANCE SUPPORT EQUIPMENT	21,048	23,084	31,069	-2,665	28,404
OTHER EXPENDABLE ORDNANCE	73,077	43,752	62,322	-1,429	60,893
Total Budget Plan	\$499,232	\$536,771	\$763,311	-\$78,126	\$685,185

BUDGET ACTIVITY 4: ORDNANCE SUPPORT EQUIPMENT

	(\$ In Thousands)
FY 1993 Amended Estimate	\$ 685,185
FY 1993 Change	\$ -78,126
FY 1993 Initial Estimate	\$ 763,311
FY 1992 Estimate	\$ 536,771
FY 1991 Actual	\$ 499,232

Purpose and Scope of Work

Funds provided in this budget activity are for Ship Gun and Ship Missile Systems equipment, Fleet Ballistic Missile and Anti-Submarine Warfare Support equipment, and Other Ordnance Support equipment, and Other Expendable Ordnance.

Justification of Funds

Ship Gun System Equipment (P-1 Line Items 174)

	(\$ In Thousands)
FY 1992	FY 1993
\$15,216	\$16,574

The FY 1992 request of \$15.2 million and the FY 1993 request for \$16.6 million is to procure Gun Fire Control equipment. The funds requested for Gun Fire Control equipment are for the procurement of equipment and ordnance alterations to improve reliability and maintainability of the MK-86 and MK-68/56 surface Gun Fire Control Systems installed on all surface combatants fitted with 5" naval guns.

Ship Missile Systems Equipment (P-1 Line Items 175-184)

(\$ In Thousands)	
FY 1992	FY 1993
\$279,299	\$427,822

The \$279.3 million budgeted in FY 1992 and the FY 1993 request of \$427.8 million are for Ship Missile Systems (SMS) programs. The MK-92 Fire Control System \$13.7 million budgeted in FY 1992 and \$23.0 million requested in FY 1993 will provide for improved readiness of the MK-92 system. The FY 1992 budgeted and FY 1993 request of \$28.4 million and \$37.6 million, respectively, for Harpoon Support equipment will be used to procure ordnance alterations. The TERRIER Support equipment \$19.5 million budgeted in FY 1992 and \$20.6 million requested in FY 1993 will provide for modification to the TERRIER Missile Weapon Systems including Fire Control System MK-76, Weapons Direction System MK-14, Guided Missile Launching System MK-10, Communications Tracking Set AN/SYR-1 and Ancillary support equipment. These modifications provide for CG/SM-2 performance improvements (Standard Missile (Extended Range) Block I missile capability), New Threat Upgrade performance improvements (Standard Missile 2 (Extended Range) Block II missile capability) and associated reliability/maintainability/availability improvements in CG-16/26/N35 Class ships. The FY 1992 budgeted and FY 1993 request of \$26.9 million and \$33.3 million, respectively, for the TARTAR Support equipment program are for improvements to the CGN/DDG/SM-2 Weapons Systems including Fire Control Radar Mods, Weapons Direction System (WDS MK-14), AN/SYR-1 Downlink Receiver and Ancillary Modifications to provide capability to fire the SM-2 (MR) missile; and improvements to the Guided Missile Launching System MK-13 Mod 4 on the FFG-7 Class ships. The Point Defense Support equipment budget of \$44.5 million in FY 1992 and \$17.3 million requested in FY 1993 will provide air defense of selected ships by upgrading the NATO SEASPARROW Surface Missile System including modifications to incorporate specific improvements to increase reliability. The \$1.2 million budgeted in FY 1992 and \$1.2 million requested in FY 1993 for Airborne ECM/ECCM will provide for equipment used to simulate projected enemy jamming tactics and techniques during Surface Warfare Systems evaluations and Fleet exercises. The AEGIS Support equipment budget of \$46.4 million in FY 1992 and \$154.3 million requested in FY 1993 will provide shore based assets for the AEGIS Combat System/Educational Center to support the battle readiness of AEGIS Cruisers including AEGIS Combat System Center equipment and AEGIS Educational Center equipment. The \$52.9 million budgeted in FY 1992 and the \$47.8 requested in FY 1993 in the Surface TOMAHAWK Support equipment will procure Tomahawk Weapons Control Systems (WCS), WCS modifications and the Afloat Planning Systems (APS). The Afloat Planning System provides Tomahawk Land Attack Missile (TLAM) mission planning capability to U.S. Navy Battle Force and Battle

Group Commanders. The \$3.3 million budgeted in FY 1992 and the FY 1993 request of \$3.6 million for the Submarine TOMAHAWK Support equipment program will procure Fire Control Systems training and certification equipment needed for the successful launching of the Tomahawk cruise missile from SSN 637 and 688 Class submarines. The \$42.5 million budgeted in FY 1992 and \$89.3 million requested in FY 1993 for the Vertical Launch System will provide for installation of VLS systems on DD 963, and CG 47 class ships.

Strategic Platform Support Equipment (P-1 Line Items 185-186)

(\$ In Thousands)	
FY 1992	FY 1993
<u>\$82,754</u>	<u>\$43,241</u>

The FY 1992 request of \$82.8 million and the FY 1993 request of \$43.2 million for Strategic Platform Support equipment provides funding for ordnance support, ship alterations and test equipment for the Trident submarine and Trident Refit Facility (TRIREFAC) located at Naval Submarine Base (NSB), Bangor, Washington and numerous support facilities. A significant modernization program is the Combat Control System MK2 (CCS MK2) which provides the ADCAP torpedo capability plus display and simulator improvements which will provide important operability enhancements in SSBN platforms. In addition, funds are requested for the procurement of Strategic Weapon System (SWS) equipment for deployed SSBNs and shore support sites to support the POSEIDON (C-3), Trident I (C-3), Trident I (C-4) and Trident II (D-5) programs and procurement of Strategic Weapons System equipment and ship system ordnance equipment needed to establish the Navy Submarine Base, Kings Bay Georgia.

ASW Support Equipment (P-1 Line Items 187-190)

(\$ In Thousands)	
FY 1992	FY 1993
<u>\$ 92,666</u>	<u>\$108,251</u>

The \$92.7 million budgeted in FY 1992 and \$108.3 million requested in FY 1993 is for Anti-Submarine Warfare Support equipment procurement includes funding for the All Digital Attack Center (ADAC), which includes the FCS MK-117 increased Display and Conversion for Over the Horizon targeting, Advanced Capability (ADCAP) Torpedo, and FCS MK-117/CCS MK-1/MK-2 Improvements. The Combat Control System Obsolete Equipment Replacement (CCS OER) program helps to standardize hardware

and software, ensuring commonality with the AN/BSY-1 and Trident SSBN's. Replacing obsolete components with modernized versions will result improved reliability, maintainability and operability. In addition, FY 1992 and FY 1993 funding will support procurement of various upgrades to submarines and surface torpedo tube equipment, Anti-Submarine Rocket (ASROC) launchers, various test equipments. These funds will also provide for the procurement of Anti-Submarine Warfare torpedo exercise and shore support equipment, range equipment for Fleet Operational Readiness, Accuracy Check Sites (FORACS) and Sensor Accuracy Check Sites (SACS), and test equipment to support Weapon System Accuracy Trials (WSAT).

Other Ordnance Support Equipment (P-1 Line Items 191-196)

	(\$ In Thousands)
FY 1992	FY 1993
\$23,084	\$28,404

The \$23.1 million budgeted in FY 1992 and the FY 1993 request of \$28.4 million for Other Ordnance Support equipment are for various ordnance programs not budgeted under other programs within this budget activity. Some of the major programs include: Explosive Ordnance Disposal equipment, Unmanned Seaborne Targets, and Stock Surveillance equipment. The request in both FY 1992 and FY 1993 for Explosive Ordnance Disposal equipment provides for procurement of necessary EOD tools and equipment required for initial outfitting of EOD units. These equipments provide ordnance location and safe disposal of unexploded ordnance. The request for Unmanned Seaborne Targets provides Surface Seaborne Targets for Fleet training, with procurement of Septar Targets and Floating Automatic Scoring Target (FAST) hulls in FY 1992 and continuing in FY 1993. The request in FY 1992 and FY 1993 for Stock Surveillance equipment provides resources for determining safety, reliability, readiness, and service/shelf life of both stored and deployed Navy and Marine Corps tactical weapons and weapon systems and the causes for degradations. Other programs included in the FY 1992 and FY 1993 request are Anti-Ship Missile Decoy System, Calibration equipment, and Other Ordnance Training equipment.

Other Expendable Ordnance (P-1 Line Items 197-200)

	(\$ In Thousands)
FY 1992	
<u>\$43,752</u>	
	FY 1993
	<u>\$60,893</u>

The \$43.8 million budgeted in FY 1992 and \$60.8 requested in FY 1993 supports fleet mine support, mine neutralization, Defense Nuclear Agency material and ship expendable countermeasures procurements. The request for Fleet Mine Support Equipment in FY 1993 provides for the procurement of material and production support services for the assembly of mines in stockpile. The request also provides for support of fleet proficiency training, mine warfare and mine countermeasures training, and improved stockpile mine performance. The Defense Nuclear Agency material program provides material to support the maintenance, training, testing, and quality assurance of in-service/out-of-production nuclear weapons. The Shipboard Expendable Countermeasures program provides for Anti-Ship Missile Decoys deployed from the MK-36 Decoy Launching System. The FY 1992 budgeted amount and the FY 1993 request provides for SEA GNAT RF Decoys.

BUDGET ACTIVITY 5: CIVIL ENGINEERING SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(\$ In Thousands)

Budget Plan (Amount for Procurement Actions Programmed)				
	FY 1991 Actual	FY 1992 Estimate	FY 1993 Initial Estimate	FY 1993 Amended Estimate
Passenger Carrying Vehicles	\$313	\$6,920	\$6,912	\$6,639
Trucks, Trailers, Construction and Maintenance Equipment	61,281	61,199	56,928	49,493
Amphibious Equipment and Combat Construction Support Equipment	6,289	93,930	7,779	4,773
Other Equipment	21,833	130,052	37,354	21,928
Total Budget Plan	\$89,716	\$292,101	\$108,973	\$82,833

BUDGET ACTIVITY 5: CIVIL ENGINEERING SUPPORT EQUIPMENT

	(\$ in Thousands)	
FY 1993 Amended Estimate	\$	82,833
FY 1993 Change	\$	-26,140
FY 1993 Initial Estimate	\$	108,973
FY 1992 Estimate	\$	292,101
FY 1991 Actual	\$	89,716

Purpose and Scope of Work

Funds provided under this budget activity are for the procurement of passenger carrying vehicles, trucks and trailers, construction, earthmoving, maintenance, fire fighting, weight handling, amphibious and specialized equipment, combat construction support equipment, mobile utilities support equipment, fleet moorings, collateral equipment for the initial outfitting of military construction projects, pollution control equipment, and equipment used for construction of underwater facilities. This equipment is procured for Navy-wide use by the Operating Forces and Shore Establishment including passenger carrying vehicles for Industrial Fund activities.

Justification of Funds

Passenger Carrying Vehicles - (P-1 Line Items 201 & 202)

	(\$ in Thousands)	
FY 1992		FY 1993
\$ 6,920		\$ 6,639

This category provides for replacement of buses, sedans, station wagons and armored sedans for all Navy activities. Included are replacement vehicles for Navy Industrial Fund (NIF) activities in compliance with the 97th Congress House of Representatives Conference Report No. 97-80. The FY 1992 program provides for the replacement of 355 vehicles leaving 2,335 in the inventory which exceed economic replacement criteria. The FY 1993 program provides for the replacement of 439 vehicles leaving an additional 2,325 in the inventory which exceed economic replacement criteria. The planned procurements for FY 1992/FY 1993 do not include any armored sedans. This category does not include ambulances, which are addressed below.

Trucks, Trailers, Construction and Maintenance Equipment - (P-1 Line Items 203-209)

(\$ in Thousands)	
FY 1992	FY 1993
\$61,199	\$49,493

This category includes trucks, trailers, generators, crushing, drilling, earth moving, fire fighting and weight handling equipment and ambulances for the protection and maintenance of Naval Shore Activities, Naval Construction Forces, and various other Operations Forces worldwide. Funding provides for initial outfitting of the Advanced Base Functional Component (ABFC), \$.608 million in FY 1992 and \$.473 million in FY 1993, The Reserve Naval Construction Force (RNCF), \$.977 million in FY 1992 and \$.853 million in FY 1993, and the Assault Follow-on Echelon (AFOE), \$.960 million in FY 1992 and \$.2.453 million in FY 1993.

Amphibious Equipment/Combat Construction Support Equipment - (P-1 Line Items 210-211)

(\$ in Thousands)	
FY 1992	FY 1993
\$93,930	\$ 4,773

These funds provide specialized amphibious equipment which significantly enhances the Navy's capability to support Marine Corps amphibious operations through the ship-to-shore transfer of both dry and liquid cargo and as a key part of the Strategic Sealift Program. This equipment will be used by the Amphibious Construction Battalions to support Maritime Prepositioning Force (MPF) operations and during the Assault Echelon and the Assault Follow-on Echelon phases of amphibious operations to provide essential logistic support in advanced areas having little or no port capability. The amphibious equipment in the FY 1992/FY 1993 program includes powered and non-powered causeway sections, side-loadable warping tugs, and other miscellaneous specialized amphibious equipment. Combat Construction Support Equipment consists primarily of relocatable facilities such as storage magazines, fuel storage tanks, multipurpose shelters and containers, and panelboards in support of Naval Construction Force personnel. The FY 1992 and FY 1993 programs include the outfitting of Naval Mobile Construction Battalions with containers for prepacking Table of Allowance items and provide soft shelters for the protection of personnel against chemical agents at overseas Naval Bases.

Other Equipment - (P-1 Line Items 212 - 217)

(\$ in Thousands)	
FY 1992	FY 1993
\$130,052	\$21,928

Other programs in Budget Activity 5 include Mobile Utilities Support Equipment which provides electric power and high quality steam for support to the fleet while in port, and for emergency shore operations, serious utility system deficiencies and delayed military construction. Collateral equipment provides equipment and furnishings to initially outfit military construction projects. Ocean Facilities Construction Equipment is associated with strategic deterrence, anti-submarine warfare and other fleet underwater construction programs. Fleet Moorings procure the components for overhauling fleet moorings worldwide. Pollution control equipment is for compliance with the Clean Air Act and Clean Water Act Amendments, various Environmental Protection Agency regulations and State Implementation plans. Also included is Other Civil Engineering Support Equipment which encompasses administrative and public works shop equipment as well as additional appropriated funding for Operation Desert Shield/Desert Storm. The supplemental funds are required for the reconstitution of Naval Construction Force Tables of Allowance plus other equipment utilized during Desert Shield/Desert Storm in support of Naval Forces in Southwest Asia.

BUDGET ACTIVITY 6: SUPPLY SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(\$ In Thousands)

Budget Plan				
(Amounts for Procurement Actions Programmed)				
	FY 1991 Actual	FY 1992 Estimate	FY 1993 Initial Estimate	FY 1993 Amended Estimate
Material Handling Equipment and Systems	\$33,781	\$12,117	\$14,066	\$13,511
Other Supply	5,369	2,442	3,751	3,604
Support Equipment				
First Destination	18,723	16,898	17,163	16,151
Transportation	179,210	130,941	153,602	115,830
Classified Programs				
Total Budget Plan	\$237,083	\$162,398	\$188,582	\$149,096

BUDGET ACTIVITY 6: SUPPLY SUPPORT EQUIPMENT

	(\$ In Thousands)
FY 1993 Amended Estimate	\$ 149,096
FY 1993 Change	\$ -39,486
FY 1993 Initial Estimate	\$ 188,582
FY 1992 Estimate	\$ 162,398
FY 1991 Actual	\$ 237,083

Purpose and Scope of Work

This budget activity finances the procurement of forklift trucks and other materials handling equipment used at Navy installations and aboard ships; automated materials handling systems; investment type support equipment; reprographics equipment; and first destination transportation costs for other procurement acquisitions. In addition, financing for certain classified projects is included in this activity.

Justification of Funds

Materials Handling Equipment and Systems (P-1 Line Items 218-220)

	(\$ In Thousands)
FY 1992	\$12,177
FY 1993	\$13,511

These funds are requested to procure Forklift trucks in FY 1992 and FY 1993 which are needed for the cyclical replacement of overage equipments aboard ships and at shore activities which are more costly to maintain than to replace.

For Other Materials Handling equipment, the FY 1992 and FY 1993 requests represent a phased equipment replacement program designed to reduce the significant level of overage warehouse tractors, cranes and other equipment in the inventory.

Other Supply Support Equipment (P-1 Line Items 221)

(\$ in Thousands)	
FY 1992	FY 1993
<u>\$2,442</u>	<u>\$3,604</u>

The request for Other Supply Support equipment includes the procurement of shop and office equipment, reprographics, uninterrupted power service units, enlisted dining facilities equipment, and office automation.

First Destination Transportation (P-1 Line Item 223)

(\$ In Thousands)	
FY 1992	FY 1993
<u>\$16,898</u>	<u>\$16,151</u>

The requested funds are for First Destination Transportation costs associated with the movement of newly procured equipment and material from the contractor's plant to the initial point of receipt by the government.

Classified Programs (P-1 Line Item 224)

(\$ In Thousands)	
FY 1992	FY 1993
<u>\$130,941</u>	<u>\$115,830</u>

Details of this program are of a higher classification. Justification is provided separately.

BUDGET ACTIVITY 7: PERSONNEL AND COMMAND SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(\$ In Thousands)

Budget Plan
(Amounts for Procurement Actions Programmed)

	<u>FY 1991</u> <u>Actual</u>	<u>FY 1992</u> <u>Estimate</u>	<u>FY 1993</u> <u>Initial</u> <u>Estimate</u>	<u>FY 1993</u> <u>Change</u>	<u>FY 1993</u> <u>Amended</u> <u>Estimate</u>
Training Equipment	\$113,124	\$109,192	\$158,930	-68,387	\$90,543
Command Support Equipment	487,989	188,447	225,029	-45,532	179,497
Computer Acquisition Equip	98,948	75,903	148,764	-15,460	133,304
Productivity Programs	17,781	52,702	51,032	-2,157	48,875
Total Budget Plan	\$717,842	\$426,244	\$583,755	-\$131,536	\$452,219

BUDGET ACTIVITY 7: PERSONNEL AND COMMAND SUPPORT EQUIPMENT

	(\$ In Thousands)
FY 1993 Amended Estimate	\$ 452,219
FY 1993 Change	\$-131,536
FY 1993 Initial Estimate	\$ 583,755
FY 1992 Estimate	\$ 426,244
FY 1991 Actual	\$ 717,842

Purpose and Scope of Work

This budget activity finances the procurement of Training Equipment, Command Support Equipment, Computer Equipment and Productivity Investment Programs.

Justification of Funds

Training Equipment (P-1 Line Items 225-231)

	(\$ In Thousands)
FY 1992	FY 1993
\$109,192	\$ 90,543

Surface training devices will provide maintenance, operator, team, and refresher training for new combat systems/capabilities being introduced into the fleet. Requested funding supports a variety of cost effective devices including Surface Sonar Trainers, Ship System Trainers, Submarine Sonar Trainers, Submarine Combat System Trainers, Submarine Sonar Trainers, Submarine Combat System and Trainers and Surface Combat System Trainers (FY 1992, \$46.7 million; FY 1993, \$36.2 million).

Funding is required to procure Training Support Equipment (TSE) consisting of minor training aids and devices to support the education and training programs which supply the Fleet with effectively trained personnel (FY 1992, \$5.7 million; FY 1993, \$3.3 million).

Training Device Modifications provide cost-effective enhancements to update the existing inventory of training devices. The modifications help maintain the training value of devices and keep them compatible with equivalent changes made to the fleet operational equipments which these devices simulate (FY 1992, \$56.7 million; FY 1993, \$51.1 million).

Command Support Equipment (P-1 Line Items 232-241)

(\$ In Thousands)	
FY 1992	FY 1993
\$188,447	\$179,497

This funding provides for the procurement of items including Command Support, Intelligence Support, Education Support, Medical Support, Operating Forces Equipment, Naval Reserve Support, Oceanographic Support, Physical Security Support, and Centrally Managed equipment with a unit cost less than \$15 thousand.

This request includes acquisition of equipment needed for the Naval Intelligence Command and its field activities. It is a part of the General Defense Intelligence Program (GDIP) requirements. Details on this classified program are contained in the Intelligence Justification Books, provided separately (FY 1992, \$36.7 million; FY 1993, \$64.3 million).

Funding is also requested to procure Medical Support equipment to be located in the United States. Funds requested to replace existing worn-out, obsolete assets located in the United States will provide for the acquisition of new technological developments for a modern health care delivery system (FY 1992, \$46.6 million; FY 1993, \$2 million).

Funds are requested to procure Oceanographic equipment required to collect, analyze, and disseminate environmental data. This data is critical for precise positioning, navigation, and targeting of enemy air, surface, and sub-surface weapon systems (FY 1992, \$13.2 million; FY 1993, \$23.2 million).

Funds are requested in FY 1992 and FY 1993 to continue procuring security systems to protect nuclear weapons afloat and ashore. It continues to provide for increased security of arms, ammunition and explosives (FY 1992, \$25.9 million; FY 1993, \$33.1 million).

Funds are requested for acquisition of equipment to support Chief of Naval Operations field activities, Naval Military Personnel Command, Naval Telecommunications Command, Office of the Secretary of the Navy, Naval Reserves, Naval Academy, Naval Postgraduate School, Naval War College, and Headquarters of Pacific, Atlantic, and Europe Fleet Commands (FY 1992, \$66.1 million; FY 1993, \$58.7 million).

Computer Acquisition Program (P-1 Line Item 242)

(\$ In Thousands)	
FY 1992	FY 1993
\$75,903	\$133,304

The Computer Acquisition Program (CAP) was established to optimize the procurement of general purpose Automated Data Processing Equipment (ADPE) Navy-Wide. The procurement of ADPE through the CAP represents the culmination of several planned and developed ADP systems that are ready for deployment and introduction throughout the Fleet. The workload that is performed directly supports such day-to-day efforts as fleet supply and logistics, maintenance, financial and personnel management, health management, all of which are currently either performed manually or in part by using old, obsolete, unreliable data processing support. The automation and upgrade capability funded by the CAP will lighten Fleet workload and modernize ADP, directly improving overall Fleet readiness.

Productivity Programs (P-1 Line Items 243-244)

(\$ In Thousands)	
FY 1992	FY 1993
\$52,702	\$48,875

Funds requested for the Productivity Investment Fund and Productivity Enhancing Incentive Fund are used to purchase improved general purpose equipment, tools and procedures. The objective of productivity investments is to apply capital investment in exchange for labor intensive and costly operations in government by investments in modern equipment, methods and labor saving devices. It also realizes a continuing stream of benefits through the reduction of recurring operating costs. Projects involve the replacement of old and outmoded equipment and procedures to reduce inefficiency and maintenance costs. This frequently implants new technology as well as enabling growth in efficiency and the solution of emerging problems in operations and logistics. The technology factor has been credited with at least 40 percent of all productivity growth over the past five decades of domestic experience. Productivity investments directly address the unfunded backlog of compelling investment opportunities existing in the Navy.

BUDGET ACTIVITY 8: SPARES AND REPAIR PARTS
SUMMARY OF BUDGET PLAN
(In Thousands)

Budget Plan (Amounts for Procurement Actions Programmed)					
	FY 1991 Actual	FY 1992 Estimate	FY 1993 Initial Estimate	FY 1993 Change	FY 1993 Amended Estimate
Spares and Repair Parts					
Initial	\$228,812	\$259,341	\$274,202	-10,811	263,391
Replenishment	15,609	16,918	19,073	-2,476	16,597
Outfitting	271,445	215,049	274,775	25,778	300,553
Total Budget Plan	\$515,866	\$491,308	\$568,050	\$12,491	\$580,541

BUDGET ACTIVITY 8: SPARES AND REPAIR PARTS (P-1 LINE ITEM 245)

	(\$ in Thousands)
FY 1993 Amended Estimate	\$ 580,541
FY 1993 Change	\$ 12,491
FY 1993 Initial Estimate	\$ 568,050
FY 1992 Estimate	\$ 491,308
FY 1991 Actual	\$ 515,866

Purpose and Scope of Work

Budget Activity 8 provides for all Other Procurement, Navy (OPN) spares. The funding requested provide for the procurement of spares and repair parts for all equipments requiring support by the Systems Commands prior to transitioning into the Navy supply system and is divided between initial spares (\$259.3 million in 1992 and \$263.4 million in FY 1993), replenishment spares (\$16.9 million in 1992 and \$16.6 million in 1993), and outfitting spares (\$215.0 million in 1992 and \$300.6 million in FY 1993). The initial spares procurement includes support for ships initial spares, communications and electronics initial spares, aviation initial spares, ordnance initial spares, and civil engineering initial spares. Replenishment spares includes support for aviation, ordnance and FBM spares. Outfitting spares predominantly provides spares to support end items as the ships are modernized.