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CHAPTER 3

PROGRAMMING AND BUDGETING

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CHAPTER 3

PROGRAMMING AND BUDGETING

3.0 INTRODUCTION

To ensure timely availability of required material, all organizations responsible for providing supply support must budget for equipment and spares. Material budgeting is tied to all stages of life cycle material support--from the initial provisioning of new items, through replenishment, to the repair of established stock numbered items. Funds must be budgeted to cover organizational and intermediate outfitting allowances and wholesale system back-up stocks determined in the provisioning process. Additionally, replenishment and repair funds must be budgeted to support and maintain inventory levels based on recurring and non-recurring demands received from customers for established items.

3.1 DoD PLANNING, PROGRAMMING AND BUDGETING SYSTEM (PPBS) PROCESS

Introduced by Defense Secretary Robert S. MacNamara in 1962, the Planning, Programming, and Budgeting System (PPBS) is the Department of Defense's (DoD's) primary resource management system. It is a cyclic process containing three distinct but interrelated phases: planning, programming, and budgeting. PPBS provides a formal, systematic structure for making decisions on policy, national military strategy, and the development of forces and capabilities to accomplish anticipated missions. It provides for a time-phased allocation of resources and submission of supporting documents. The objective is to provide operational commanders the best mix of forces and support within fiscal constraints.

PPBS is a biennial overlapping process. A complete PPBS cycle takes 24 months (February of year 1 to January of year 3). The planning phase is nine months starting in February of odd-numbered years (the "off-year" for programming and budgeting) and ending in October with publication of the biennial Defense Planning Guidance (DPG). Figure 3-1 shows the overlap of this iterative process.

The programming phase is 12 months, starting in August of odd numbered years when the draft DPG is issued, and overlaps the

planning phase while the draft DPG is being staffed and reviewed, and ending in May or June of every even-numbered year (the "on-year" for programming and budgeting) after Defense Planning Resource Board (DPRB) review of the military department's Program Objective Memoranda (POM). The DPRB, chaired by the Deputy Secretary of Defense, provides planning and programming recommendations to the Secretary of Defense (SECDEF).

PPBS RESOURCE ALLOCATION PROCESS-OVERLAP

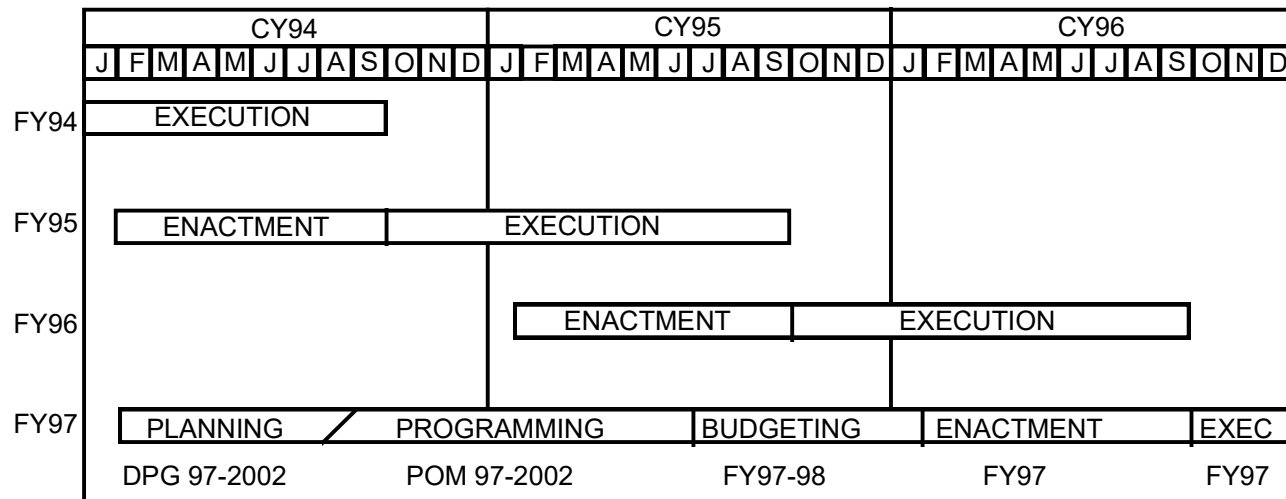


Figure 3-1

The budgeting phase starts in July or August of even-numbered years when the DPRB review of the programs is finished, and ends when the President's Budget is sent to Congress.

In theory, the PPBS process is a two-year cycle; however, the actual development and execution has been on an annual basis for the last seven to eight years. The two-year cycle is documented in this chapter.

3.1.1 Planning

The planning phase begins when the White House issues provisional budget levels for the next planning period. This normally occurs after the President's budget is submitted to Congress in odd-numbered years. It involves planners in the Joint Staff, National Security Council (NSC), Office of Management and Budget (OMB), Office of the Secretary of Defense (OSD), and the military department headquarters. These planners look at the threat facing the nation for the next 5-20 years, assess the capability to counter it, and recommend the forces necessary to defeat it.

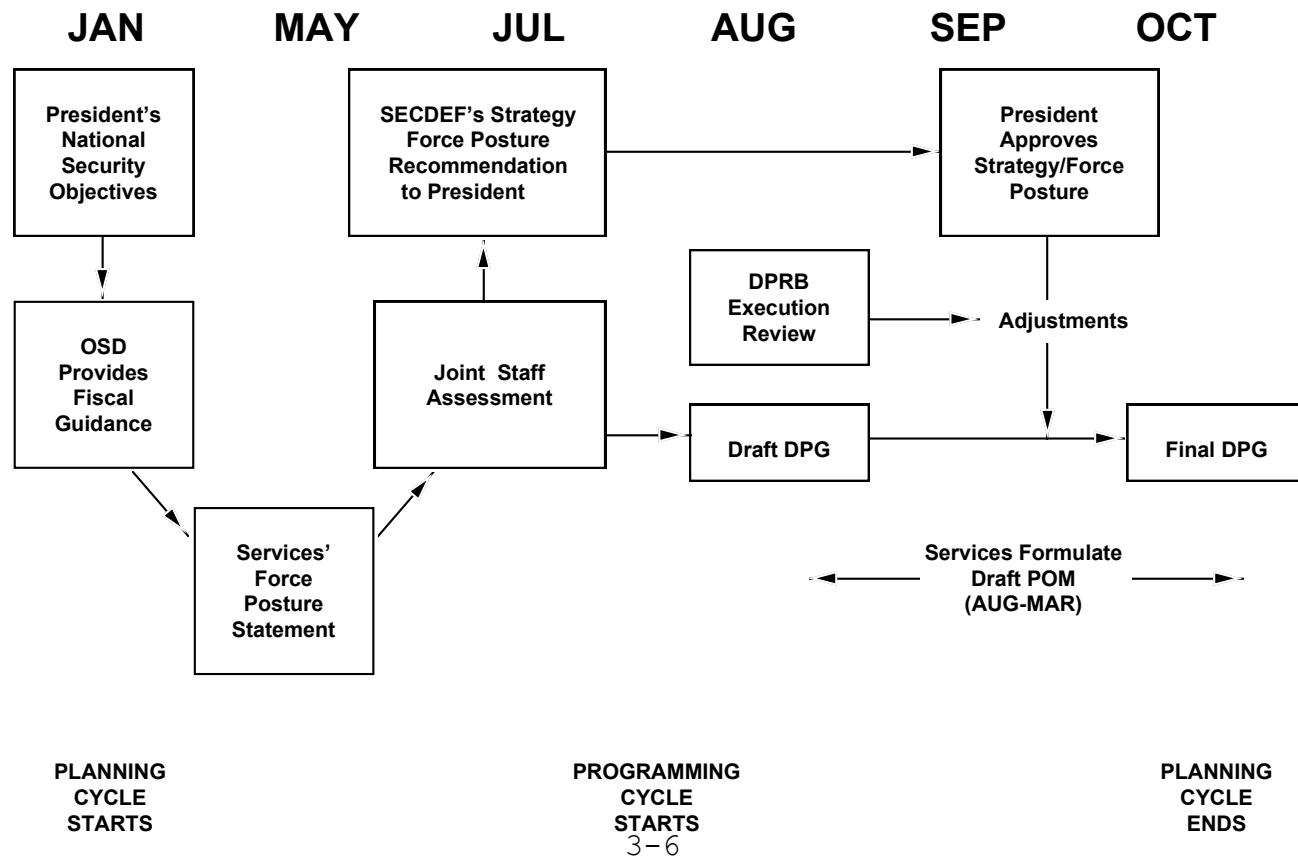
As shown in Figure 3-2, the sequence of events after the national security objectives have been determined by the President's staff are as follows:

- OSD provides fiscal guidance to the Services.
- The Services propose Force Posture Statements.
- After Joint Staff review of each Service's Force Posture Statement, SECDEF submits a total Defense Strategy/Force Posture recommendation for approval by the President.
- SECDEF issues final DPG to the Services. The DPG provides both fiscal guidance (dollars) and narrative guidance as a basis for the programming cycle. The DPG covers the budget and program years. It is the authoritative statement of strategies, issues, and rationale that provides fiscal constraints and narrative guidance for program and budget development by the Department of the Navy (DoN).

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- The DPRB, chaired by the Deputy Secretary of Defense, provides planning and programming recommendations to SECDEF.

PLANNING, PROGRAMMING, AND BUDGETING SYSTEM (PPBS) PLANNING/PROGRAMMING CYCLE (ODD YEARS)



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Figure 3-2

3.1.2 Programming

The programming phase results in development of the Future-Year Defense Program (FYDP) for the Navy, and for the Department of Defense as a whole. The future-year program links national policies, strategy, and objectives to specific forces and major programs, including acquisition programs. It is based on the DPG and on updated out-year fiscal projections.

Programming attempts to match available dollars against a prioritized list of requirements to develop a six-year resource proposal. It is the bridge between planning (broad fiscal guidance) and budgeting (detailed pricing for each program element).

The programming cycle begins in the latter half of the odd year based on the draft DPG as shown in Figure 3-2. The services draft a POM in response to the draft DPG. After the DPG is finalized in October of the odd year, the Navy prepares a POM based on guidance in the DPG. The Navy POM is submitted to the office of the Assistant Secretary of Defense for program analysis on April 1 of each even-numbered year, as shown in Figure 3-3. The POM is a blueprint of each DoN proposal for updating the FYDP to reflect resources needed for mission accomplishment.

The POM is divided into eleven major force programs. Listed below, these programs are expressed in terms of time-phased resource requirements for output capabilities such as strategic forces, general purpose forces, airlift and sealift forces, etc.

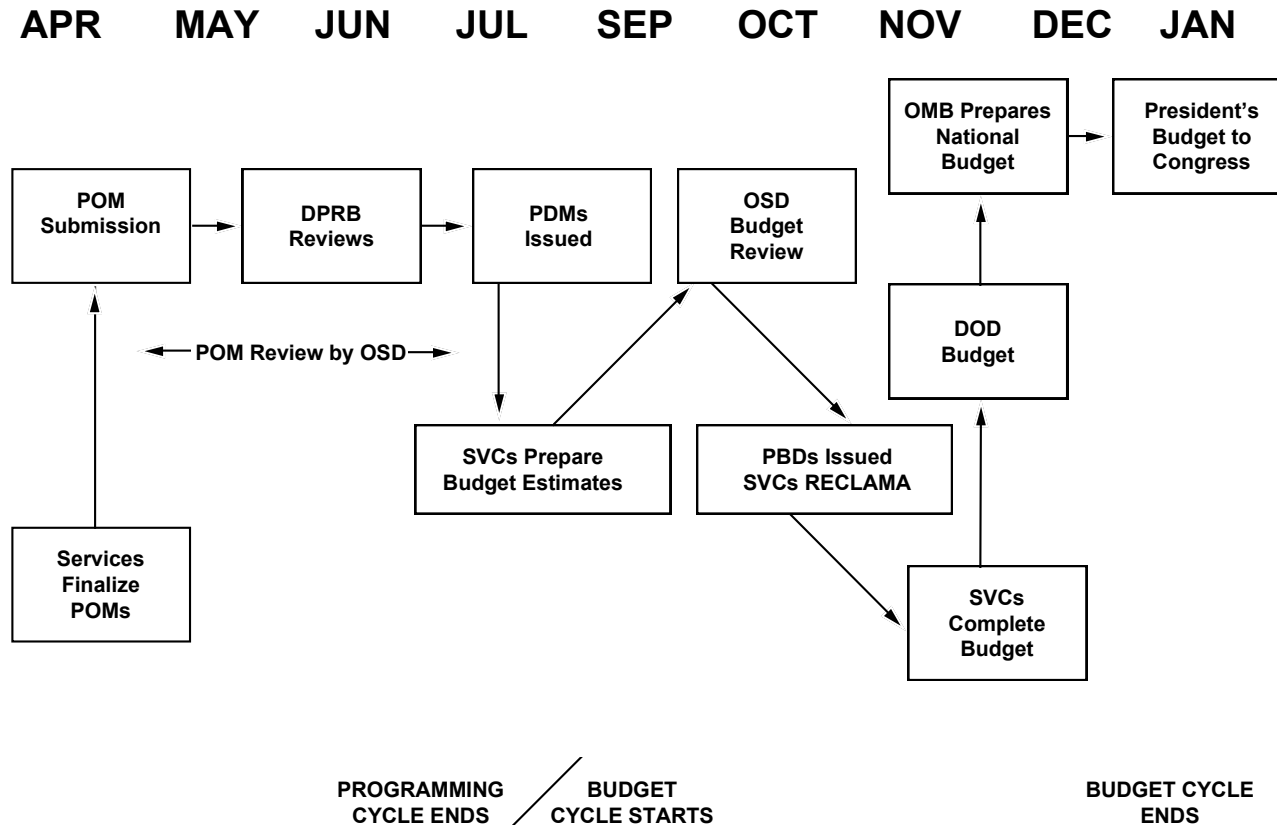
Major FYDP Force Programs

1. Strategic Forces
2. General Purpose Forces
3. Intelligence and Communications
4. Airlift/Sealift Forces
5. Guard and Reserve Forces
6. Research and Development
7. Central Supply and Maintenance
8. Training, Medical, Other General Personnel Activities
9. Administration and Associated Activities
10. Support of Other Nations

11. Special Operations Forces

NOTE: Programs 1,2,4, and 5 are considered as force related while Programs 3,6,7,8 and 9 are support programs. Program 10 and 11 stand alone.

PLANNING, PROGRAMMING, AND BUDGETING SYSTEM PROGRAM BUDGET CYCLE (EVEN YEARS)



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Figure 3-3

3.1.2.1 Navy Program Objective Memorandum (POM)

As part of the programming phase, Office of the Chief of Naval Operations (OPNAV), **N80**, biennially prepares a Navy POM, the document that delivers the Navy's proposed program decisions to OSD. The Secretary of the Navy (SECNAV) uses the annual POM to describe the proposed detailed application of available Navy resources for assigned military missions. The POM must be developed within the fiscal constraints imposed by SECDEF.

The proposed programs are presented for the base fiscal year and the subsequent years of the FYDP. The POM includes Program Manager (PM) data on logistic support funding requirements. The POM is used to submit new funding requests and to request revisions to previously approved SECDEF programs published in the FYDP.

During the programming phase, the downward flow of program funding guidance and the upward flow of proposed POM follows two parallel paths, as displayed in Figure 3-4 and described as follows:

A. Major Defense Programs

Funding guidance flows downward from the Defense Acquisition Executive (DAE) to the Navy Acquisition Executive (NAE) to Program Executive Officers (PEOs) and Direct Reporting Program Manager (DRPM) to the PMs of the major defense programs. POM input from the PMs flow upward through the PEOs to the NAE and SECNAV.

B. Non-major Programs

Funding guidance flows downward from the Chief of Naval Operations (CNO) and the Commandant of the Marine Corps (CMC) to the Systems Commands (SYSCOMs) and then to the managers of the non-major defense programs. POM input flows upward through the same chain. SECNAV submits a consolidated POM to the Defense Comptroller.

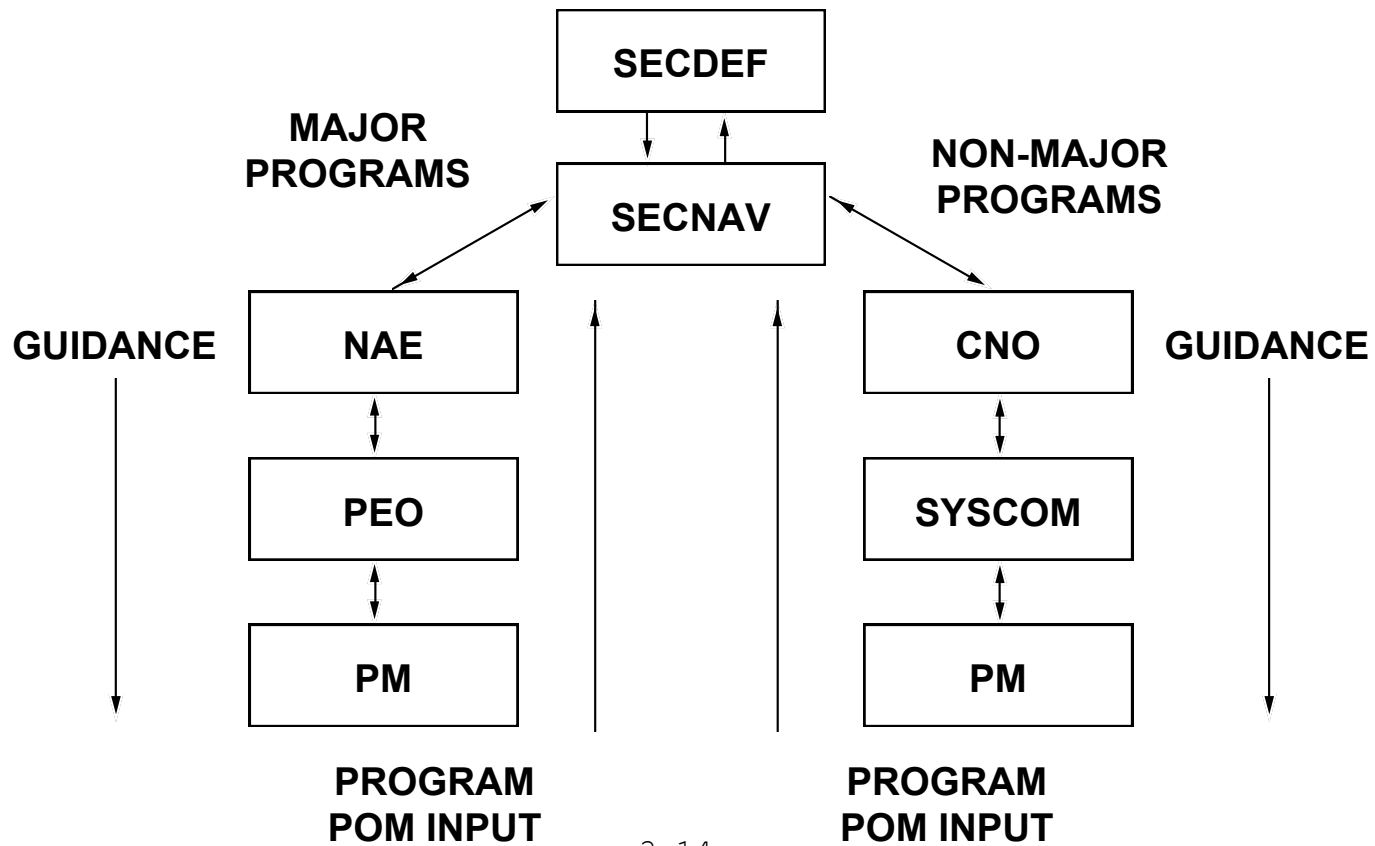
The Navy POM is reviewed by the DPRB. SECDEF approval of the POM is reflected in PDMS issued by mid August or September of the even year. The Navy POM is then adjusted, ending the programming phase.

3.1.3 Budgeting

Based on adjustments required by the POM's, DoN budget estimates are prepared and forwarded to OSD by 15 September of the on-year. This is called the "Budget Estimate Submit" (BES).

Budget estimates define the Input required to establish the approved programs. Budget estimates are proposed in the language of Congressional appropriations (e.g., Military Pay Navy,

PROGRAMMING CYCLE FLOW FOR PROPOSED DON POM SUBMISSION



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Figure 3-4

Shipbuilding and Conversion Navy (SCN), Operation and Maintenance Navy (O&MN)). The DoN budgeting cycle of the PPBS consists of four steps.

- 1) The submission of budget estimates to the Comptroller of the Navy (NAVCOMPT) for review and approval by SECNAV.
- 2) The submission of budget estimates to OSD. SECDEF issues adjustments in the form of Program Budget Decisions (PBDs). The Services may issue reclamas (appeals) to individual PBDs. SECDEF submits the completed DoD budget to the OMB for review and approval by the President.
- 3) The submission of the President's budget to Congress for its review and preparation of appropriation and authorization bills.
- 4) The execution by the DoN of enacted appropriations.

Although the budgeting phase should only take place every two years under the biennial concept, in reality it takes place each year. Congress only provides annual appropriations, so each fall DoD must either construct a full-up budget (during POM or even numbered years), or amend the second year of the previously submitted two year budget (during the PPBS off-year, or odd-numbered years). Further, this process normally requires at least a partial POM/FYDP update every year.

3.1.3.1 Budget Execution

Once the appropriations and authorization bills are passed by Congress and signed by the President, the OMB issues the appropriations and the new obligation authority. Since the approved appropriations are based on requirements formulated eighteen months to two years previous, they may be far different from the original submission by the claimants and sub-claimants. In addition, the world security situation may have changed. Emergency or crisis situations can develop at any time that could influence the need for funds within a given appropriation. Supplemental budgets are used in these circumstances to acquire the justifiable resources needed for such contingencies. Reprogramming actions may be used to reallocate funds.

3.1.3.2 Program and Appropriation Budgets

The DoD Budget and the FYDP are split into two separate formats, the Program Budget and Appropriation Budget.

The Program Budget sets forth the accomplishments which can be expected from the resources programmed. They are the same as major FYDP programs, which identify broad areas of both mission and support. Figure 3-5 displays the major programs and associated appropriations.

The Program Budget is made up of Program Elements (PEs). A PE is a grouping of forces, manpower and costs associated with an organization, a group of similar organizations, a function or a project. Each PE consists of forces, manpower and costs. The PEs may be aggregated to display the total resources assigned to a specific program, to families of weapons and support systems within a program or to specific resources, such as operating costs. They may be aggregated differently for programming purposes, for budget reviews, and for management purposes.

The Appropriation Budget indicates the dollars required and provided to accomplish the broad areas of mission and support included in the Program Budget. An appropriation, which flows from Congress is an authorization to incur obligations for specific purposes. Appropriations can be categorized by purpose (investment, expense or research and development, level of funding (incremental/fully funded), and duration (annual or multiple years).

The criteria for the purpose considers the intrinsic qualities of the item, such as durability or consumability, as well as the circumstances under which the item is used and managed. Investment type appropriations are received for items such as major end items, modification kits and ammunition, which are financed under the Appropriated Purchase Account (APA).

Appropriations also have a specific duration, or obligational availability period, which can be considered as annual or multiple year. The duration of this period is generally consistent with the level, or funding characteristics, of the appropriation. The O&MN appropriation, which funds ship's operating budgets is incrementally funded by Congress each year and is available for incurring obligations only during that fiscal year. Other

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appropriations, such as Other Procurement, Navy (OPN) and Weapons Procurement, Navy (WPN), have obligational availabilities of three years, while SCN appropriations usually last five years. These appropriations are fully funded, which means that they must be sufficient to fund a complete and useable end item. They are intended to fund the procurement of a specific number of items.

PROGRAMS AND APPROPRIATIONS

PROGRAMS

1. STRATEGIC FORCES
2. GENERAL PURPOSE FORCES
3. INTELLIGENCE & COMMUNICATIONS
4. AIRLIFT & SEALIFT FORCES
5. GUARD & RESERVE FORCES
6. RESEARCH & DEVELOPMENT
7. CENTRAL SUPPLY & MAINTENANCE
8. TRAINING, MEDICAL, AND OTHER GENERAL PERSONNEL ACTIVITIES
9. ADMINISTRATIVE & ASSOCIATED ACTIVITIES
10. SUPPORT OF OTHER NATIONS
11. SPECIAL OPERATIONS



APPROPRIATIONS

ANNUAL:

- MILITARY PERSONNEL - NAVY, MARINE CORPS
- RESERVE PERSONNEL - NAVY, MARINE CORPS
- OPERATION & MAINTENANCE - NAVY, MARINE CORPS, NAVY RESERVE, MARINE CORPS RESERVE

MULTIYEAR:

- AIRCRAFT PROCUREMENT, NAVY (APN)
- SHIPBUILDING & CONVERSION, NAVY (SCN)
- WEAPONS PROCUREMENT, NAVY (WPN)
- OTHER PROCUREMENT, NAVY (OPN)
- PROCUREMENT, MARINE CORPS (PMC)
- RESEARCH, DEVELOPMENT, TEST & EVALUATION, NAVY
- MILITARY CONSTRUCTION, NAVY & NAVY RESERVE

REVOLVING:

- DEFENSE BUSINESS OPERATIONS FUND

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Figure 3-5

3.2 SPARES BUDGETING

Spares budgeting and budget execution is accomplished, for the most part, at the Naval Inventory Control Point Mechanicsburg (NAVICP-M). Spares funding requirements for procurement and repair of items managed must be accurately determined and budgeted, or sufficient funds will not be available to support inventory requirements. Spares budgeting is involved at all stages of life cycle material support from initial provisioning of new items through replenishment and repair of established stock numbered items. Spares funding must be consistent with and reflect the requirements determination process of the inventory models used in the Uniform Inventory Control Point (UICP) system.

Funds for initial spares are budgeted for new items not previously established in the supply system. Replenishment funds are used to procure replacement inventories after initial spares have been issued to users. Component rework funds are used to repair Not-Ready-For-Issue (NRFI) carcasses of repairable items. Initial spares budgets are developed based on planning/program data received from Naval Sea Systems Command (NAVSEA) and other Hardware Systems Commands (HSCs). Program Support Data (PSD) indicate the total number of equipment being acquired, delivery schedules, and installation schedules by ship or site. This data is used by the Inventory Control Points (ICPs) in pricing initial spares budget estimates, including the cost of initial outfitting allowances, follow-on outfitting requirements, and wholesale supply system back-up stock. Stock replenishment and component rework budgets are primarily demand oriented as opposed to the program oriented initial spares budgets.

Replenishment and rework budgets are based on the Stratification (STRAT) program which forecasts future demand requirements (recurring and non-recurring) and inventory level requirements to support the forecasted demand.

In the meantime, spares are budgeted for and procured using the Defense Business Operations Fund (DBOF). Major equipment and repairable components being managed on an interim basis by a HSC are procured using the APA.

Material budgets are submitted through Navy channels to the OSD/OMB. NAVICP-M material budgets are reviewed and approved by Navy review levels during a joint on-site review. The Navy review

includes the applicable financing systems commands, OPNAV N4, and Naval Supply Systems Command (NAVSUP) for the DBOF.

3.2.1 Appropriation Purchases Account Navy owned secondary items of APA repairable assemblies, some modification kits, and repair parts are managed by the NAVICP at both Inventory Control Point-Philadelphia (NAVICP-P and NAVICP-M. Additional APA items, e.g., principal end items, modification kits, Depot Level Repairables (DLRs) with an unstable design, etc., have been retained for management by the HSC, or the PM, e.g., Strategic Systems Program Office (SSPO). The HSC or PM may manage such items at headquarters or through a field activity or by a commercial contractor for interim contractor support. Items retained by the HSC for management are reviewed periodically and transferred to a NAVICP when the need to manage by an HSC or PM no longer exists.

APA items are procured by prescribed budget activities under Aircraft Procurement, Navy (APN), WPN, and OPN appropriations. Rework of APA material is accomplished under the O&MN appropriation.

The procurement of APA material can be summarized as follows:

<u>Appropriation and Budget Activity</u>	<u>Description</u>
APN-6	Aircraft Spares and Repair Parts
WPN-1	Ballistic Missiles
WPN-2	Other Missiles
WPN-3	Torpedoes and Related Equipment
WPN-4	Other Weapons
OPN-1	Ships Support Equipment
OPN-2	Communication and Electronic Equipment
OPN-3	Aviation Support Equipment
OPN-4	Ordnance Support Equipment

The budgets for APA items managed by NAVICPs are developed in accordance with **DOD 7000.14-R Volume 3**. The APA budget cycle begins with the line item stratification of assets performed by the NAVICP. The submission is based on the March Stratification, and the apportionment submission, when required, is based on the September Stratification.

The objective of the APA budget development process is to present a balanced budget to higher review levels which, if approved, will permit the NAVICP to carry out supply system inventory policy and achieve supply system performance goals. The goal is to achieve a predetermined requisition fill rate or System Material Availability (SMA). The NAVICP must collect and analyze a large mass of data in order to develop the APA procurement and rework budgets. NAVSUP provides supply and budget policies and procedures. NAVSEA and other HSCs provide program and planning information, and the data collection systems. The flow of data through the APA Budget Process is included in Figure 3-3. The APA Budget is segmented into three separate categories: (1) Initial Provisioning, (2) Replenishment, and (3) Component Rework (repair) funding.

3.2.1.1 Initial Provisioning

Initial Provisioning funding requirements for APA items are developed in accordance with **DOD 4140.1-R**. Program and planning data required for development of the initial provisioning requirement is provided to the NAVICP by the HSC or PM which manages the end item. This program/planning data includes end item procurement plans plus delivery and installation schedules. The NAVICP must maintain continuous dialogue with the end item PM at the HSC to insure that all required information is available for development of the initial provisioning requirement.

The amount budgeted overall for initial provisioning includes outfitting and initial system stock requirements for an initial support period which is normally one year beyond the Preliminary Operation Capability (POC) of the end item. After the initial procurement, Follow On Outfitting (FOO) and Follow On System Stock (FOSS), required because of increased end item population, will be budgeted as special programs in the replenishment budget.

3.2.1.2 Replenishment

APA replenishment procurement funding requirements are developed on the basis of line item stratification results. Included in the requirement are projected issues of material to end users through the appropriate fiscal periods plus required end of period levels requirements (safety level, lead time requirements, repair cycle, procurement cycle, etc.). Assets which are applied to the requirements include on-hand Ready For Issue (RFI), recoverable on-hand NRFI material, on order material, serviceable returns and projected recoverable unserviceable returns. The asset shortfall becomes the basic funding requirement. However, because of the numerous events and conditions which cannot be incorporated into the stratification process, certain adjustments and special program additions are usually required to determine the final budget figure. These additions or new initiatives are priced out on a gross basis after application of available assets, and included in the Budget Transition Statement.

3.2.1.3 Component Rework Repair Funding (CRRF)

The component rework funding requirement is developed on the basis of Repair Stratifications. Requirements include expected customer orders, plus end of period repair level requirements. Assets applied to the requirements include RFI assets on hand, serviceable returns, receipts from procurement, NRFI scheduled for repair, NRFI not currently scheduled for repair, and unserviceable returns.

3.2.2 Defense Business Operations Fund (DBOF)

The DBOF was established on October 1, 1991. The DBOF replaced the Stock Funds and Industrial Funds for all services. Items purchased by the DBOF are held in stock until they are requisitioned by a customer. When items purchased using DBOFs are issued to user activities, the user's financing appropriation reimburses the DBOF for the items drawn, thus providing resources which can be used by the fund to purchase new items or to replace inventory that has been sold. Because of this last feature, the DBOF is categorized as a revolving or Working Capital Fund (WCF). The DBOF consists of two components, material carried in the account and cash. The purpose of DBOF is to recover all costs associated with obtaining, storing, and issuing spares to a customer. Additionally, the revolving principle of the fund

provides NAVICPs great flexibility in using funds to supply future needs.

3.2.2.1 DBOF Pricing

Material prices are developed under the general policy guidance of SECDEF, NAVCOMPT, and NAVSUP. The pricing policy is to charge the end use customer the price paid for an item, plus a surcharge where applicable. The DBOF surcharge recoups the costs of maintaining the Navy Supply System. The goal is to break-even, not to make a profit. NAVICPs maintain four prices:

A. Replacement Price

The latest stock buy procurement price paid for an item.

B. Standard Price

The price charged for a consumable item or for a DLR when no carcass is returned.

C. Repair Price

The actual repair price or a weighted average of repair prices that NAVICP paid to have an item repaired, or the latest workload forecast price provided by the Designated Overhaul Point (DOP).

D. Net Price

The price a customer pays for a DLR item when a carcass is returned to the supply system (Repair Price plus surcharge). If an NRFI unit is not turned-in within a reasonable time frame, the delinquent customer receives an additional charge which is the difference between the net price and the standard price. Both prices are listed in the Management List - Navy (ML-N).

Repair and replacement prices are updated as new contracts are awarded, after work load forecast, or by manual update. Standard and net prices are updated annually on 1 October.

3.2.2.2 DBOF Costs and Surcharge

In order to remain solvent, the DBOF recoups costs when establishing the prices on the items sold to customers. A summary of those costs are described below:

A. Replacement Cost

The cost to obtain a replacement item from a supplier. The DBOF must replace those items which are issued if it is expected that they will be required again in the future. The replacement price will be the last confirmed contract price. The replacement price usually includes the cost of transporting the item from the source to a stock point first destination).

B. Navy Supply Operations Cost (Budget Project 91)

The cost to operate the Inventory Control Point, Fleet and Industrial Support Centers (FISCs), and other miscellaneous Navy Supply System costs.

C. Defense Logistics Agency (DLA) Surcharge

The cost to receive, store, issue, and ship Navy owned material at DLA supply depots.

D. Physical Losses

The cost of replacing damaged or lost material while it is being held in inventory. The DBOF is responsible for refinancing lost or damaged wholesale material while it is held at a stock point.

E. E. Obsolescence

The cost, recognized in advance, of procuring material which is never sold. The DBOF buys material for stock in anticipation of customer requests and continues to support systems until they are deactivated. Some of the material bought by the stock fund is never sold to customers. This situation occurs due to erroneous demand forecasts, technological improvements in the item or weapon system, or the deactivation of the system being supported.

Additional Costs included in the net price surcharge are:

F. Depot Washout

The cost of replacing NRFI DLRs which do not survive the repair process and are condemned.

G. Carcass Losses

NRFI DLRs turned-in but lost in the supply system or at a DOP.

A surcharge is determined separately for each of the wholesale Budget Projects (i.e., BP 81 & BP 85), and is applied as a

percentage fee to the replacement cost of each item to recoup the remaining costs. The DoD Price Stabilization Factor (PSF) also applies a percentage factor to the cost of an item in anticipation of the expected average inflation which will occur during a forthcoming fiscal year. The sum of the replacement price, surcharge, and PSF equals the standard price. For DLRs, the net price consists of the repair price, a depot washout charge, surcharge, and PSF.

3.2.2.3 DBOF Budget Process

Obligational authority is provided to a NAVICP's DBOF account in a manner similar to that used for appropriations. DBOF budgets are developed twice annually and submitted to the OMB n via the DoD Comptroller. OMB controls stock fund operations through the apportionment process, wherein it issues obligational authority to the individual DBOF funds. Unlike appropriations, the apportionment process for DBOF does not restrict the use of obligational authority to a quarterly basis.

DBOF budgets develop dollar value requirements, offset the requirements with available assets and request obligational authority for the difference. The budgets are developed for two or three fiscal years in each submission and at least two major submissions are prepared each year. The initial DBOF budget submission and subsequent re-budget reviews of obligational authority result in at least five submissions for each fiscal year prior to the conclusion of a fiscal year's execution. While these budgets make reference and comparison to previous approvals by OSD/OMB, each budget starts over in the construction of its requirements.

3.2.2.4 DBOF Budget Requirements

DBOF requirements are essentially a pipeline of material between suppliers and the Navy's operating forces. In order to calculate the requirements for this pipeline, one must consider not only the issues from the pipeline over time but also the value of the material in the pipeline at a specific point in time. This pipeline consists of material which is on-order from contractors and on hand. The asset requirements in each stock fund budget are developed to end each fiscal period in a position sufficient to support the level of flow expected during the next fiscal period.

The focus of requirements development in DBOF budgets is always expressed in future terms.

Requirements for DBOF assets are generally for two basic purposes: (1) to support peacetime operations known as Peacetime Operating Stocks (POS), and (2) support mobilization and War Reserve Material Requirements (WRMR). While WRMR are generally stated in terms of fixed levels of assets to support contingency plans, many of the POS requirements are based on the forecasted level of business for the following year. The remainder of the POS requirements are stated in terms of fixed levels of supplies for insurance purposes or to support new equipment and are identified by Planned Program Requirements (PPRs) or in the Transition Statement.

DBOF obligational requirements are determined by offsetting the value of requirements with the value of current assets. While the DBOF attempts to procure only items which will eventually be sold, changing demand patterns and the phase out of supported equipment cause some of the assets to be inapplicable to the current requirements. The applicability of assets is determined through the use of stratification. Requirements are developed on a line item basis and compared with actual asset positions. Consequently, some assets are declared to be excess or inapplicable. Inapplicable assets are not directly considered in the obligational calculation.

DBOF obligational authority is determined using a concept called unit costing. Under unit costing, the obligational authority to buy replacement stocks of issued material is determined by multiplying the dollar value of issues (sales) by a percentage factor or "unit cost" determined by OPNAV. OPNAV adjusts the "unit cost" rate based upon estimates of future support needs. Future support requirements are estimated by considering such factors as force structure, operating tempo, modernization requirements, etc. For example, during a period of downsizing, obligational authority may be constrained to 90% of current sales. In this scenario, future requirements would be expected to be less than previous years; therefore, less sales replacement obligational authority is needed. Conversely, if the Navy were in a period of expansion, unit cost could be greater than 100% to accommodate the growth.

3.2.2.5 DBOF Budget Projects

The DBOF fund is split into various Budget Projects which are assigned to NavICPs and Retail Offices for management. These Budget Projects break items into commodity groups for which differing levels may apply. The following wholesale Budget Projects are managed by the NavICP:

<u>Commodity</u>	<u>Budget Project</u>	<u>Budget Project Manager</u>
Ships Consumables & Field Level Repairable	14	NAVICP-M
Ships Depot Level Repairable	81	NAVICP-M
Aviation Consumables & Field Level Repairable	34	NAVICP-P
Aviation Depot Level Repairable	85	NAVICP-P

3.2.2.6 DBOF Managed Depot Level Repairable (DLRs)

Prior to 1981 all DLRs were managed as investment type items through APA financing. To take advantage of the flexibility that comes with a revolving fund, DLRs were transitioned to the Navy Stock Fund (NSF) (1981 for ship DLRs & 1985 for Aviation DLRs) which was subsequently incorporated into the DBOF (1991). The added elements of high cost and handling the NRFI carcass of a DLR affects budgeting in two ways. The DBOF budget process separately handles DLR initial (buy-in), replenishment, and repair funding.

3.2.3 Budgets for Initial Spares

The main purpose of provisioning is to insure the timely availability of an initial stock of secondary items to adequately support operational users, maintenance facilities, and supply at the least initial investment cost. The initial investment must be sufficient to support a weapon system until normal stock replenishment programs receive enough historical usage data to operate effectively. **DODI 4142.42** establishes policy relative to stockage criteria and the determination of requirements for

secondary items, beginning with initial provisioning and continuing through the Demand Development Period (DDP), which is limited to two years after the POC date.

3.2.3.1 Program Support Data (PSD)

PSD and Weapon System Planning Documents (WSPDs) for aircraft spares provide the NAVICPs with information necessary to budget for initial provisioning. Provisioning requirements for new items are supported by the DBOF or APA, as appropriate. PSD shows the total number of equipment being acquired, delivery schedules, and installation schedules by ship or site. This data is used by the NAVICPs in pricing out spares budget estimates including the cost of initial and follow-on outfitting and wholesale supply system stock. PSD is also used to determine the end user funding requirement so that funds can be budgeted and available to "buy-out" initial outfittings. PSD is covered in greater detail in [Section 3.3 of this chapter](#).

3.2.3.2 Initial Spares Funding

Initial spares funding requirements for DBOF wholesale stock levels and intermediate stock levels are budgeted a procurement lead time in advance of the material required date by the supporting the NAVICP. The requirement includes material for the first installation and all installations occurring within 12 months after the first POC. Since the installations are time-phased, they are averaged over the 12 month period using the Time Weighted Average Monthly Program (TWAMP). A three month, six month, or twelve month TWAMP period, based on the item value of annual demand. At the same time, funds will be budgeted to cover outfitting requirements for all installations with a funding required date falling within the fiscal year. The funding required date is determined by backing off from the material required date the procurement lead time of the longest lead time item. Requirements for a given item are considered to be initial during the first fiscal year of funding. Both wholesale and retail requirements are included. All subsequent requirements are budgeted and funded as replenishment.

3.2.4 Secondary Item Replenishment Budgets

Secondary item replenishment budgets are based on UICP models for both procurement and component rework. The UICP models are designed to achieve a specified level of fleet material readiness. The Navy currently has an inventory management goal to achieve an 85% SMA rate for incoming requisitions. However, CNO directs that Nuclear support items under NAVSEA 08 cognizance will be supported at a 95% SMA rate.

The NAVICPs budget for sufficient secondary item procurement and component rework funds to satisfy 85% (95% for Nuclear) of all requisitions from stock located anywhere in the supply system. UICP provides the tool to analyze and evaluate the various parameter settings for use in Stratification to meet the specified goals. The degree of success in budgeting and obtaining funds necessary to the SMA goal is contingent upon using the proper parameter settings, the quality of the data base, the credibility attached to the resulting budget by higher budget review levels, and the availability of funds.

In practice, the budgeting process for secondary items is very complex. Requirements and assets must be determined for thousands of items and summarized through the line item stratification process for conversion to budgeting terms. For repairable items, the Inventory Manager (IM) must also consider the number of failed units which will be returned and the number which will survive the repair process when repair is accomplished. Component rework budget requirements must be determined in conjunction with the procurement budget over the same period. For a DLR, when requirements exceed assets, the difference will be obtained through the component rework process. Any shortfall creates a procurement requirement which must be covered in the procurement budget.

Supply Demand Reviews (SDRs) are performed by NAVICP IMs at variable intervals (usually every two weeks) to determine which items require supply action. Procurements are made for items that are at or below reorder point to bring their stock position up to the requisitioning objective. Every six months, every item in the NAVICP's Master Data File (MDF) is processed through the Stratification Program (B20) which calculates funded and unfunded levels of requirements for these items and applies the assets to

requirements in a priority sequence. Stratification determines how much funding is required to achieve desired inventory levels.

3.2.5 Stratification

OPNAVINST 4440.16B, which implements [DOD 4140.1-R](#), directs a uniform sequence of requirements priority and asset application for the stratification of secondary items. All Navy secondary items, except those assets aboard combat vessels, must be stratified at least semi-annually to support budget submissions. The stratification process identifies assets by their intended use. Stratification computes requirements through the budget year, applies the opening assets to those requirements by simulating procurements and repairs and determines if any excesses exist.

Requirements include reorder level, backorders, war reserve, and future expected demand. The calculations are the same as a SDR. Available assets (including dues) are applied in a DoD prescribed priority sequence against the requirements. If assets are insufficient, procurements and repairs are simulated over the time period covered. Stratification then multiplies the total simulated procurements and repairs for each National Stock Number (NSN) by the standard or repair price for that NSN and totals by (Navy cognizance symbol (COG)) the amount required to fund the requirements.

Stratification coordinators at the NAVICPs are responsible for convening the Stratification "Steering Group" to establish requirements and due dates necessary for running the Stratification Program. Stratification milestone plans are prepared that detail milestones and due dates required during the Stratification process.

The resulting Stratification tables are described as follows: Table I, Budget Stratification, projects procurement deficits over a budget horizon and is used as a primary tool for development of the procurement budget. Table II, Readiness Retention Stratification, is a vehicle for the Inventory Management Report of Material Assets (DD Form 1138) submitted to OSD as well as a means to identify potential system excesses. Table II also identifies dues (repairs, procurements, and commitments) which are in long supply so that managers may take appropriate cancellation or disposal action. Table III, Local Activity Item

Stratification, projects required levels of Navy owned stocks of DLA managed material (primarily 9 Cog) held at FISCs, Naval Air Stations, and on Special Accounting Class (SAC) 207 ships (e.g., aircraft carriers, tenders, and active Fleet Surface Ships (AFSSs)). The Local Activity Item Stratification also calculates excess assets for potential disposal action. Table IV, Repair Stratifications, project repair requirements over a budget horizon and are the prime basis for the component rework budget. Integration of procurement and rework budgets is facilitated because requirements are computed as of the same cutoff date with identical beginning assets. Program simulations for issues, procurements and component rework are also identifiable between the various stratifications.

A Transition Statement, or more properly the "Transition from Stratification to Budget," is used for both APA and DBOF budgets. The Transition Statement begins with the results of Stratification, and makes adjustments for new initiatives, special program additions or other elements which are not in Stratification and includes the application of offsetting assets. The Transition Statement can also be used, when necessary, to adjust the results of Stratification to arrive at a proposed funding requirement.

The NAVICPs often run Stratification on a smaller scale in order to review dollar requirements for a particular weapon system or on a selected universe of items. These "Mini Stratifications" price out the applicable requirements for that weapon system or selected universe in the same manner as for an entire Project.

3.2.6 Spares Budget Execution

Once the budget process has provided the funds necessary for the NAVICPs to procure (and/or repair in the case of DLRs) secondary items, an execution strategy is developed to ensure that IMs comply with established higher level policies, obligate within NAVICP dollar allocations, and execute approved programs. The NAVICPs publish a Material Budget Execution Plan (BEP) which promulgates a spending plan for the fiscal year. The BEP includes the NAVICP's general execution strategy, the universe, range and depth of items to be supported, special initiatives, SMA goals, approved inventory management plans, policies, goals and objectives and NAVICP spending plans. Spending plans include four categories or phases of procurements and/or repair actions:

A. Initiation

A request by the IM for a procurement or rework action. This usually occurs during SDR but can occur at anytime the IM initiates a requirement.

B. Commitment

An administrative reservation of funds based upon firm procurement directives which authorized the obligation. A commitment is usually the first step in the process of spending available funds. The effect of entering into a commitment and the recording of that commitment on the records of the allotment is to reserve funds for future obligations.

C. Obligation

A legal reservation of funds and a responsibility to make a future payment. The responsibility is incurred as soon as an order is placed, or a contract is awarded, for the delivery of goods or the performance of services. It is not necessary that goods actually be delivered or services actually be performed, before the obligation is created; neither is it necessary that a bill or invoice, be received first. The placement of an order is sufficient. An obligation legally encumbers a specified sum of money which will require outlays or expenditures in the future upon delivery of the goods or services.

D. Expenditure

A payment against available funds. It is evidenced by voucher, claim, or other document approved by competent authority. An expenditure represents the actual payment of funds.

3.2.6.1 Spares Budget Execution at NAVICP

The NAVICP Material BEP is prepared annually to ensure execution of funding resources in a manner that will maximize NAVICP's material support to the Fleet. The plan formalizes comprehensive management planning and policies to be used by each operating division in execution of approved material procurement and repair funds. Financial control is achieved by monitoring actual execution against the BEP.

The Material Budget Board, which is chaired by the Commanding Officer, is responsible for overall material funding policy and ensures that Command goals are incorporated in the BEP. The board reviews all elements of budget planning, formulation, and execution and is the means through which performance is measured. The board meets monthly or more frequently as specified by the Chairman to review recommended changes to the existing BEP. Sales, obligation of funds, and the generation of buys and repair actions are carefully monitored.

Material budget execution is monitored in the following manner:

A. PPRs Review

The establishment of funded PPRs results in the allocation of funds if a procurement or repair action is required. **NAVICP Code 01** has the overall responsibility to review, monitor and control all PPRs before they are entered into file to insure that only funded programs are being loaded. This avoids budget shortfalls resulting from the entering of unfunded PPRs into file.

B. Generation of Unbudgeted Requirements

There may be instances when unbudgeted requirements need to be generated prior to budget submission and approval. Emergent requirements and program growth require **NAVICP Code 01** approval with concurrence by NAVSUP.

C. Sales Monitoring

DBOF customer orders and sales data are closely monitored against approved phasing plans. Centralized Accounting and

Billing (CAB) sales from the major reporting activities are accumulated and tracked on a weekly basis. Forecasts are updated continually throughout the fiscal year as actual experience occurs and trends are reported to the Budget Council. Deviations from plan are analyzed and obligation plans adjusted, if required, to execute to the approved DBOF unit cost rate. Sales data is also monitored to track "Buy-out" of material by various programs/customers relative to material bought by the DBOF.

3.3 PROGRAM SUPPORT DATA (PSD) AND PSD SHEETS

Thus far, this chapter has provided an overview of the budgeting systems used to obtain the funding necessary to provide initial and follow on supply support. This portion of Chapter 3 provides policy and procedures for identifying and translating new requirements into a standardized PSD system. The PSD system is used to formulate and justify secondary item budgets.

The PSD system links HSC PMs and the supporting NAVICP. It provides the information needed to document the supply support for new weapon systems, revisions, Engineering Change Proposals, Ship Alterations, and program reductions or terminations. PSD is used by the NAVICP to identify initial and follow-on secondary spares and repair parts including; initial system stock, replenishment system stock, and Onboard Repair Parts (OBRPs) needed for outfittings. PMs use PSD to document and justify requirements for Installation and Check-Out (INCO) spares, Maintenance Assistance Modules (MAMs), and interim support material.

3.3.1 PSD Policy and Procedures

OPNAV Instruction 4423.4A

<http://neds.daps.dla.mil/Directives/4423a4.pdf> establishes policy and responsibility for developing program data used in the computation of initial spares requirements. It requires Acquisition Managers responsible for the introduction of equipment/weapon systems to not only budget for supply support but also, provide the NAVICP with the program data necessary to establish program support.

Establishing and maintaining the PSD system is a joint responsibility between the HSCs and NAVICPs. OPNAVINST 4423.4A

<http://neds.daps.dla.mil/Directives/4423a4.pdf> designates Commander, Naval Supply Systems Command (COMNAVSUPSYSCOM) as the lead SYSCOM for matters relating to secondary item requirements determination and the PSD process. It further designates Commander, Naval Sea Systems Command (COMNAVSEASYSYSCOM) as manager of the Program Support Data Automated Reporting and Tracking System (PARTS) database that is used by all HSCs and NAVICPs.

The only authorized exceptions to the PSD process are as follows:

- Material within the APN account.
- SSPO managed material.
- Civil Engineering and Construction equipment.
- Navy Nuclear Propulsion Plants.
- Foreign Military Sales (FMS) Programs.
- Equipment under the Research, Development, Test and Evaluation (RDT&E) account.
- Explosive ordinance.
- Contractor Furnished Equipment (CFE), except for specifically designated Mission Critical Equipment or spares costing more than \$100K per year, by joint determination of the NAVICP and HSC.

3.3.1.1 PSD Automated Reporting and Tracking System (PARTS)

PARTS is the official database in which all PSD resides. PARTS serves as a central automated database to include all NAVSEA, Space and Naval Warfare Systems Command (SPAWAR), and Naval Air Systems Command (NAVAIR) end item and secondary item PSD requirements. Its purpose is to provide a clear and easy method of tracking PSD. NAVSEA, as the PARTS system manager, maintains the centralized PSD data base and standard PSD application programs, budgets for and provides user hardware requirements, provides user training and assistance, and serves as Chairman of the PARTS Technical Committee. Unique enhancements to PARTS are funded by the requesting SYSCOM/NAVICP.

Detailed instructions for entering PSD into PARTS is provided in **NAVSUPINST 4420.36**, . PSD is comprised of three forms which are accessed through a series of seven screens. They are:

<u>FORM</u>	<u>SCREEN</u>
NAVSUP Form 1390 (End Item Form)	End Item Budget and Acquisition Data End Item Contract Data End Item Logistics Data End Item Comments
NAVSUP Form 1390/1 (Equipment Installation Form)	Equipment Installation Data
NAVSUP Form 1392	HSC Secondary Item Funding Requirements

Every PSD in PARTS requires, as a minimum, NAVSUP Forms 1390 and 1390/1. If an HSC spares funding requirement exists, then a NAVSUP Form 1392 is required.

3.3.1.2 NAVSEA Deputy Commander for Fleet Logistics Support, Material Support Division (SEA 04L) Responsibilities

The Deputy Commander for Fleet Logistics Support, Material Support Division (SEA 04L) is responsible for the Outfitting Budgets required to provide OBRPs, Operating Space Items (OSI), Ready Service Spares (RSS), and equipage for Navy Ships. These funds are budgeted in both the SCN and OPN appropriations.

SCN funds are used to provide required outfitting material to new construction ships and conversions/overhauls funded by the SCN appropriation.

OPN funds are used to provide outfitting material to:

- Active Fleet Ships
- Naval Reserve Force Ships
- Marine Air Groups (MAGs)
- Commander, Naval Telecommunications Command (COMNAVTELCOM) Activities
- Chief of Naval Education and Training (CNET) Activities
- Coast Guard Ships (installed Navy owned equipment only)

NAVSEA OPN Outfitting funds provide initial allowances of spares, repair parts, and equipage incident to:

- Installation of new equipment
- Alteration of existing equipment configuration
- CNO or SYSCOM special allowance changes (primarily personnel safety related items)

Detailed procedures for Ship Outfitting are provided by:

- 0910-LP-434-3400 Policies and Procedures Manual Navy Outfitting Program, OPN Outfitting.
- 0910-LP-311-1200 Policies and Procedures Manual Navy Outfitting Program SCN Ships.

SEA 041 uses PSD PARTS data to develop the budget for OPN Outfitting Funds.

3.3.1.3 Program Manager (PM) Responsibilities

PSD is prepared by Program Managers when new equipment acquisitions are approved for production and appear in the FYDP or when a revision or ECP is approved for implementation. The PM responsibilities include:

- Developing and maintaining current program data in PARTS for assigned programs, including those programs in which another SYSCOM participates.
- Ensuring that PSD is submitted to the NAVICP for each program requiring supply system support. PSD will be provided at least a budget lead time (usually two fiscal years) in advance of the requirement and will be updated as changes occur.
- Ensuring PSD is provided at the end item equipment level and separately for each end item that is embedded in, or is a component of, a system. System level PSD is acceptable in the early stages of a program but must be approved by OPNAV and the NAVICP.
- Revising PSD as required to reflect significant changes, but no less frequently than semi-annually, in conjunction with the Navy POM call. Any PSD revision which results in a plus

or minus one million dollar change in any fiscal year for secondary items must be submitted with justification to **NAVSUP Code 013.**

- Removing equipment and systems from the active PSD/PARTS file when all planned procurements have been made, and the Material Support Date (MSD) has been reached and all planned installations have been accomplished and POC dates attained.

3.4 REQUIREMENTS DETERMINATION - SECONDARY ITEMS

After HSC PMs have loaded the required PSD data into PARTS, NAVICP provisioners and budget personnel can begin the task of developing budget estimates needed to justify the purchase of supply support for new weapon systems and end items.

NAVICP budget preparation for new secondary items begins well before a new weapon system is provisioned or fielded. It is an iterative process where rough initial budgets are prepared and continuously refined as detailed supply support is identified through the Provisioning process. Provisioning, which is fully explained in PAFOS, Chapter 4, is the process used to identify the kind and number of individual components and repair parts needed to support a new weapon system. Provisioning is the beginning of the secondary item procurement process.

The budgeting process, based on PSD, can begin up to seven years before a new weapon system is fielded, and up to four years before a new system is provisioned.

3.4.1 DoD Requirements Model

[DOD 4140.1-R](http://neds.daps.dla.mil/Directives/4423a4.pdf) and OPNAVINST 4423.4A <http://neds.daps.dla.mil/Directives/4423a4.pdf> prescribe policy and procedures for the determination of initial requirements for secondary item spare and repair parts. The intent of this policy is to achieve maximum initial support within available resources and provide peacetime initial spare and repair parts under a concept that requires supply response times be kept to a minimum. This concept is implemented through procedures that provide a coordinated approach to all elements: program development; the depth of stocks provided in the initial requirements computation; the range of items selected for initial stockage; and requirements

computation policy, from the beginning of a new program to the end of the DDP for each item.

The procedures require that a minimum supply response time be achieved through a cost-effective approach of balancing shortage costs and costs related to holding inventory. Thus, the cost of obsolescence and other aspects of holding costs are considered when determining whether or not to stock an item, and the depth of stock is initially constrained in order to minimize the probability of over procurement and to achieve an optimal inventory mix based on actual demands.

The Services are afforded a relatively wide latitude in determining initial end use/retail level requirements. However, the rules for determining wholesale requirements are more restrictive and are specified in significant detail. The Navy uses several alternative DoD approved models to determine initial requirements for the consumer level. Wholesale requirements are determined by models that have also been approved by OSD and are in compliance with [DOD 4140.1-R](#). A general description of DoD Wholesale Requirements Policy as well as the specific models used by the NAVICPs follows.

Wholesale Level Requirements - [DOD 4140.1-R](#) requires the services to standardize practices for initial requirements determination and provides specific guidelines to hedge against the probability of over procurement. Initial provisioning is accomplished to support only the initial program rather than the entire life cycle of a weapon system. DoD also provides explicit methodology for determination of initial wholesale level secondary item spare and repair parts, and detailed mathematical models for implementation. However, other mathematical models may be used which may provide for a different mix of inventory provided a financial base is established based on the DoD model and an objective to minimize system downtime is included in the model. The elements of wholesale level requirements determination include developing program data, identification of demand based items, identification of non-demand based stockage requirements, developing a cost constraint, and range and depth selection.

The initial step in developing program data is establishing a POC date for the end item. The POC date is the date that repair parts for the end item are first required. Two forecast horizons are used in provisioning to satisfy DoD requirements: the Program Forecast Period (PFP) and the Program Time Base (PTB). The PFP is

developed beginning with the POC and extending through the Procurement Lead Time (PCLT) plus a three month combination Procurement Cycle/Safety Level (PC/SL). The PFP determines how much program or population will be used in the demand forecast for the range decision.

Most programs are phased in gradually over time. An accurate prediction of requirements cannot be developed without considering the projected time in use during the forecast horizon for each unit of program. DoD has provided a standard procedure for computing the program for requirement forecast known as the TWAMP. The amount of Program used in the TWAMP is based on the PTB. The PTB is normally 12 months. The PTB determines how many units of program are used in the depth decision. The PTB is constrained by DoD guidelines for low, medium, and high intensity management. The data required to develop the TWAMP is contained in the PSD provided by the HSCs.

Non-Demand Based Items. Non-demand based items fall into two categories: insurance items and Numeric Stockage Objective (NSO) items. An insurance item is an essential item identified during the provisioning process and added to a ship's Coordinated Shipboard Allowance List (COSAL), for which no failure is predicted through normal usage, but an unexpected failure or damage in combat would seriously hamper the operational capability of a weapon system. A NSO item is an essential item for which the probability of demand is so low that it does not meet the demand based stockage criteria. Since the lack of a replacement item would seriously hamper the operational capability of a weapon system, the item is stocked in the wholesale supply system but as a non-demand based item.

Additional items included in the non-demand based item category are:

- Items needed to support particular programs of a non-recurring or sporadic nature such as set assembly, non-repetitive overhaul programs where reprocurement is not required once the particular program has been completed.
- Items that are procured on a life-of-type basis or which are bought out at the termination of a production program.

- Items that are not fully consumed during a one-time or non-repetitive program, but should be retained for possible future need on other programs.

Demand Based Items. A demand-based item is one for which the decision to stock or not to stock is based upon anticipated recurring demands. All other stocked items are classified as non-demand based items. A cost equation is used to identify demand based items. The cost equation, referred to as the Cost Difference (COSDIF) Equation, is an approach that compares the forecasted cost of stocking an item to the expected cost of not stocking the item and subsequently needing it.

3.4.2 NAVICP Wholesale Models for System Stock Requirements

NAVICPs must consider the criticality of secondary items to the mission of the ship or aircraft in which they are installed as well as their importance to the weapon system they support.

Non-Demand Based Requirements. Critical items that warrant stocking but do not have enough forecasted demand to qualify as demand based may be identified by a technical decision process as part of a Logistic Support Analysis (LSA) or the criticality decision may be based on historical Casualty Report (CASREP) or Type Commander (TYCOM) data for similar equipment. Critical item identification is reflected in the assignment of two codes. The first code at the part or item level is known as the Military Essentiality Code (MEC). If the failure of an item would render the end item inoperable, the item is assigned a MEC OF '1.' If the failure of an item would affect personnel safety, a MEC of '5' is assigned. If the item is needed to prevent impairment or temporary reduction of operational effectiveness of the End Item, MEC of '7' is assigned. All other items are assigned a MEC of '3.'

The second code is assigned to a weapon system or end item in a specific shipboard use to denote its importance to the mission of the military unit in which the component is installed. This code is the Mission Criticality Code (MCC).

MCCs can be determined from the following matrices:

Alternatives for Mission Accomplishment			Impact if Alternatives Fail
Redundant systems available	Alternatives (excluding redundancies)	No Redundancies or Alternatives	
3	4	4	Total loss of mobility or life support.
2	3	4	Severe degradation of mobility or total loss of a primary mission.
1	2	3	Severe degradation of a primary mission.
1	1	2	Total loss or severe degradation of a secondary mission.
1	1	1	No mission impact.

When the MCC assignment is based on CASREP history for similar equipment, the following criteria are used:

Code

- | | |
|---|--|
| 4 | The ratio of C3 and C4 CASREPs to C2 CASREPs is at least one to five, and the ratio of C4 to C3 CASREPs is at least one to three. |
| 3 | The ratio of C3 and C4 CASREPs to C2 CASREPs is at least one to five, but the ratio of C4 to C3 CASREPs is less than one to three. |
| 2 | The ratio of C3 and C4 CASREPs to C2 CASREPs is less than one to five. |
| 1 | No CASREP history. |

Item Mission Essentiality Codes (IMECs) use the same definitions as MCCs and are derived from a combination of both the MCC and the MEC.

PART MEC	EQUIPMENT MCC	IMEC
5	ANY	5
1	4	4
1	3	3
1	2	2
1	1	1
7	4	3
7	3	2
7	2	1
7	1	1
3	ANY	1

NOTE: Non-Demand based IMEC 3 and 4 items are bought in quantities sufficient to support one maintenance action or one Minimum Replacement Unit (MRU).

Demand Based Requirements. For demand based requirements, the models provided in [DOD 4140.1-R](#) are used to compute initial wholesale requirements. The demand forecast (Y) for use in the range decision is based on the total amount of Program to be installed two years after the POC date:

$Y = E \text{ times } P \text{ times } RF \text{ where:}$

E = Number of equipment installed in a two year Period

P = Number of parts per equipment

RF = Replacement Factor (Number of replacements per unit of installed equipment per year). Replacement Factors are initial Best Replacement Factors (BRFs) and may be based on a manufacturer's estimate of a Median Family Replacement Factor (MFRF).

The depth of material is based on TWAMP quarterly demand forecast.

Quarterly Demand (D) = $\frac{TWAMP \times P \times RF}{4}$

NAVICP uses a computer program called Ship's Provisioning System (SPS) to provision new items. One function of SPS is to calculate Quarterly Demand for new items. The Quarterly Demand calculated in SPS is subsequently used by the NAVICP's SDR program to calculate total requirements and generate Purchase Requests (PRs) for each item.

3.4.3 NAVICP Calculations for Outfitting Requirements

In addition to determining supply system wholesale requirements for new items, NAVICPs also determine the initial support requirements for operational units and selected shore facilities. NAVICP's prepare the DBOF "buy-in" budget for spares needed at the end use/organizational level, and initiate procurements for material that will be subsequently "bought-out" during the outfitting process. In a manner similar to wholesale requirements determination, NAVICP uses SPS to calculate end use requirements and load PPRs into NAVICP's MDF. The PPRs, in conjunction with the demand forecast for wholesale requirements, determine the number of items recommended for procurement by SDR.

As previously discussed, DoD allows the Services greater flexibility in determining end-use/retail requirements compared to wholesale inventory levels. Retail allowance models are categorized by their level of protection: fixed, variable, and optimal. NAVICP has versions of each type available for use as options in NAVICP's SPS program. The following is a description each type.

A. Fixed

The fixed level models referred to as Fleet Logistics Support Improvement Program (FLSIP) and Modified FLSIP (MOD-FLSIP), use only the demand forecast to determine requirements and provide the same level of protection for all demand based items. The goal of these models is to provide an endurance level with safety stock for all demand based items based on a predetermined constant parameter (e.g. 90%). Demand based items are defined as items with a predicted demand of at least one in ninety days. The original FLSIP concept was established in 1964 to ensure that ship's allowances are based on updated failure rates, and are limited to shipboard installable repair parts. FLSIP also limits the range of insurance items that can be carried in allowance, to vital items that have a predicted demand of at least one in four years. A study done by the Center for Naval Analysis in 1979 found that FLSIP fails to identify or recognize repair parts essential to a ship's missions, and it fails to adequately support essential items with historical demand just below the insurance threshold. The revised allowance policy that resulted from the study is known as Modified FLSIP of MOD-FLSIP. Since the implementation of MOD-FLSIP, non-demand based or insurance item range criteria depends upon the item's criticality to the ship's missions (IMECs). If the IMEC is 3 or 4, the range is limited to a forecasted demand of one in ten years.

MOD-FLSIP allowances are now being replaced with a new inventory model called .5 FLSIP Plus. Budget reductions made it necessary to reduce the range, depth, and cost of shipboard inventories. Of all the items selected for inclusion in a ship's storeroom by the MOD-FLSIP COSAL computational model, on average only 25% were used between overhauls. With .5 FLSIP Plus, the number of insurance items is significantly reduced by limiting the range of spares to those parts with a forecasted usage rate of one in two years.

To maintain readiness, allowance items which have proven demand within a ship's class, as indicated by the CASREP and reported usage in the 3M Database, are "added back" into the COSAL allowance.

B. Variable Protection Level Models

The Variable Protection Level Model is used for TRIDENT submarines. The allowance quantity computed by this model consists of the expected 90-day replacement quantity plus a variable number of standard deviations. In the TRIDENT model, MEC is a measure of item importance, and ranges from 95 (least important) to 116 (most important). Parts are added to the ship's allowance based on essentiality using a cost sensitive model that provides 100% of range requirements for the highest MEC items.

C. Availability Centered Inventory Model (ACIM) Optimization Model

An optimization model is designed to maximize inventory performance given a specified investment level or, conversely, to achieve a specified performance level for the minimum investment. Performance is measured in terms of response time or in backorder days. Two models have been approved by Navy for use in determining consumer level inventory requirements. The first model is used to compute Allowance Requirements Registers (ARRs) for aviation consumer allowances. The second model, the ACIM, is used to compute ship allowances for specified weapon systems when it can be demonstrated that the weapon system readiness objective cannot be achieved with the standard protection level models. Each specific application of ACIM must be approved by OPNAV. The procedures for developing an ACIM allowance are detailed in NAVSEA Handbook TL-441-AA-HBK-010.

ACRONYMSDEFINITIONS

ACIM	Availability Centered Inventory Model
APA	Appropriation Purchases Account
APN	Aircraft Procurement, Navy
ARR	Allowance Requirements Register
ASO	Aviation Supply Office
BEP	Budget Execution Plan
BES	Budget Estimate Submit
BRF	Best Replacement Factor
CAB	Centralized Accounting and Billing
CASREP	Casualty Report
CFE	Contractor Furnished Equipment
CMC	Commandant of the Marine Corps
CNO	Chief of Naval Operations
COG	Cognizance Symbol
COMNAVSEASYS COM	Commander, Naval Sea Systems Command
COMNAVTEL COM	Commander, Naval Telecommunications Command
COMNAVSUPSYSCOM	Commander, Naval Supply Systems Command
COSAL	Coordinated Shipboard Allowance List
COSDIF	Cost Difference
DAE	Defense Acquisition Executive
DBOF	Defense Business Operations Fund
DDP	Demand Development Period
DLA	Defense Logistics Agency
DLR	Depot Level Repairable
DoD	Department of Defense
DON	Department of the Navy
DOP	Designated Overhaul Point
DPG	Defense Planning Guidance
DPRB	Defense Planning Resource Board
FBM	Fleet Ballistic Missile (Submarine)
FFG	Fast Frigate Guided Missile (Ship Type)
FISC	Fleet and Industrial Support Center
FLSIP	Fleet Logistics Support Improvement Program
FMS	Foreign Military Sales
FOO	Follow On Outfitting
FOSS	Follow On System Stock

FYDP	Future-Year Defense Program
HSC	Hardware Systems Command
ICP	Inventory Control Point
IM	Inventory Manager
IMEC	Item Mission Essentiality Code
INCO	Installation and Check-Out
LSA	Logistic Support Analysis
MAG	Marine Air Group
MAM	Maintenance Assistance Module
MCC	Mission Criticality Code
MCO	Maintenance Criticality Oriented
MDF	Master Data File
MEC	Military Essentiality Code
MFRF	Median Family Replacement Factor
MRU	Minimum Replacement Unit
MSD	Material Support Date
NAE	Navy Acquisition Executive
NAVAIR	Naval Air Systems Command
NAVCOMPT	Comptroller of the Navy
NAVICP	Naval Inventory Control Point
NAVICP-M	Naval Inventory Control Point, Mechanicsburg
NAVSEA	Naval Sea Systems Command
NAVSUP	Naval Supply Systems Command
NAVSUPINST	Naval Supply Systems Command Instruction
NRFI	Not-Ready-For-Issue
NSC	National Security Council
NSN	National Stock Number
NSO	Numeric Stockage Objective
O&MN	Operations and Maintenance, Navy
OBRP	Onboard Repair Part
OMB	Office of Management and Budget
OPN	Other Procurement, Navy
OPNAV	Office of the Chief of Naval Operations
OPNAVINST	Office of the Chief of Naval Operations Instruction
OSD	Office of the Secretary of Defense
OSI	Operating Space Items
PARTS	PSD Automated Reporting and Tracking System
PBD	Program Budget Decision

PCLT	Procurement Lead Time
PC/SL	Procurement Cycle/Safety Level
PDMs	Program Decision Memorandums
PEO	Program Executive Officer
PE	Program Element
PFP	Program Forecast Period
PM	Program Manager
POC	Preliminary Operation Capability
POM	Program Objective Memoranda
POS	Peacetime Operating Stocks
PPBS	Planning, Programming, and Budgeting System
PPR	Planned Programmed Requirement
PR	Purchase Request
PSD	Program Support Data
PSF	Price Stabilization Factor
PSICP	Program Support Inventory Control Point
PTB	Program Time Base
RBS	Readiness Based Sparing
RDT&E	Research, Development, Test and Evaluation
RF	Replacement Factor
RFI	Ready-For-Issue
RSS	Ready Service Spares
SCN	Shipbuilding and Conversion, Navy
SDR	Supply Demand Review
SECDEF	Secretary of Defense
SECNAV	Secretary of the Navy
SMA	System Material Availability
SPAWAR	Space and Naval Warfare Systems Command
SPS	Ship's Provisioning System
SSPO	Strategic Systems Program Office
SYSCOM	Systems Command
TWAMP	Time Weighted Average Monthly Program
UICP	Uniform Inventory Control Point
WPN	Weapons Procurement, Navy
WRMR	War Reserve Material Requirements
WSPD	Weapon System Planning Document