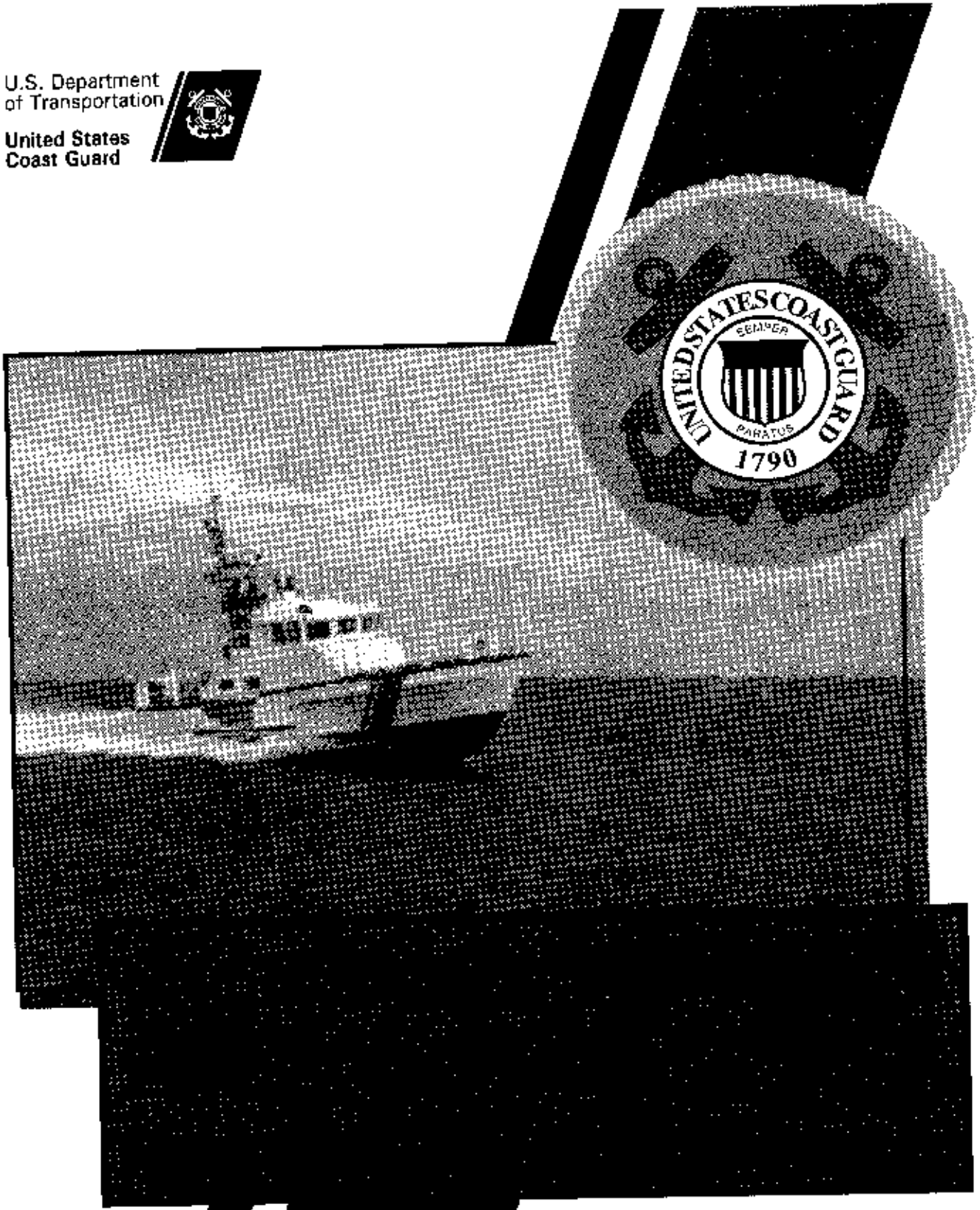
U.S. Department
of Transportation

**United States
Coast Guard**



COMMANDANT INSTRUCTION M7132.1C

19 FEB 1999

U.S. Department of Transportation
United States Coast Guard

Commandant
U.S. Coast Guard

2100 2nd Street SW
Washington D.C. 20593-0001
Staff Symbol: G-CPP
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COMDTINST M7132.1C

19 FEB 1999

COMMANDANT INSTRUCTION M7132.1C

Subj: U. S. COAST GUARD FISCAL YEAR 2000 AGENCY CAPITAL PLAN

1. PURPOSE. To promulgate the Coast Guard's Agency Capital Plan for fiscal year 2000.

2. ACTION. Area and district commanders, commanders maintenance and logistics commands, commanding officers of headquarters units, assistant commandants, Chief Counsel and special staff divisions at headquarters shall ensure compliance with the provisions of this directive.

3. DIRECTIVES AFFECTED. COMDTINST 7132.1B is canceled.

4. BACKGROUND. The Coast Guard Agency Capital Plan (ACP) is prepared annually to document long term capital decisions and the future capital asset funding requirements of the Coast Guard. It is the successor to previous versions of this document that were issued as the Capital Investment Plan (CIP). Recent legislation (the Government Management Reform Act, the Government Performance and Results Act, as well as the Information Technology Management Reform Act, among others) requires all government agencies to develop more robust connections between the taxpayer investment in that agency and the public good outcomes enabled by that investment. Also, additional Executive Branch guidance on capital investment planning provided in OMB Circulars A-109 and A-11, and in the Department of Transportation's Major Acquisition Policy and Procedures Manual (MAPP) provide additional requirements for more comprehensive capital planning. The FY2000 ACP reflects a continuing effort to more closely link agency capital planning to mission performance and agency outcomes, consistent with this legislation and guidance.

5. DISCUSSION. The ACP provides a brief overview of the capital planning process and key guiding principles and lays out the mission and goals of the service, broadly tying classes of

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assets to operational activities and the outcomes they produce. It also presents a baseline of current assets, examines the ability of the service's capital inventory to meet current and future operational requirements, and provides an overview of approved acquisitions. It examines affordability concerns, identifies budget constraints and strategies, and lays out a general plan for future investments and divestitures to ensure that the future capital base of the service will meet anticipated needs.

6. PROCEDURE. The FY2000 ACP is divided into three chapters and four appendices. The chapters describe the Coast Guard's current state of capital planning as well as the emerging capital investment decision-making processes. Personnel associated with maintaining or acquiring capital assets should carefully review these chapters. The appendices reflect the results of the Coast Guard's existing capital management processes. The appendices describe, in order, the Coast Guard's current capital inventory, the current acquisition projects, the acquisition projects that have been fully developed and are seeking FY 2000 Acquisition, Construction and Improvements (AC&I) funding, and the Long Range Resource Allocation Plan (LRRAP) that anticipates AC&I funding requirements out to the year 2015.

7. CONCEPT. The concepts embodied in this ACP represent a significant step forward in Coast Guard capital planning, yet it is very much a work-in-progress. Several challenges remain to bring these concepts to full application in the management of our capital assets.

   a. The ACP development effort highlighted the need for a Coast Guard investment board that will prioritize competing capital investment proposals and develop outyear capital investment strategies to maximize the organizational benefit from constrained AC&I and OE budgets. Commandant (G-CRC) has the lead in the effort to develop such a board.

   b. The recapitalization estimates in this ACP are based upon a 1996 Commandant (G-CPP) memo that contained dated information. Capital plant recapitalization estimates must be updated to reflect the current inventory of assets, planned and economic service lives, and estimated replacement costs based on current information. This information must be consistently used throughout the Coast Guard. For example, the recapitalization estimates for the ACP and CFO Act financial statements must be based on the same documentation. Commandant (G-CPP), together with Commandant (G-CFS, G-CPA, and G-S) shall develop and promulgate this information in the FY 2001 ACP.

   c. The processes for making capital investment decisions in both information technology and shore facilities are under development and should provide a comprehensive perspective across the entire C4ISR or shore/support capital portfolios. These IT Investment and Shore Facilities Capital Asset Management processes will be described in the next editions of the ACP. Commandant (G-SI and G-SEC) shall continue to develop these capital decision models. Commandant (G-CPP) will incorporate them into the FY2001 ACP.

d. Decision rules for managing the remainder of the capital asset base will be developed and promulgated by Commandant (G-CPP) prior to the development of the FY 2001 ACP. These decision rules will specifically focus on tracking cost, condition and performance of assets against baselines established at the time of acquisition of an asset or during Mission Analysis or asset upgrades. Decision trigger points will be established based on the anticipated end of asset service life and required lead-time for recapitalization. This management-in-use process, when it is developed and incorporated into the ACP, must align with the Coast Guard's acquisition process as laid out in the Systems Acquisition Manual, the OMB Capital Programming Guide, and DOT and OMB directives.

e. The life cycle cost information and asset condition/useful service life remaining estimates currently contained in the inventory pages are inadequate for making sound capital management or investment decisions. Throughout the life of every asset, managers are required to make many decisions that require precise cost, performance, condition and service life information. The total annual operating and maintenance costs (to include AFC-30, -4X, and -01 costs, as well as any AC&I costs) as well as the results of periodic condition inspections and service life estimates must be captured and presented in the inventory pages. Developing this sort of information will not be easy, but is essential as a common basis for making investment decisions across the spectrum of capital assets. This information will be developed in Appendix B of the directorates' business plans and through the Regional Strategic Assessment process. Commandant (G-CPP), in consultation with Commandant (G-S and G-O), will be responsible for refining the format of this appendix and the related inventory pages. Directorates will then develop the information content of these appendices.

f. If annual review of Business Plan Appendix Bs reveals that an asset or class of assets falls within the decision rules for review or recapitalization/divestiture action, Commandant (G-CRC) will coordinate such action with the appropriate Assistant Commandant. Upon completion of this review, findings will be documented and reported to the investment board and the Commandant. This process will be developed and defined in the next iteration of the ACP.

g. Today's rate of technological advance renders current systems technologically obsolete far more quickly than ever before. Often, the time lag associated with an AC&I-funded project allows technology capability gaps to develop between the identification of a requirement and the delivery of a system, particularly in IT and sensor systems. We must explore alternate funding mechanisms, perhaps out of the OE funding base, to allow more timely technological refreshment of these increasingly important systems. Commandant (G-CRC) will lead an effort, with Commandant (G-S and G-A), to explore such funding options.

8. COMMENTS. Comments for improvement of this ACP are encouraged and should be directed to Commandant (G-CPP), Office of Plans, Policy and Evaluation.

T. W. JOSIAH
CHIEF OF STAFF

Encl: (1) Fiscal Year 2000 Agency Capital Plan

Executive Summary

EXECUTIVE SUMMARY

Consistent with the OMB Capital Programming Guide (Supplement to Part 3 of OMB Circular A-11) and 14 USC 663, the Agency Capital Plan is prepared annually to document long term agency capital decisions and the future capital asset funding requirements of the Coast Guard. It provides a brief overview of the capital planning process and key guiding principles and lays out the mission and goals of the service, broadly tying classes of assets to operational activities and the outcomes they produce. It also presents a baseline of current assets, examines the ability of the service's capital inventory to meet current and future operational requirements, and provides an overview of approved acquisitions. It examines affordability concerns, identifies budget constraints and strategies, and lays out a general plan for future investments and divestitures to ensure that the future capital base of the service will meet anticipated needs. Future versions of the ACP will incorporate comprehensive cost and performance information that, when compared to service life, performance and cost baselines, will enable managers to systematically forecast and plan for changes in the capital portfolio. When combined with other strategic-level planning tools, the ACP offers a comprehensive view of the cost, capability and performance of the Coast Guard's entire capital base and will guide both OE and AC&I investment decisions.

In this era of constrained federal budgets, the Coast Guard finds itself in a difficult capital management situation: the annual recapitalization costs of currently owned capital assets exceeds current out year budget estimates. It is imperative that we innovatively manage our capital resources in such a way as to be able to continue the high level of service the American public demands while finding ways to do it less expensively—i.e., improve our organizational return on the taxpayer investment.

This organizational imperative occurs at a time when the Coast Guard's deepwater surface fleet and aircraft are in urgent need of recapitalization. Funding available for this recapitalization, and ongoing projects will be constrained by budget targets. This ACP examines these issues and proposes a funding strategy to address these concerns in a performance based, fiscally prudent manner.

The Agency Capital Plan is organized into three chapters and four appendices that are consistent with the guidelines laid out in OMB's *Capital Programming Guide* and reflect the logical progression of the capital management process in the Coast Guard.

- *Chapter 1* provides an overview of the Coast Guard's capital planning cycle from planning, through budgeting, procurement and management in use to eventual divestiture. It also frames the capital planning process within the Coast Guard's strategic goals. This chapter introduces the Coast Guard's application of the concept of return on investment as the market-force "engine" for making sound investment decisions.
- *Chapter 2* introduces a recurring categorization of Coast Guard capital assets as components of larger systems, based on mission requirements and the environment they operate within: Deepwater, Coastal Zone, Inland, Shore and Logistics Infrastructure, and Command Control and Computers, Information Systems and Reconnaissance(C4ISR). Considered together, these five portfolios of capital assets are an interconnected infrastructure system (i.e., a "system of systems") that are either employed to directly deliver public good outcomes or comprise the underlying support infrastructure. In addition, this chapter describes the current state of Coast Guard efforts to baseline operating capability requirements for each of these systems through a rigorous mission analysis process.
- *Chapter 3* lays out the Acquisition, Construction, and Improvement (AC&I) Appropriation issues that influence the "shape" of the Coast Guard's funding curve for capital asset management. In

particular, it explores the Coast Guard's recapitalization dilemma in the face of smaller AC&I budgets. It continues with an explanation of capital management principles and strategies available to address this AC&I funding shortfall.

The appendices of this ACP are arguably the most significant part of the plan. While the previous chapters have laid out how the Coast Guard manages its capital asset portfolio, the appendices reflect the results of that capital management process.

- *Appendix A* is a general overview of the Coast Guard's current capital asset portfolio (grouped by system). Asset service life and operational employment concerns are discussed, gaps between capability requirements and current capabilities are identified, and future investment needs from a capability preservation perspective are addressed. Arranged as inventory sheets, each asset (or class of assets) is presented in a standard format that includes historical performance, mission contribution and cost information. Service life projections of each asset (or class of assets) are graphically summarized, providing a snapshot of the "health" of the Coast Guard's capital systems and graphically displaying the decision points that trigger the requirement for a capital asset determination by this organization. Future versions of this appendix will contain life-cycle cost data as an informant for making capital asset decisions. Appendix A also provides the link to the Coast Guard's business and performance planning process through incorporation of capital asset information generated in annual Business Plans. Business Plan Appendix B's are revised annually and provide a comprehensive overview of every capital asset. That information is the foundation for appendix A to the ACP.
- *Appendix B* provides a summary of current capital acquisitions and other AC&I projects such as service life extensions or capital upgrades. This section discusses acquisitions currently underway and examines risk, cost, schedule and performance data, borrowing from documentation already required by the A-109 process and OMB in their budget submission procedures.
- *Appendix C* reflects those AC&I projects that have already been proposed and accepted by the Coast Guard Acquisition Resource Council (CGARC) as viable capital acquisition projects, but that have not yet been funded through the budget process.
- *Appendix D* looks beyond the CGARC-approved projects of Appendix C to contemplate the notional long range recapitalization requirements (out to 20 years) as indicated by the current capital decision trigger points (contained in Appendix A). It also includes the approved-and-funded AC&I projects (of Appendix B), the CGARC-approved-but-not-yet-funded projects (of Appendix C), as well as the notional outyear recapitalization requirements to develop a Long Range Resource Acquisition Plan (LRRAP). This recapitalization forecast is constrained by mission performance requirements and a comprehensive set of assumptions, as well as incorporating the *Principles of Budgeting for Capital Asset Acquisitions* (found in OMB Circular A-11) to present a cogent, fiscally prudent plan to manage the Coast Guard's capital assets to maintain performance capability through the next quarter century.

In all, this ACP marks a focused effort to comprehensively manage the Coast Guard's capital plant in a manner that maximizes its value to the American public at the least possible cost. Several issues have been identified during the course of the ACP development (together with additional executive and legislative guidance), that will be addressed in the coming years to further our stewardship of public capital assets.

Glossary

GLOSSARY: PERFORMANCE, POLICY AND PROGRAM DEFINITIONS

Coast Guard Performance Plan: An annual plan that details the Mission, Outcome (strategic) Goals, Performance Goals, measures, external factors, strategies, resources etc. relating to organizational performance aimed at fulfilling the Service's mandate and national interests.

Outcome: The intended result, effect or consequence that will occur from carrying out a program or activities.

Performance Goal: A target level of performance relative to a known baseline expressed as a tangible, measurable objective, against which actual achievement can be compared. May be expressed as a quantitative standard, value or rate.

Policy: Direction by the Commandant or other senior official to constrain and guide the accomplishment of a planned outcome within a specific time frame.

Policy and Performance Director: The Assistant Commandant at Headquarters responsible to the Commandant for:

1. Development and deployment of policy to ensure effective performance,
2. Agreed upon performance outcomes,
3. Subordinate operating and support programs.

Policy and Performance Director Business Plan: An annual plan prepared by each Assistant Commandant that articulates their performance goals and key resource requirements. It guides the efforts of the directorate and informs the organization of broad performance goals, policies and strategies. It incorporates key aspects of the annual business planning, performance management and resource management processes of the directorate into an integrated document that assists cross-programmatic management of the Service.

Policy and Performance Management: Ongoing activities for conducting major "business lines" for which the Assistant Commandants are accountable to the Commandant. Policy and performance management is results oriented and encompasses all aspects of a directorate's business(es) including policy development and deployment, management of an assigned program or aggregation of programs, cross organizational communication and integration at Headquarters and delivery of field requirements.

Program: A major ongoing Coast Guard endeavor which fulfills statutory or executive requirements and which is defined in terms of the principle activities required to achieve a significant outcome.

Program Director: The military or civilian official at Headquarters immediately responsible to the Commandant or an Assistant Commandant for the overall management of an approved Coast Guard program including the development of program goals and strategies.

Program Manager: The staff officer at Headquarters designated by and responsible to the Program Director for the detailed management of a Coast Guard program. Contrasted to high level performance and policy management, program management focuses on the execution of program goals and strategies, resource requirements, measurement and evaluation.

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Chapter 1

CHAPTER 1 : THE BASIS FOR COAST GUARD CAPITAL ASSET PLANNING AND MANAGEMENT

"The notion here is that strategy is manifested in a relatively few investment decisions, which are hard to reverse and which tend to define choices in other areas...." Michael Porter, "Toward a Dynamic Theory of Strategy"

Introduction

Capital investment and asset management is the primary mechanism through which the Coast Guard shapes it's long-term strategy--where we choose to invest our limited resources is the most telling evidence of our organization's strategic intent. The Coast Guard's ability to safely accomplish its legal, historical and emerging mandates in future years is dependent upon the foresight and rigor that we apply to managing our capital portfolio today--we must do it right.

The Coast Guard Agency Capital Plan (ACP) documents current and projected levels of capital investment required to provide continued Coast Guard services to the American public. Previously issued as the Capital Investment Plan (CIP), the ACP provides greater detail and presents data in more meaningful formats. Most importantly, the ACP reflects a continuing effort to more closely link agency capital planning to mission performance and agency outcomes, consistent with the Government Performance and Results Act of 1993 and the Office of Management and Budget's Capital Programming Guide.

BACKGROUND

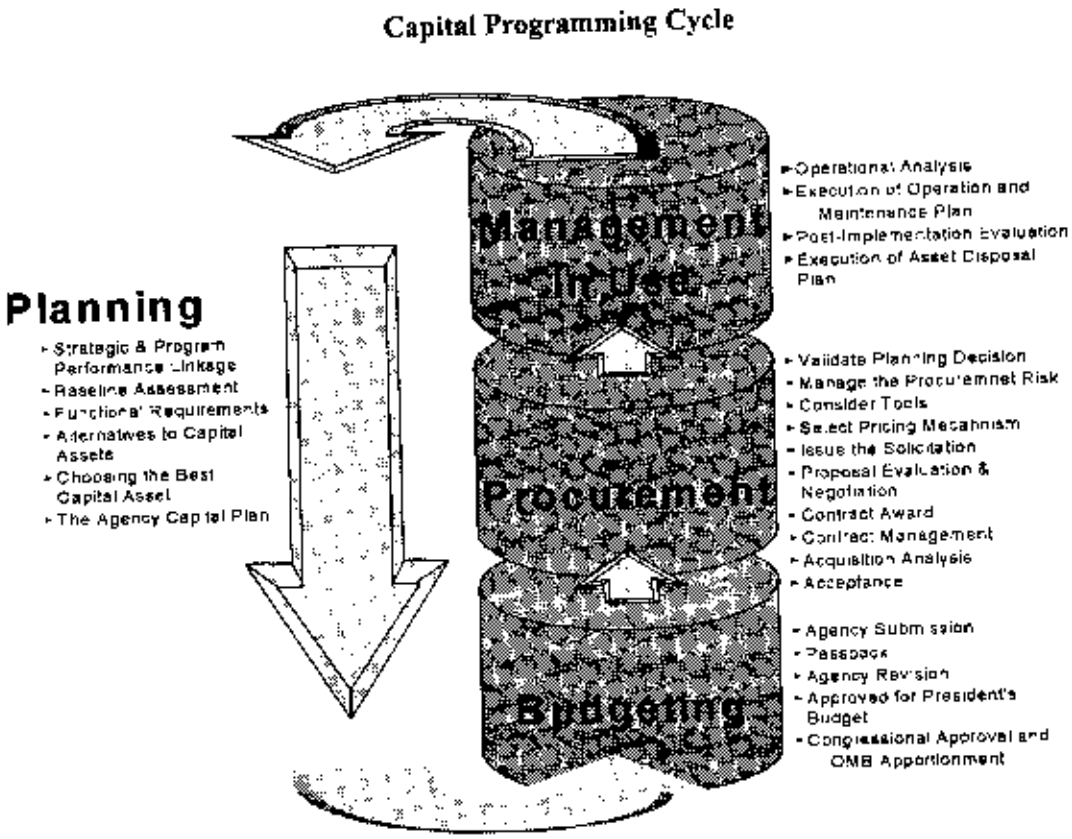
The Coast Guard owes much of its success to its people's ability to effectively use capable platforms (i.e., boats, cutters and aircraft). In the 208 years since the Revenue Marine was created, missions have been added, technology has evolved, and the contribution of other activities (regulation, prevention efforts, etc.) to Service outcomes has changed. However, the fundamental nature of the Coast Guard as a military, multi mission, maritime operating agency that relies on well-trained personnel using multi-mission capital assets has remained.

Prior to 1980, the annual capital plan was little more than a spreadsheet listing funding requirements. In 1980, Congress added the specific requirement for a cutter, aircraft and shore investment plan (14 USC 663). This required a slightly more systematic approach to documenting the need for funds, but did not begin the process of planning integration. When the requirement for a Strategic Information Resource Management Plan (SIRMP) was added in 1990, the Coast Guard Capital Investment Plan (CIP) was subsequently developed to address all of these requirements in a single, comprehensive document.

Since that time, additional Executive Branch guidance on capital investment planning provided in OMB Circulars A-109 and A-11, and in the Department of Transportation's Major Acquisition Policy and Procedures Manual (MAPP) have required even more comprehensive capital planning. The last major revision to the Coast Guard's CIP was in 1993, when the Long Range Resource Allocation Plan (required by the DOT MAPP) was added. Recent legislation (the Government Management Reform Act, the Government Performance and Results Act, as well as the Information Management and Technology Resource Act, et. al.) requires all government agencies to develop more robust connections between the taxpayer investment in that agency and the public good outcomes enabled by that investment. The FY2000 ACP reflects the Coast Guard's ongoing effort to incorporate these concepts into our organizational capital planning and outlines our next steps in the continued development of this process.

The diagram below, from OMB's Capital Programming Guide, reflects the phases and steps of a robust capital programming process. While the Budgeting, Procurement, and Management-in-Use phases are beyond the scope of this document, clearly there is a continuity, and in some cases overlap, between the various phases. This ACP focuses on the left-hand side of the diagram, the Planning phase. It describes the Coast Guard application of the steps noted under the Planning section, but also includes brief discussions of other aspects of the capital programming cycle.

Figure 1-1: Capital Programming Cycle



ORGANIZATION OF THE AGENCY CAPITAL PLAN

The FY 2000 ACP adopts a new format in comparison to previous versions of the CIP. Chapters One through Three provide an overview of *how* the Coast Guard manages its capital assets. Chapter One describes the Coast Guard's strategic planning system, its *raison d'etre* (i.e., missions) and the public good outcomes of those missions, as well as how capital asset management is guided by those outcomes. Chapter Two continues with the introduction of the Coast Guard's evolving "system of systems" concept that facilitates effective capital management within functionally-grouped portfolios of assets; it then lays out the current state of Coast Guard mission analysis as applicable to capital asset management. Chapter Three concludes the narrative portion of the ACP with an overview of the Coast Guard's AC&I appropriation and a discussion of guiding principles and strategic approaches available to the Service to leverage our capital assets during a period of shrinking federal budgets.

The critical information provided by the ACP is contained in the appendices. These appendices reflect the *results* of the Coast Guard's capital management efforts, with each appendix "capturing" a phase of the capital asset management process. Appendix A shows the current inventory of Coast Guard capital assets, including

service life information and cost data. Appendix B shows all the currently approved and funded capital acquisition projects. It is a compilation of the Coast Guard's OMB A-11 form 300 Bs. Appendix C includes the capital projects that have been approved through the Coast Guard capital asset management process but which have not yet received funding (i.e., the AC&I projects that are being considered in the current year's budget process). These projects are displayed in the same format as Coast Guard AC&I budget submission. Finally, Appendix D is the Coast Guard's Long Range Resource Allocation Plan (LRRAP), reflecting the notional outyear capital asset financing requirements through the next 20 years. It includes the critical assumptions that were used in developing that financing plan. (**NOTE** that the LRRAP is a Coast Guard-DOT-OMB planning tool. It IS **NOT** releasable outside the executive branch until approved by OMB.) Considered in sequence, these appendices reflect the Coast Guard's capital asset management, in terms of:

- management-in use;
- current acquisitions;
- proposed acquisitions;
- notional outyear capital funding requirements;

in a logical progression of the Coast Guard's capital management processes.

This ACP reflects a shift in traditional capital planning as contained in prior Capital Investment Plans and is the collective work of many people. This ACP reflects current practice as well as courses of future action. To prevent confusion, those areas that need further development are so annotated. Recognizing that development of the ACP will continue to evolve, recommendations for improvement are welcome and should be directed to the Chief of the Business and Capital Planning Division, G-CPP-2.

Before describing the process by which the Coast Guard manages its capital assets, it is worthwhile to explore the planning hierarchy in which capital planning is a subset. This integrated planning framework has been termed the Coast Guard "Family of Plans" and is described in the following section.

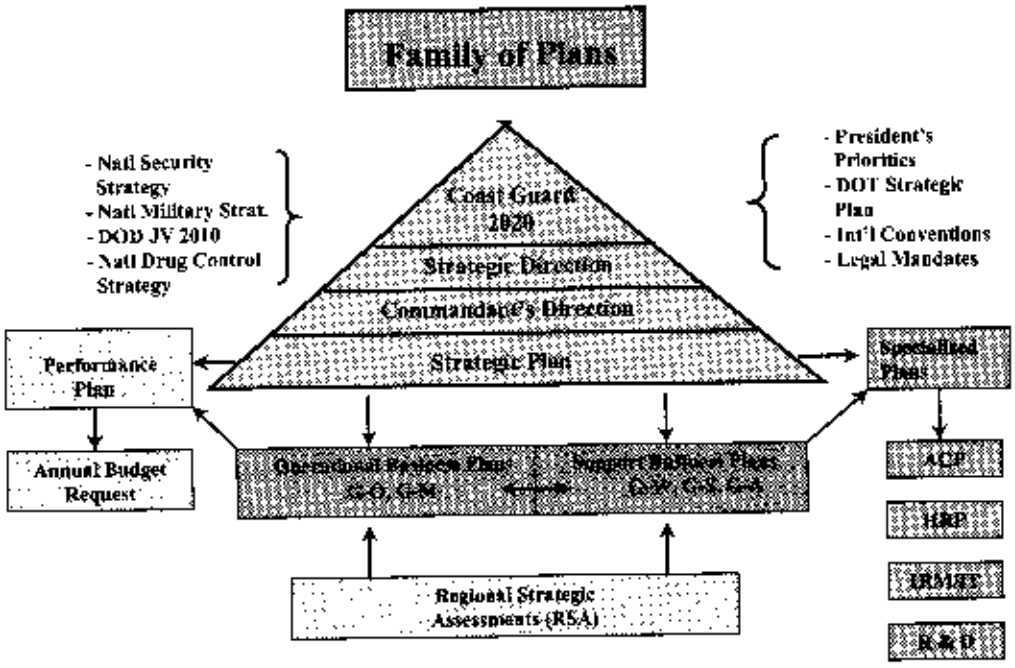
A Performance-Based Business and Capital Planning Model

The Coast Guard's ability to accomplish its legal mandates and historical missions is dependent upon its leaders' ability to craft sound strategies that can be executed by well-trained people using the proper equipment. In an organization the size of the Coast Guard, the coordination required to match these components of success at the right time and in an efficient manner is difficult to achieve absent a clearly understood, well-crafted planning system. The Coast Guard's business planning process has been developed with this in mind. Recent refinements to that process borrow heavily from the Malcolm Baldrige National Quality Award criteria as well as incorporating the guidelines of the Government Performance and Results Act.

THE COAST GUARD'S FAMILY OF PLANS

The Coast Guard has spent considerable effort to develop and refine an integrated planning framework. The diagram below represents the Family of Plans planning architecture.

Figure 1-2: Coast Guard Family of Plans



This planning architecture allows for a systematic and rational development of guidance by headquarters program managers. It also accounts for the subsequent communication of those strategies to: (1) the field units which execute those strategies and; (2) the support programs that provide the people and equipment required by those units.

STRATEGIC GUIDANCE

These considerations (and others) are used to develop what the future Coast Guard should be and are captured in the document *Coast Guard Vision 2020 (see detail in figure* 1-3, next page). This future view in turn informs the strategic direction, which describes the strategies the Coast Guard intends to pursue to align the Service's capabilities with the vision described in *CG 2020*. With a shorter-term (4 year) focus, the *Commandant's Direction*

communicates the leadership and management areas of emphasis of the Commandant of the Coast Guard. Finally, the *Strategic Plan* (under development) is the business and capital planning directive that lays out processes and objectives to achieve service goals and to guide budgetary investments.

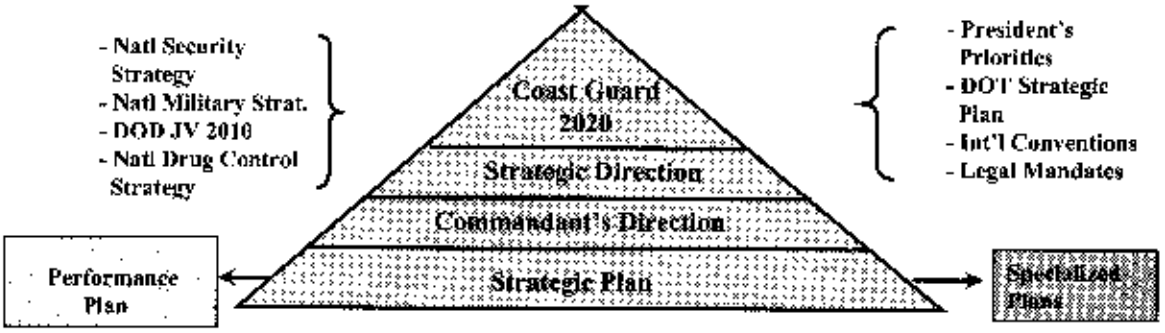


Figure 1-3: Strategic Guidance

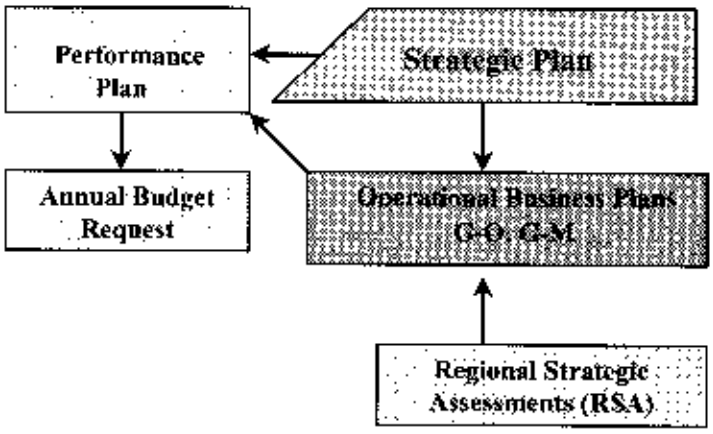
At the base of the diagram's triangle and of even shorter term perspective, are the Coast Guard's Performance Plan and the Support/Specialized Plans. These documents -- shaped and informed by the higher-level, longer term documents already mentioned -- provide practical strategies to effectively deliver services, both externally to the public (the Performance Plan) and internally to Coast Guard units (the Specialized Plans).

OUTCOMES—DELIVERING PUBLIC GOODS

The Performance Plan is compiled from the G-O and the G-M business plans for Operations and Marine Safety and Marine Environmental Protection. Each of these business plans provides significant detail on the goals, strategies, activities, and measures employed by these directorates to deliver services. They also detail the specific resources (funding , personnel, and capital assets) that each program requires. The plans focus on delivering five operational Coast Guard outcomes: *Safety, Mobility, Protection of Natural Resources, Maritime Security,* and *National Defense.* Regional Strategic Assessments are prepared annually by the Area and District Commanders to examine current and future threats and public demand for Coast Guard service, and the resources available to meet them.

Figure 1-4: Planning-Outcomes Linkage

The Performance Plan reflects the external services and associated performance goals provided by the Coast Guard. It is submitted annually to Congress with the Coast Guard's budget request and details the outcomes the Coast Guard will provide for the taxpayer. It establishes the performance goals by which the Coast Guard's service is measured as well as the resources required to achieve the specified level of service. A sample performance



goal page from the FY99 Performance Plan is shown in Figure 1-5.

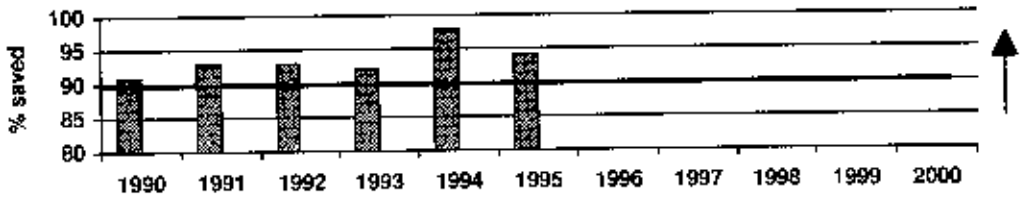
Implicit in the G-O and G-M business plans' discussions of goals, strategies and activities are the basic requirements for capabilities and workforce skills necessary to carry out Coast Guard missions. These capabilities are specifically defined in the appendices and are provided by the support programs.

Figure 1-5: Sample Page from Coast Guard Performance Plan

Goal S1: Save all mariners in imminent danger.

FY99 Target: Save 93% of all mariners in imminent danger.

Measure: Lives saved/lives saved + lives lost after Coast Guard notification.



Measurement Issues: This goal measures Coast Guard rescue response activities. Other goals cover Coast Guard prevention activities. The denominator represents the maximum potential saves and the numerator represents actual saves. It is assumed that lives lost before Coast Guard notification are not savable. Confidence level of measure is high. Data is obtained from the CG Search and Rescue Marine Information System. The goal target level was revised from 92% in FY98 to 90% to align with the long term program standard.

Program Standard/Customer Service Standard: Save 93% of all mariners in imminent danger.

Other Related Government Programs: Various state and local government emergency response programs.

Causal Factors to be Addressed:
- Severe weather
- Inability or delay in distress notification
- Unsafe operation of vessel (poorly loaded, poor navigation)
- Unsafe equipment

Strategies to Achieve Target:
- Improve rescue efforts by employing more capable cutters, boats, and sensors
- Modernize distress communications to create a fully integrated system that permits distress, safety, law enforcement interaction between the Coast Guard and mariners.
- Improve the knowledge and skills of mariners
- Improve boating safety equipment

External Factors that may Mitigate Success:
- Untimely notification of distress
- Imprecise distress location data from which to plan searches or rescues
- Severe on-scene weather conditions

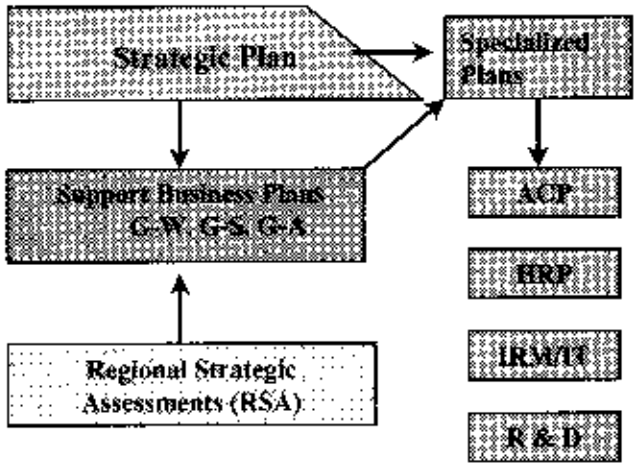
SUPPORT STRATEGIES TO MEET CAPABILITY REQUIREMENTS: *"FASTER, CHEAPER, BETTER"*

The other half of the triangle's base in this diagram is the Support/Specialized Plans which include the support programs' annual business plans and specialized plans. For the purposes of the ACP, the support programs are comprised of the following directorates: G-W (Human Resources), G-S (Systems) and G-A (Acquisitions). The support programs obtain, manage and sustain our capital base that is made up of Human, Physical,

Intellectual and Information components. These Assistant Commandants are charged with meeting the capital capability requirements of the operating programs at the lowest possible cost.

These capability-driven requirements can be expressed in terms of availability, reliability, affordability, flexibility, and safety. These are the support programs outputs. Where capability gaps exist or are anticipated based on input from the RSAs, operating and support program managers must work proactively to develop bridging strategies within a balanced approach to meeting operational demands for capability. Support programs managers must continually work with operating program managers and field commanders to ensure that the cost of maintaining and operating our operational platforms, shore infrastructure and Command Control, Communications, and Computers.

Figure 1-6: Support/Specialized Plans



These concepts are embodied in the support program business plans, described below.

- G-W's business plan is intended to meet the people needs of the service (concentrating on *affordability, availability, suitability, capability, reliability and flexibility*), while also meeting the needs of Coast Guard people (both short- and long-term personal well-being and fulfillment needs). These are G-W's outputs. G-W's business focus is on fully meeting the Service's personnel needs (both operational and support), concentrating on optimizing these outputs at the lowest overall cost, and doing so within an integrated, multidimensional human resource management system. Although G-W is focused on the people needs of the Coast Guard, this program is responsible for the training and personnel support infrastructure which represents a significant portion of any capital investment.

- G-S's plan concentrates on providing and maintaining systems (operational and support equipment, infrastructure, logistics and information services) that best meet the requirements of their customers throughout the Coast Guard. These capability driven requirements can be expressed in terms of *availability, reliability, affordability, flexibility, and safety*. These are G-S's business outputs. Overall, G-S's business focus is on fully meeting the Service's capability needs (in partnership with G-A for major acquisitions), concentrating on optimizing these outputs. G-S is also guided by the need to achieve the highest level of efficiency through faster, better and cheaper systems, and doing so within the system-of-systems approach to be discussed in chapter 2.

- G-A is a specialized element of Headquarters focused on acquiring major assets and systems that meet the capability needs of the operating programs, and that conform to the life-cycle cost and performance goals of the support programs. Their processes are described in the Systems Acquisition Manual (SAM), and are derived directly from Federal acquisition and contracting laws, regulations and policy. G-A's outcomes are generally described by the cost, schedule and performance factors built into every acquisition. G-A's business focus is on meeting these targets in terms of cycle time and lowest cost of acquisition overhead to the Service, while managing risk and providing the highest level of customer satisfaction - in essence, making not only the assets acquired but the acquisition process itself "*faster, better, cheaper.*"

Support business plans focus on strategies to meet service needs for each form of capital, and develop annual or multi-year goals that are measurable and include both performance and cost/productivity metrics. These plans must be built on the foundation of (internal) customer requirements, such as G-O and G-M, as well as Area, District and MLC commanders and major Headquarters Units.

BUSINESS PLAN APPENDICES AND SPECIALIZED PLANS

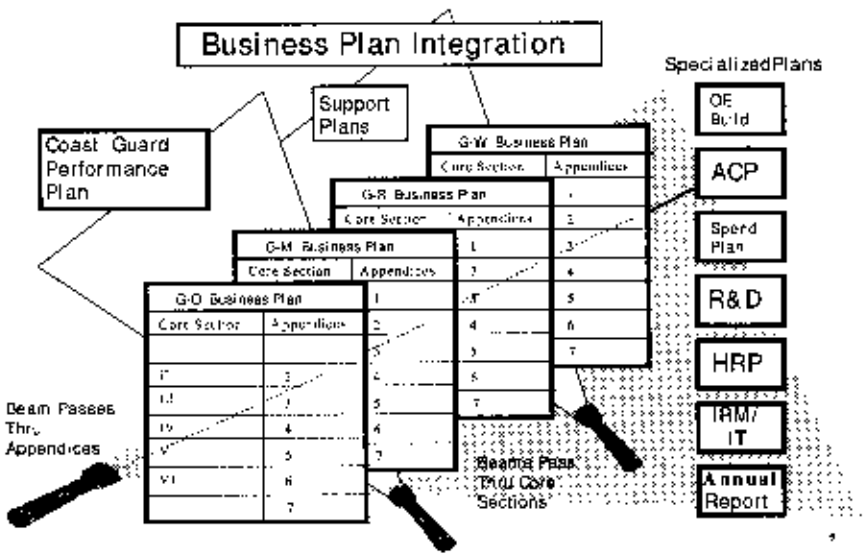
Both support and operational business plans have appendices that list the programs' specific resource requirements. These appendices are a tool to communicate the programs' resource requirements to the appropriate resource manager. For example, each directorate's budgetary requirements are listed in their business plan's Appendix A which are then are collated, prioritized and approved for the annual budget submission by the Director of Resources (G-CRC) (Human Resource requirements are listed in Appendix E and are addressed by G-W, etc.). For the purposes of capital asset management, Appendix B shows current capital assets, their use and anticipated service life information and, in the future, will display life cycle cost data to permit a greater degree of precision in making the most efficient use of our capital resources. The Office of Plans, Policy and Evaluation (G CPP) manages Appendix B of the business plans.

After compiling the appendices from the various directorates' business plans, a resource manager has a service-wide listing of resource needs that can then be addressed. *Specialized plans* are the planning documentation that reflect the resource managers' methodologies for addressing the resource concerns of the Coast Guard. Generally, specialized plans are service-wide in scope and deal with issues that are more strategic in nature (i.e., longer term) than program business plans and their appendices.

They have broad, long-range impact on the Coast Guard's budget and resources, and deal with issues that require focused, comprehensive documentation to ensure the processes that support them are performing well. Where business plans are program-specific documents that focus program and field activities on near-term goals, specialized plans lay out long-term guiding principles, describe processes and products, and establish the means by which we obtain and manage capital or allocate resources. In essence, the specialized plans serve as "capstone" documents that articulate strategic intent and provide strategic direction within their respective subject areas.

Figure 1-7 shows the connections between the performance plan, directorate business plans and specialized plans. The metaphor of a flashlight shining through the various sections of a business plan to reveal another type of document is intended to illustrate the integrated nature of these planning documents. As a result, the G-O and G-M business plans together inform the Performance Plan and similarly, the cumulative appendices inform the specialized plans (discussed in greater detail below).

Figure 1-7: Appendices and Specialized Plan Relationship



The following paragraphs cover the major specialized plans that currently exist or are being developed and that have some direct connection to the ACP, identify the owner and primary feeders, and generally discuss their purpose and application:

- Agency Capital Plan (ACP). The ACP is the Coast Guard's long-term plan for managing and budgeting Coast Guard's portfolio of capital assets, including ships, boats, aircraft, shore infrastructure, associated C4I/sensors and information/logistics support systems, and the physical components of our IT/IRM systems. It is revised annually, and is managed and developed by G-CPP (with G-CFP, G-CPA, G A and G-S providing critical support). The ACP is developed in parallel with the annual budget and performance plan. It is published to coincide with the C-stage budget, and is fed by business plan appendix B's.
- Human Resource Plan. The Human Resource Plan is intended to be the human capital analog to the ACP. It is intended to lay out philosophy and general requirements that are used to develop the Service's future workforce. G-W is responsible for developing and implementing the Human Resource Plan. The Human Resource Plan is operationalized through the G W business plan. Appendixes E of program business plans are the input mechanism for both the G-W business plan and, when the issue is of a strategic HR nature, the Human Resource Plan.
- Information Technology (IT) Plan. G-S (and specifically the Chief Information Officer) is responsible for this plan. Ultimately, it will serve as the primary means for the Coast Guard's CIO to articulate strategy for translating overall service requirements for information capital and IT capability into corporate processes, equipment and policy. As with the Human Resource Plan, both the G-S business plan and the IT/IRM Plan will be fed by Appendix F of the program business plans. Additionally, the IT/IRM Plan will be guided by financial information system requirements from the Chief Financial Officer (G-CFP), as well as by special studies and mission analyses. As it is developed, the plan may be expanded to cover C4I and sensors.
- R&D Plan. G-S is responsible for this plan which serves as the primary means for the Coast Guard's R&D program to encapsulate service-wide requirements for technology and institutional research. The plan is fed by Appendix D of the program business plans as well as by broader needs developed from special studies and mission analyses.

Given that the majority of services provided to the public by the Coast Guard are at the field level, it is critical that the strategies (and subsequent resourcing of those strategies) not be developed in a headquarters vacuum. The field commanders must have significant input to the planning process. The Family of Plans allows for this in several ways. The methods (some still under development) that are pertinent to capital planning are briefly described below:

- Shore Facilities Capital Asset Management (SFCAM), will develop a holistic, life cycle management process for shore infrastructure. It will include revised master planning and facilities inventory procedures for shore infrastructure, and will yield a revised feeder/trigger mechanism into the planning proposal/Shore Facilities Requirements List (SFRL) process as well. G-S/SEC is the process owner in consultation with G-CPA and G-CPP.
- Regional Strategic Assessments, conducted by each District and aggregated into an Area assessment, take a critical look at current and future threats and demand for Coast Guard services, and examine the adequacy and availability of resources to meet these demands. Regional Assessments will be used to feed field requirements and priorities to Program Directors. G-CPP, in consultation with the Area Commanders, is the process owner.
- The Planning Proposal Process, will be refined to include problem statements based on the regional assessments or SFCAM outputs before complete planning proposals are submitted. This will reduce the workload on field planners by identifying the highest priority candidates for AC&I shore projects, and will reinforce the linkage between SFCAM, the SFRL process, and the AC&I budget. It will also ensure rational, consistent framework for making decisions on funding sources (OE vs. AC&I) for shore projects.

While not all of the planning efforts and documents described above have the same degree of importance vis-a-vis the ACP, there are connections that should be understood if Coast Guard planners are to realize the full benefits of such an integrated planning architecture. The next few sections of the ACP are intended to show

how this planning architecture functions to actually provide the right resource to achieve the desired outcomes. Accordingly, one must first identify what the desired outcome is, then build the strategy and resources to achieve that outcome. For the Coast Guard, the Performance Plan describes this logic path.

Overview of Coast Guard Mission and Outcome Goals

The Coast Guard's annual Performance Plan, developed to meet the requirements of GPRA and OMB Circular A-11, begins with the Coast Guard's mission statement and five outcome goals. These goals are derived directly from the statutes that provide the bedrock authority and responsibility of the Service, and represent, more than anything, broad areas of national interest that the Coast Guard exists to fulfill. These also serve as guideposts for the development of annual performance goals and as a means to validate the activities we carry out and the asset portfolio we maintain. In addition, they are consistent with the vision, strategic themes and guiding principles laid out in the Coast Guard's long-range strategic plan, *Vision 2020*. The Coast Guard's mission and outcome goals are listed below as they appear in the performance plan submitted with the FY 1999 budget.

Coast Guard Mission

The Coast Guard is a multi-mission maritime service and one of the Nation's five Armed Forces. Our mission is to protect the public, the environment, and U. S. economic interests - in our ports and waterways, along our nation's coast, on international waters, or in any maritime region as required to support national security.

Outcome Goals

Safety: Eliminate deaths, injuries, and property damage associated with maritime transportation, fishing, and recreational boating.

Protection of Natural Resources: Eliminate environmental damage and natural resource degradation associated with maritime transportation, fishing, and recreational boating.

Mobility: Facilitate maritime commerce and eliminate interruptions and impediments to the economical movement of goods and people, while maximizing recreational access to and enjoyment of the water.

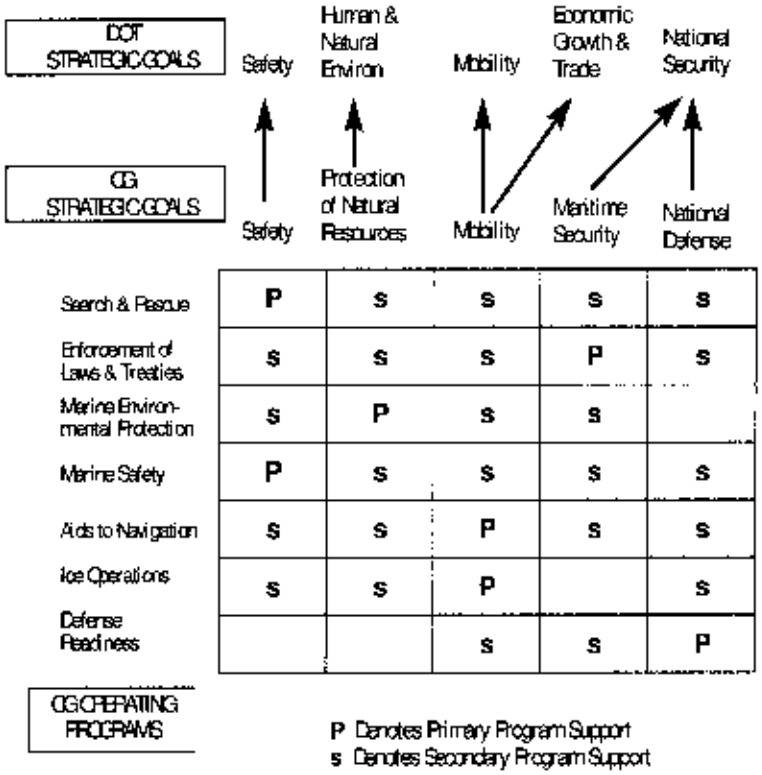
Maritime Security: Protect our maritime borders from all intrusions by halting the flow of illegal drugs, aliens, and contraband into this country through maritime routes; preventing illegal fishing; and suppressing violations of federal law in the maritime region.

National Defense: Defend the nation as one of the five U.S. Armed Forces. Enhance regional stability in support of the National Security Strategy, utilizing our unique and relevant maritime capabilities.

LINKAGE TO DEPARTMENT OF TRANSPORTATION STRATEGIC PLAN

These outcome goals reflect strong alignment with the five strategic goals of our parent agency, the Department of Transportation. The diagram on the next page shows this alignment with the DOT's Strategic Goals as published in the 1997 2002 DOT Strategic Plan.

Figure 1-8: CG Goal Linkage to DOT Goals



LINKAGES BETWEEN MISSIONS, GOALS AND CAPITAL ASSETS

It's important to understand that the Coast Guard (and all of the federal government) is in a state of transition in management philosophies. The Coast Guard is organized in terms of traditional operating programs, referred to in various statutes which describe our authorities and responsibilities. However, as noted above, in the context of GPRA and A 11, these operating programs, such as law enforcement, search and rescue, mariner licensing or ice operations, are considered activities that contribute to the five broader outcomes previously discussed. It is necessary to reconcile these traditional missions with the relatively newly defined outcomes The illustration above (Figure 1-8) shows the relationship of the Coast Guard's strategic goals to the operating programs. That the operating programs support more than one goal is an important relationship to recognize, because it highlights the unique nature of our service and the multi-purpose character our capital assets must embody in order to be both operationally and cost effective.

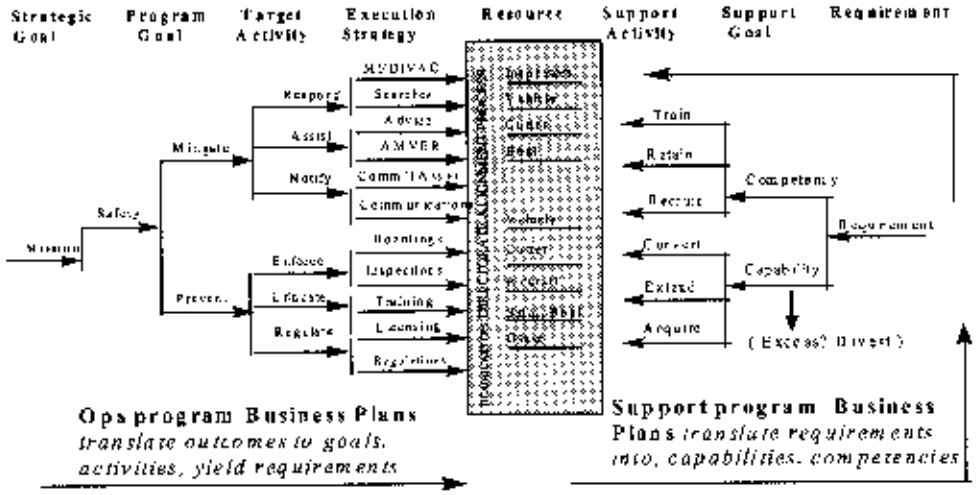
Overview of Coast Guard Capital Asset Management Principles

As noted, federal agencies exist to provide certain public good outcomes that are most appropriately reserved to the federal government. These outcomes can be determined from analysis of historical missions, legal mandate, and executive direction. It logically follows that every capital asset in any agency's portfolio should demonstrably be linked to how that agency provides its public goods. In the Coast Guard, these public goods are defined as our outcome goals. The following example reveals how we link those public goods to our capital assets.

STRATEGIES TO ACHIEVE COAST GUARD OUTCOMES

To illustrate the linkage between capital planning and outcome goals, the following example may be useful. One of the five Coast Guard outcomes is **Safety:** *Eliminate deaths, injuries, and property damage associated with maritime transportation, fishing, and recreational boating.* This outcome can be achieved through both prevention and mitigation (or response) strategies. Working from left to right in the diagram below, the reader will gain a sense of the strategic options and sub-options available to achieve the Safety outcome.

Figure 1-9: Linking Operational Requirements to Support



For example, the Assistant Commandant for Operations could focus his program's efforts on either effectively *preventing* accidents, or *responding* effectively to accidents (mitigating), or some combination of both. In order to prevent accidents, there are a range of target activities that include enforcement of safety regulations, education of mariners, or development of new safety regulations.

There are a similar range of activities available to mitigate accidents (respond, assist, communicate). Some combination of activities would be selected by the program manager to most positively achieve the outcome of Safety. The strategic options and activities that are selected have direct bearing on the types of capital assets acquired and how they are employed. These are generically illustrated in the middle gray box. Continuing to the right in the diagram, one can see what support activities are then required to provide the types of capital (or human) assets required. Support program managers are in the business of meeting these asset requirements at the lowest possible cost.

Continuing with this Safety outcome example, one subordinate performance goal is to "save all mariners in imminent danger." However, in selecting strategic approaches, the Coast Guard program manager responsible for achieving this performance goal would have to consider the composition of the "customer" base. Intuitively (for the purposes of this example), the strategic approaches would vary significantly between the recreational boating public and the commercial fishing fleet—both are Coast Guard customers. Within each category of customer, the program manager would have to analyze maritime accidents to determine where in the chain of cause-and-effect the application of Coast Guard effort would have greatest impact. It is likely that a combination of both prevention and response strategies would be selected for both groups. The program manager would then evaluate the available resources to conduct those strategies. If the capabilities of current resources are adequate, the program manager would then apply those resources to the strategies—changing the current level of effort and re-directing current capital assets as necessary to achieve the desired ends. If the current resource capability is inadequate, the program manager would then petition the support programs for

additional capability potentially proposing the acquisition of new capital assets--to achieve those strategies. The support programs would then be responsible for providing this capability at the lowest possible cost. All the while, the program manager would monitor the performance goal measures to evaluate whether the strategic approaches selected are in fact the most effective. This, in essence, is the mission analysis process and is consistent with the approaches recommended by OMB Circular A109.

DEFINING CAPABILITY REQUIREMENTS: MISSION ANALYSIS

Coast Guard operating program managers work closely with field commanders and customers to determine the appropriate strategies to achieve desired performance goals and to develop requirements for operational capability (i.e., capital asset performance standards). The operating environment, customer service standards, historical experience and safety shape these requirements. These required capabilities are clearly defined through a rigorous process of mission analysis.

This mission analysis process is a continuous, iterative process employed or used throughout all management and organizational levels of the Coast Guard to monitor, measure and evaluate the execution of Coast Guard missions. Annually, each operational and support assistant commandant takes a "snapshot" of this process in the form of a published business plan. Business plan format is specially configured to facilitate communication between all programs, but particularly between operational and support programs.

In particular, and for the purposes of this capital asset management discussion, Appendix B of the program's business plans reflects each program's capital asset capability requirements. These are an inventory of each program's capital assets, their maintenance and operational life cycle costs and projections, and the nominal decision rule for triggering capital asset decisions that need to be made by the organization.

If indicated by this appendix's decision rules, this business plan would also initiate one of the Coast Guard's capital asset management processes to provide the information necessary to make a sound capital asset decision. The processes are:

- The development of a mission analysis report for Deepwater, Coastal Zone, Inland or support infrastructure assets (the SAM, as well as the Planning and Programming Manual (COMDTINST M16010.1B) and the Mission Analysis Report Instruction (HQINST 16050.1 series), provide more detail on this process);
- The Shore Facility Capital Asset Management process for shore facilities (under development), or;
- The Information Technology Management Process for information systems (also under development).

New program initiatives that have capital asset implications would also be initiated/supported through the business plan. Each of these processes has (or will have, for those processes under development) similar steps but is configured to the unique characteristics of the portfolio of capital assets managed through that process.

For example, the mission analysis process, when formalized and documented in a Mission Analysis Report (MAR), provides the requirements foundation for the Coast Guard's operational capital assets. This process examines and validates the need for, and performance of, every element of the operational capital base. First, it systematically describes the linkages between outcomes, performance goals, performance standards, strategies, activities and assets, and then applies this framework to the current portfolio of assets. Gaps and inefficiencies are identified, and short- and long-term approaches to close gaps and divest excess (or inefficient) assets are established.

A MAR documents:

- mission need (either capability deficiency, or program enhancement),
- alternatives,
- the projected life cycle costs of each alternative and a sensitivity analysis (tbd),
- risk adjusted Return on Investment (ROI) calculations for each alternative (based on the project's expected outcome contribution) (tbd) and,

- a cost-benefit analysis.

There are four possible outcomes following completion of a MAR:

- disapproval or,
- proceed to non-major acquisition or,
- proceed to major acquisition or,
- proceed to non-material solution (i.e., rule-making).

In all cases the MAR is reviewed by the Chief of Staff, who provides recommendations to the sponsor. If appropriate, the Sponsor then prepares a Project Nomination Memorandum, and submits it to the Executive Secretary of the Coast Guard Acquisition Review Council, as well as to the Chief of Staff, for review. Comments/recommendations are then forwarded to the Vice Commandant, who makes the final decision (the SAM is the governing Instruction on this process and should be consulted for a more detailed explanation of this process).

Chapter 2 of this manual summarizes current Mission Analysis Reports (MARs) and provides references to source documents.

ACQUISITION PROCESS

The acquisition process is designed to deliver the right asset that provides the right capability at the right cost. While the number of steps and key decision points for each major acquisition is tailored to meet the specific needs of individual projects, there are basic activities that must be accomplished for every acquisition project. These include (not in order): completing a Mission Analysis and Mission Analysis Report; establishing and documenting operational requirements taken from the Mission Need Statement; preparing an Operational Requirements Document (required for detailed technical guidance in the contract); a determination of affordability; formulation of an acquisition strategy; establishment of project baseline, cost and operational effectiveness factors (cost, schedule, performance); determination and management of risk; determination of production readiness and supportability; planning for developmental and operational testing; and post-acquisition follow up and performance evaluation. These activities are conducted within a carefully managed plan that also considers the appropriate level of review and documentation. The Coast Guard Systems Acquisition Manual [SAM] (COMDTINST M4150.2E) guides each step in the management, support and oversight of Coast Guard major acquisition projects.

Making Difficult Capital Asset Decisions: Two Tools

All Coast Guard capital managers are faced with difficult decisions about where they should invest their capital, particularly in light of the shrinking purchasing power of today's federal budgets. Borrowing some concepts from corporate America, this section describes several tools that allow managers to make such decisions using common frames of reference. Fundamentally, these decisions must be based on where that investment is going to provide the greatest organizational benefit (i.e., maximize outcomes), now and in the future. The challenge is determining just where that greatest benefit is. While the full development of the supporting information to use these tools is not yet complete, Coast Guard resource manager understanding and application of these concepts must quickly mature to facilitate the significant investment decisions facing this organization.

RETURN ON INVESTMENT

Resource options (be they capital asset alternatives or operational effort alternatives) should be evaluated on the degree to which alternative options contribute to the performance goals. Ideally, this should be done in quantitative terms. This simple concept can be explained in terms of *return on investment (ROI)*:

$$\text{Return on Investment} = \frac{\text{Values of outcomes}}{\text{Cost of achieving outcomes}}$$

To maximize ROI, an organization must either :

- Maximize the value of the outcome achieved, or;
- Maximize the number of outcomes achieved, or;
- Minimize the cost of achieving those outcomes.

Operational programs (G-O and G-M) are responsible for developing strategies to maximize the number of outcomes (expressed in terms of public good outcomes such as increasing the number of lives saved, reducing the amount of oil spilled, etc.). In other words, operational programs are charged with improving program effectiveness. This can only be accomplished if the operating programs receive the necessary capital assets and material, as well as the human resources, from the support programs.

Support programs (G S, G-A, and G-W) are responsible for delivering resources that meet the capability needs (e.g., *availability, reliability, affordability, flexibility, and safety)* of the operating programs while at the same time minimizing the costs associated with doing so. The support programs are cost centers that must minimize overhead costs (for example, by reducing the cost of a cutter-day, or by driving down the costs of providing capable petty officers, etc.). In other words, support programs are responsible for improving productivity.

Operational programs formally communicate such capability needs to the support program through their business plan appendices and the mission analysis process. However, there must be a robust and ongoing informal dialogue between the operating and support programs if the Coast Guard's effectiveness and productivity goals are to be realized.

This concept of return on investment provides a common yardstick to measure the value of Coast Guard investments that applies in both the operating and support arenas. This concept can be applied to managing existing assets (i.e., the Coast Guard's Base funding) as well. That is, the application of existing resources to achievement of an outcome goal should be based on where that resource provides the greatest outcome. The Coast Guard's program managers' ability to increasingly express this ROI (or ROA for existing assets) in quantitative terms will be indicative of the increasing maturity of the Service's application of these concepts. This concept will be developed in subsequent versions of the ACP.

But regardless of how favorable this ROI may be, it is strategically important to not allow "good numbers" drive bad investment decisions. Such investment decisions must be made in the context of the strategic direction the organization desires.

A STRATEGIC LENS

Equally important as the concept of ROI in evaluating strategic investment alternatives is the concept of a strategic "lens" through which to consider strategic options. Comparing the investment alternatives to an idealized future Coast Guard (in the light of the future operating environment), or in consideration of the core competencies (or sustainable competitive advantage) of this organization is critical to making good capital investment decisions. Such a lens or "filter" is the product of regularly conducted strategic studies, such as the National Defense Panel or the Quadrennial Defense Review for the Department of Defense, or for the Coast Guard, *Vision 2020* or the upcoming roles and missions study, among others. Such a filter describes the key

attributes that a capital asset must have in order to be the best capital asset in the envisioned future. For example, the current draft of Vision 2020 speaks to three key attributes that the future Coast Guard (and presumably its assets) must have to be successful: the discipline of an armed force, the synergy of multi-mission assets, and a capability to respond to shifting national priorities and interests.

The next Chapter will describe the application of the concepts described in this chapter to the current inventory of Coast Guard Capital Assets.

Chapter 2

CHAPTER 2 : A "SYSTEM OF SYSTEMS" APPROACH

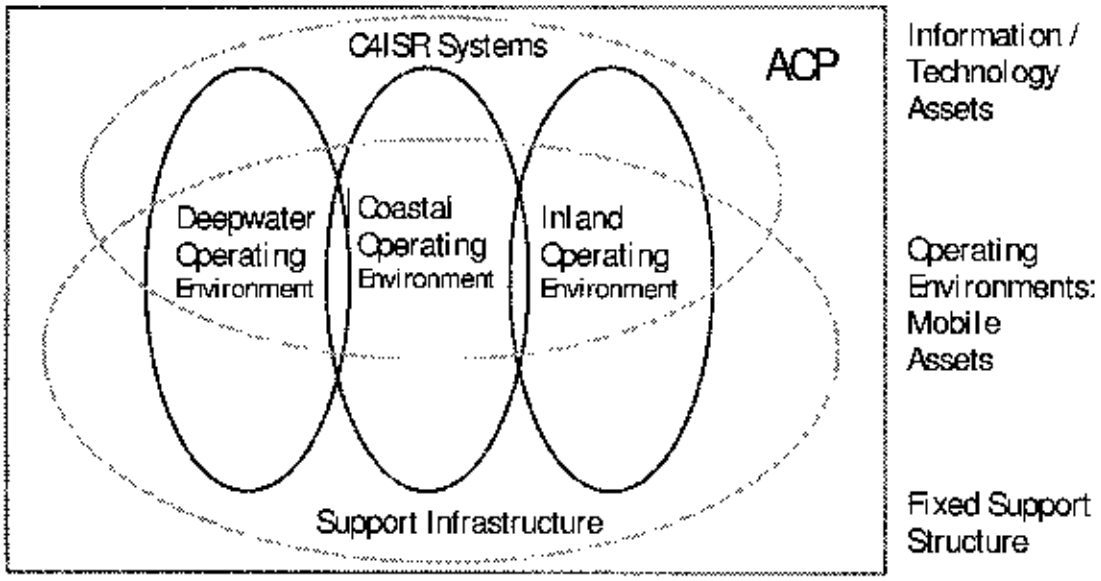
This chapter describes the capital portfolio conceptual model that the Coast Guard is developing to manage its capital asset portfolio. It then describes the current state of mission analysis in each of the subsets that make up the portfolio defining the required capabilities that must be embodied in the assets we employ to achieve the desired public good outcomes. In each of these subsets, current acquisitions, proposed acquisitions, and notional outyear acquisitions are listed. These are more comprehensively laid out in the Appendices.

Capital Assets as Components of Systems

The Coast Guard is an organization with a diverse set of missions and mandates, requiring the employment of highly capable, multi-mission platforms and shore facilities. For the purpose of both operational performance planning and capital asset management, the Coast Guard's operational environment can be broken into three distinct functional regions *Deepwater, Coastal and Inland* - based on the unique demands these regions place on our equipment and capabilities as they are employed to achieve Service outcomes. These groupings allow planners to optimize investments across platforms within each operating environment and to meet the requirements of A-109, A-11 and GPRA. The Service's information and command systems, comprised of *C4ISR (Command, Control, Communication, Computers, Intelligence, Surveillance and Reconnaissance)*, as well as support infrastructure, comprised of *logistics systems* and *shore facilities*, are treated similarly.

Taken together, these five groupings of capital assets are managed as a *"system of systems"* that work in a complementary fashion to achieve the highest level of capability attainable at the lowest overall cost. The illustration below represents this concept, and shows how both C4ISR and support infrastructure serve as key linking elements between the mobile assets (ships, planes and boats) we employ in operational activities.

Figure 2-1: CG System of Systems—An Open Architecture of Capability and Assets



This concept, when expanded into a more comprehensive set of capabilities, allows planners and asset managers to identify the role that each element of our asset base plays in contributing to individual

performance goals and overall service outcomes. By linking assets to outcomes, and grouping assets into specific categories (or systems of systems), the multi-mission nature of assets and their contribution to overall service effectiveness becomes clear. This also allows the life cycle management of the assets that make up a system to be more rationally tied to the budget process. The timing of mission analysis, facilities planning, investment, divestiture and recapitalization decisions, as well as defining requirements for funding, is managed from the perspective of maintaining system capability rather than on an asset-by-asset basis.

Investment Plans by a "System of Systems" Approach

The remainder of this chapter examines Coast Guard requirements and asset capabilities in five categories - the three operational environments (Deepwater; Coastal Zone; and Inland) as well as C4ISR and Support infrastructure. Note that Support Infrastructure is further divided into engineering and logistics; information; and shore facilities for ease of presentation.

DISCUSSION

The Coast Guard must operate in, on and above the waters of the United States and its environs in order to accomplish its goals and activities aimed at delivering service to the American public. During its 208 years of service, the Coast Guard has produced a positive return on investment, and must continue in this tradition. As we continually assess our capital plant, we review mandates, missions and requirements to ensure that we achieve the proper balance between performance, capabilities and cost.

The following studies and reports, completed over the past several years, have defined Coast Guard requirements, assessed the ways we do business, and evaluated current and future capital asset capabilities, gaps and needs.

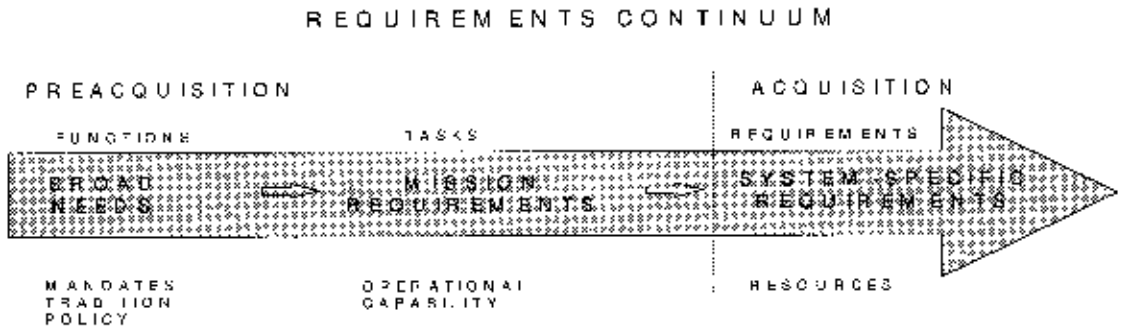
- Deepwater Mission Analysis, November 1995.
- HC-130 Supplemental Mission Analysis Report, December 1995
- International Ice Patrol Mission Analysis Report, November 1995
- Coastal Zone Mission Analysis Report, pends completion
- Vessel and Station Boats Mission Analysis Report , May 1994
- ATON Force Mix 2000, ongoing
- USCG C4I Baseline, Objective Architecture & Transition Plan, 1997
- Station Re-leveling, 1995
- Great Lakes Icebreaking Study, June 1997
- Strategies for Improving Coast Guard Shore Facilities Capital Asset Management, 1997 & 1998
- Operational Information System Mission Analysis Report, April 1997
- Short Range Communications System Mission Analysis Report, May 1994
- System to Automate and Integrate Logistics Mission Analysis Report, November 1993
- Port Needs Study (Ports and Waterways Safety System)
- C4I Baseline Architecture, 1996
- C4I Objective Architecture and Transition Plan, 1998.

Data from each of these documents has been used in our current capital planning efforts and to build this chapter of the ACP. Lessons learned from each of these efforts are also being incorporated into the directives

and guidance documents concerning mission analysis and the acquisition process. This collective body of work represents the current status of Coast Guard Capital requirements definition and portfolio management. The continuing challenge is to create a framework to link business planning and management of assets-in-use to effectively build better capital plans that look at the entire portfolio from a life-cycle perspective.

As discussed in Chapter 1, mission requirements evolve from mandates, traditions and policy, and can be viewed from broad strategic-level needs through more specific program and mission requirements to the most detailed level of system specifications, all of which are used to define the requirement for Coast Guard resources. The figure below represents this requirements continuum relative to the acquisition timeline:

Figure 2-2: Requirements Continuum



This approach to building a requirements-based Agency Capital Plan ties directly into the Coast Guard planning process, and is closely linked to Appendix B of the headquarters directorates' business plans as supported by the field commanders' regional strategic assessments.

The remainder of this chapter examines Coast Guard requirements and asset capabilities in the five "systems" - the three operational environments (Deepwater; Coastal Zone; and Inland) as well as C4ISR and Support infrastructure. Note that Support Infrastructure is further divided into engineering/ logistics; and shore facilities for ease of presentation.

As ongoing studies aimed at developing management processes and analytical models for each of these systems are completed, this section of future ACPs will be modified to reflect the changes. This edition of the ACP reflects the beginning of the effort to develop a capital asset planning process around a requirements-based model. Because of this, the discussion that follows is a combination of work drawn from previous efforts and information extracted from several ongoing studies as well as the evolving business planning model.

In many cases, the discussion looks conceptually toward the balance between requirements and capabilities. However, until the new model has been applied to each component of the Coast Guard's portfolio of assets and data is gathered over several years, the ACP will not be able to quantitatively establish the correlation between requirements and current capability across the entire inventory. For this version of the ACP, discussion of asset capability and degradation is presented in terms of projected end-of-service life based on assumptions made during the acquisition process, generally without benefit of management-in-use analytics, although these are being developed as the FY2000 ACP goes to press.

Although there are significant capability differences between assets within an asset class, there is presently no standardized method of quantifying that capability as a basis for comparison. For this reason, all assets are presented as graphically equal and are each counted as one asset, not as individually contributing a discrete level of capability to the overall force. For example, in Domestic Icebreaking, the capability of the CGC Mackinaw greatly exceeds a 140' WTGB Icebreaking Tug or a 65' WYTL Harbor Tug. However, on the Domestic Ice Breaking graph, all are represented as one unit of icebreaker capability. Future presentations will attempt to

graph the capability of individual assets as contributing a proportional increment of capability within system rather than as having equal capability across the range of an asset type. The means to do this is under development.

Finally, graphs in the following sections indicate that asset availability, and thus capability, fall to zero at the end-of-service life. In reality these assets can be (and historically have been) made to run well beyond their projected end-of-service life or even their economical service life. However, to achieve this extension on service life, there is a cost in additional maintenance and a likely reduction of capability and availability (without extensive and costly engineering modifications). Quantifying this relationship between service life, operating and maintenance costs, and replacement cost, as well as comparison of mission contributions between assets with differing capabilities, will be developed in future editions of this document. In addition, we have not yet developed a method of weighting maintenance and recpaitalization requirements in a manner that can be consistently applied to capital budgeting. A ship can obviously sail with faded paint, however it cannot sail with leaking fuel tanks or inoperative generators. Current methods of building maintenance and overhaul budgets do not capture weighted (mission critical vs. non-mission critical) funding requirements, nor do calculations of service lives or impact of deferred maintenance on operational capability.

Deepwater Investments

The Deepwater mission area is defined as that area beyond the normal operating range of shore-based small boats. It requires either extended on-scene presence, long transit distance to reach the operating area, forward deployment of forces, or a combination of these factors. For descriptive purposes, it is generally considered to be that area beyond 50 miles from the continental U.S.

REQUIREMENTS

Coast Guard activities in the Deepwater operating environment contribute to the strategic goals of **Safety, Protection of Natural Resources, Maritime Security and National Defense** and provide direct fulfillment of program goals within the following programs: *Search and Rescue, Enforcement of Laws and Treaties, Marine Environmental Protection, Marine Safety, Ice Operations and Defense Operations.* The operational activities the Coast Guard conducts in meeting the nation's needs in the Deepwater arena require specialized assets that perform the following functional tasks: **detection, classification, identification and prosecution**. In order for the Coast Guard to retain its multi-mission flexibility, the assets in the Deepwater system-of-systems must be able to effectively execute all of these basic tasks as further expanded in the table on the next page.

A Coast Guard Roles and Missions study will be undertaken in FY 1999. The President's FY 1999 budget request stated "A Presidential Advisory Council will review the CG's missions. Special attention will be given to the CG's deepwater missions; the council's recommendations will help shape the Deepwater Capability Replacement Project, a recapitalization of the CG's large cutters and aircraft set to begin in 2001." Although the council had not yet been formed at the time of publishing the ACP, it is expected to report its findings late in FY 1999. The results of that study's efforts will be incorporated into future ACPs.

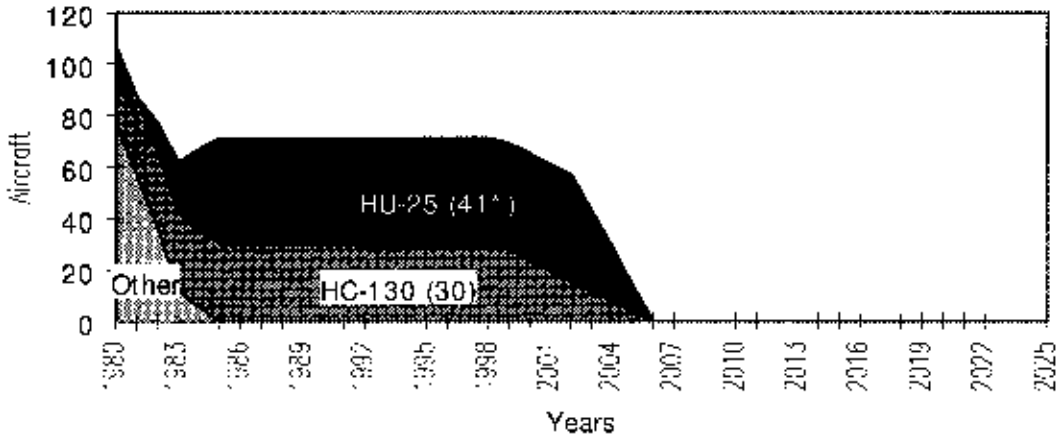
Table 3-1: DEEPWATER MISSION REQUIREMENTS

Program	Functional Tasks	Key Requirements	Comments
Ship Interdiction	Detection/ Classification/ Identification/Prosecution	Presence/Surveillance/ Respond to Intelligence/ Board/Inspect	Mission needs to maintain continuous presence, thus providing a visible deterrence, and to dispatch boarding teams to conduct inspection. Law enforcement assets must be able to compel compliance within Coast Guard mandated authority.
Alien Migrant Interdiction	Detection/ Classification/ Identification/Prosecution	Presence/Surveillance/ Respond to Intelligence/ Board/Inspect/Transport/ Escort/Turn Over/Process	Mission needs capability to sustain presence and ability to rescue large numbers of migrants simultaneously when typical overcrowded craft wind or capsizes during attempted voyage. Migrants must be sheltered and fed and their disposition or return.
Living Marine Resource Enforcement	Detection/ Classification/ Identification/Prosecution	Presence/Surveillance/ Respond to Intelligence/ Board/Inspect	Mission needs to deter illegal activity by documenting violations through vessel boardings and inspections.
General Law Enforcement	Detection/ Classification/ Identification/Prosecution	Presence/Surveillance/ Respond to Intelligence/ Board/Inspect	Current scope is minor and mostly reactive. As with all law enforcement activities, mission needs to compel compliance within Coast Guard mandated authority.
Search and Rescue	Detection/ Classification/ Identification/Prosecution	Search/Assist/Transport	Mission needs to search and locate distressed mariners and recover them from conditions of peril, provide medical advice, assistance, or evacuation. As a secondary priority, mission needs to control damage and recover property.
International Ice Patrol	Detection/ Classification/ Identification/Prosecution	Survail/Inter/Broadcast	Mission needs to continually monitor iceberg transit through major trans-Atlantic shipping routes and broadcast advisories to mariners of iceberg presence.
Navigation Support	Detection/ Classification/ Identification/Prosecution	Transport/Maintain	Mission needs to provide for maintenance of National Data Buoy Center buoys and to transport relevant buoys to maintenance facilities. Communication links are also necessary to validate data being transmitted by the buoys.
General Defense Operations	Detection/ Classification/ Identification/Prosecution	Presence/Surveillance/ Board/Search/Tow	Mission needs capability of operating worldwide with sustained presence, interoperable with Department of Defense assets.
Marine Interdiction Operations	Detection/ Classification/ Identification/Prosecution	Presence/Surveillance/ Detect/Intercept/Board/ Inspect	Mission needs to dispatch trained boarding or inspection teams providing for their logistics support, transportation, and protection. Sustained presence and the ability to compel compliance with Coast Guard order is needed.
Deploy Port Operations	Detection/ Classification/ Identification/Prosecution	Presence/Surveillance/ Investigate/Respond	Mission needs to dispatch appropriate assets to investigate security threats. Assets must be interoperable with Department of Defense and other government agency forces and must be capable of sustained presence.

CURRENT CAPABILITY

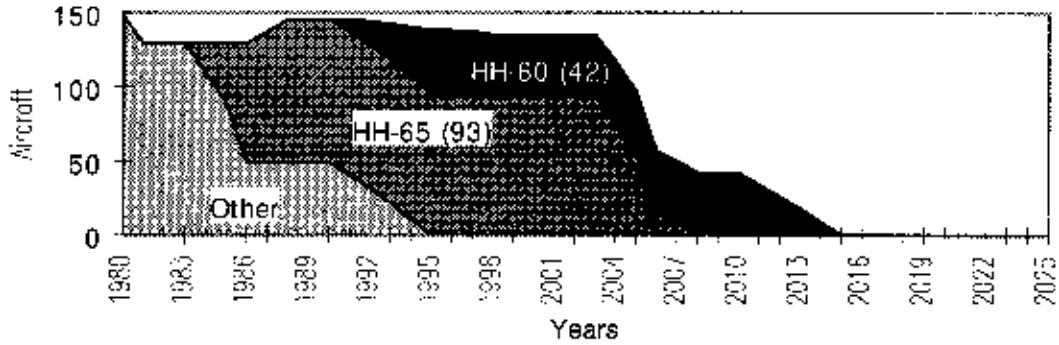
Aviation: The primary functions of Coast Guard aviation in the Deepwater arena are detection, classification and identification in support of Maritime Safety, Law Enforcement, and Marine Environmental Protection. Short and Medium Range Recovery aircraft also have prosecution capabilities for Maritime Safety. Long range search aircraft also have the capability to conduct command and control functions. The following two graphs show the number of air assets available for Deepwater missions. These charts are based on end-of-service-life projections developed at the time of acquisition or major rehabilitation, and indicate a diminished capability and capacity for Deepwater aviation supported missions beginning in the year 2002. Future iterations of this document will incorporate economic and technological end of service life projections and discuss capability replacement in terms of tradeoffs between cost and mission performance. The Assistant Commandant for Systems has developed a comprehensive service life extension plan for maintaining current aviation capabilities beyond the time line indicated above, if such a course of action is indicated by the Deepwater Capability Replacement Analysis effort.

Figure 2-3: Long and Medium Range Search Aircraft



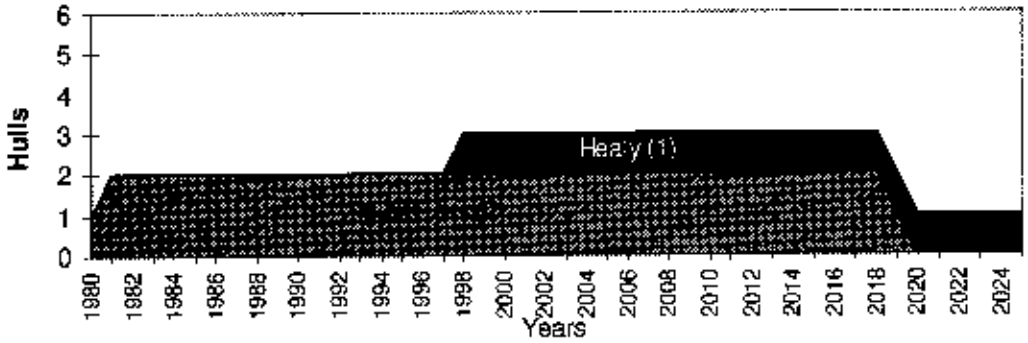
* Note that the number of 41 HU-25 includes the 16 Coast Guard-owned HU-25 aircraft that are currently in long-term storage. The remaining aircraft are operational and support allowance.

Figure 2-4: Short and Medium Range Search and Recovery



Surface: Coast Guard Deepwater surface assets perform functions primarily associated with their ability to remain on scene for extended periods, carry equipment and personnel, and assisting mariners in distress. These capabilities include providing command and control, providing surveillance, deterring through presence, searching, rescuing, boarding, and inspecting. The following two charts represent the numbers of available Deepwater surface assets between 1980 and 2025. Polar Icebreaking capability increases beginning in 1998 with the addition of the new Coast Guard Polar Class Icebreaker, HEALY, and decreases by 66 percent in 2014, when the current Polar Icebreakers near the end of their projected service lives. Current end of service life projections also indicate a loss of capability and capacity to perform other Deepwater missions beginning around the year 2000 because of the degradation of the oldest ships in our current fleet of Deepwater cutters. As previously stated, future editions of this document will discuss this situation in terms of tradeoffs between replacement of the capability and keeping current assets in service beyond their projected service lives, focusing on cost and mission performance.

Figure 2-5: Polar Icebreaking Capability



Note that a reliability improvement project is planned for the Polar Class icebreakers in the next two years. This will allow them to continue in service until 2016-2020. Healy was launched in 1997, with operational capability expected in FY 1999.

Figure 2-6: WHEC/WMEC Multi-Mission Capability

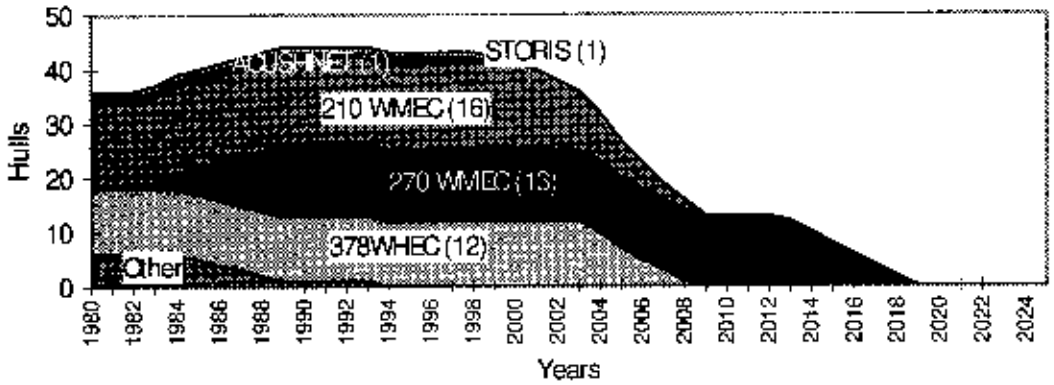
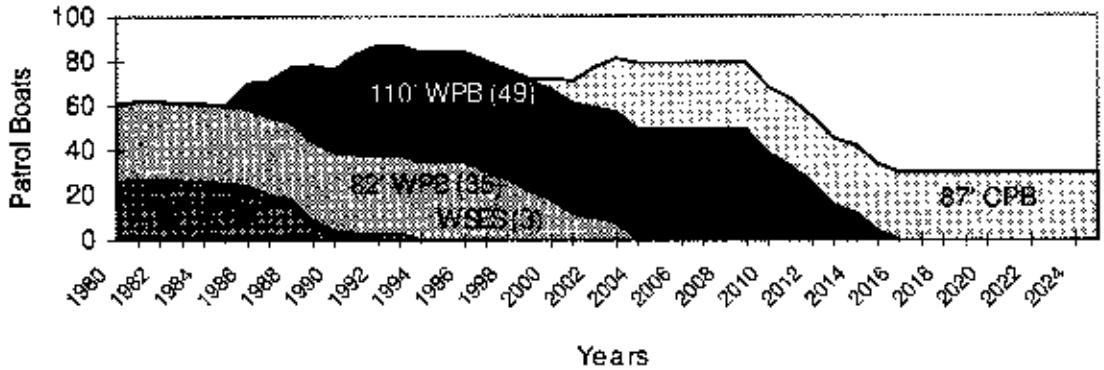


Figure 2-7: WPB Multi-Mission Capability



CAPABILITY GAP

Requirements: The Deepwater Mission Analysis assumes that the Coast Guard will continue to have Deepwater operating environment responsibilities well into the future. These responsibilities are not likely to shrink—in fact, the report identifies several areas where requirements may grow. The report categorizes the Coast Guard's Deepwater needs as either *resource availability* (essentially the quantity of assets available) or *resource capability* (inherent capability of employed assets). The report indicates that emerging mission performance demands will require increased capabilities in Deepwater surface assets relating to C4ISR; target classification; efficient boarding techniques; and speed.

Capabilities: Regional assessments and the Mission Analysis indicate that there are currently *availability* shortcomings that will grow significantly as the current assets reach the end of their service lives and require more time out of service for maintenance. While the Deepwater Mission Analysis found that current Coast Guard assets are *capable* of adequately performing current Deepwater missions, the report also pointed out that these assets may be approaching the end of their economic service lives. As these assets age, major repair periods are required to keep them (and their inherent capabilities) functioning. In addition, technological opportunities exist to reduce operating costs while improving performance. For example, the newest surveillance technologies could be used as a force multiplier, reducing the need for large numbers of surface assets. Crew size reductions can be accomplished through installation of automated engineering and navigation systems. However, the nature of Coast Guard missions will continue to require presence of cutters, a large passenger carrying capability, and high on-scene endurance. Likewise, innovative use of satellite or unmanned aerial vehicle technology might reduce the need for conventional aircraft. As with cutters, however, some level of manned aircraft with on-scene capability will be needed into the foreseeable future.

Gap: There are three driving forces that cause requirements and capabilities to become unbalanced, resulting in a need to upgrade or acquire Coast Guard assets. These are: (1) new program requirements caused by newly assigned or redefined missions; (2) new ways of doing business determined by potential efficiencies or by customer demands; and (3) reduced asset capability or availability due to deterioration, technical obsolescence, increasing operating cost or other results of age. While the first two of these driving forces result in the need to improve Coast Guard capital assets to assure effective and efficient performance and to meet increased threats, the third force - aging assets - is more critical to ensuring our ability to continuously provide the American public with the services they expect. It is understood that assets reaching the end of their projected service life can be extended almost indefinitely. However, this typically comes at very high cost and permanently sub-optimizing capability relative to potential replacements.

The appendices of this ACP outline Deepwater projects in varying stages of development that define our future capital needs in the Deepwater operating environment. These capital needs are based on balancing mission and program requirements, asset capabilities, and cost.

Coastal Zone Investments

The Coastal Zone mission area is defined as the navigable waters along and directly accessible from the coastline of the United States, generally extending out to a distance of 50 NM offshore. The Coastal Zone includes the Great Lakes but does not include the Western Rivers system.

REQUIREMENTS

As in the Deepwater arena, the outcomes Coast Guard activities in the Coastal Zone contribute to include **Safety, Protection of Natural Resources, Maritime Security and National Defense, and also Mobility**. Coastal Zone operations provide direct fulfillment of operational performance goals within the following major programs: *Search and Rescue, Enforcement of Laws and Treaties, Marine Environmental Protection, Marine Safety, Ice Operations, Aids to Navigation and Defense Operations*. Many of the Coastal Zone outcomes, programs and activities

Table 3 2: Coastal Zone Functional Requirements

Functional Tasks	Functional Sub-Tasks	Definitions
COMMAND AND CONTROL	SENSE	Monitoring and collecting data across the acoustic, radio, IR, visual, and UV spectra; accessing operational information sources.
COMMAND AND CONTROL	ASSESS	Sorting and analyzing data from all sources to provide a coherent operational picture.
COMMAND AND CONTROL	DECIDE	Determining the appropriate response.
COMMAND AND CONTROL	ACT	Initiating the decided upon response through communicating information.
PREPAREDNESS	AVAILABLE	Providing capabilities where mission demand occurs.
PREPAREDNESS	RESPONSIVE	Providing capabilities where mission demand occurs.
OPERATIONS	TRANSPORT	The carrying of personnel, equipment, or material necessary to conduct, or as a result of, missions.
OPERATIONS	SEARCH	Detecting, identifying, and/or determining position of targets in a predetermined area on, over or under the water, or the adjacent shoreline.
OPERATIONS	ASSIST	Providing services on scene necessary to conduct missions.
OPERATIONS	ENFORCE	Compelling compliance with appropriate laws and orders using minimum necessary force.
OPERATIONS	PREVENT	Educating, deterring, or intervening to prevent harm to people, property, or the environment, and preventing violations of appropriate laws and orders.
OPERATIONS	FACILITATE	Managing the safe and efficient use of waterways.
OPERATIONS	OPERATE	Conducting general operations in varying environmental conditions.

are similar to those performed in the Deepwater arena. Where there are differences that require a unique approach to defining requirements and capability, the Coastal Zone Mission Analysis currently underway will adapt the functional model from Deepwater. When the Coastal Zone Mission Analysis is completed, the work of both studies will be analyzed and a broader model for future mission analyses will be developed.

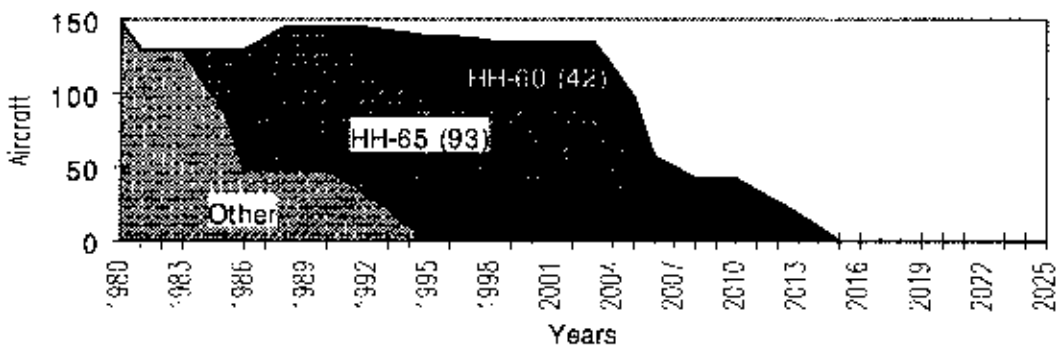
It should be noted that all Coast Guard assets are not necessarily specific to Deepwater or Coastal Zone environments; some platforms can and do operate in both. Examples include 110' Island Class patrol boats, 180' and 225' sea-going buoy tenders, and all rotary wing aircraft. When assets can operate in multiple arenas, they need to be built to withstand the requirements of the more demanding environment.

CURRENT COASTAL ZONE CAPABILITY

Aviation: The primary function of Coast Guard aviation in the Coastal Zone is to detect and prosecute for SAR. The quick-response time capability, shared with rescue boats from shore stations, is very important to emergency-driven response requirements to meet public expectations and program standards, such as our search and rescue program. Other functions performed by these aircraft include sensing, detecting and assessing targets for Coast Guard law enforcement and protection of natural resource missions.

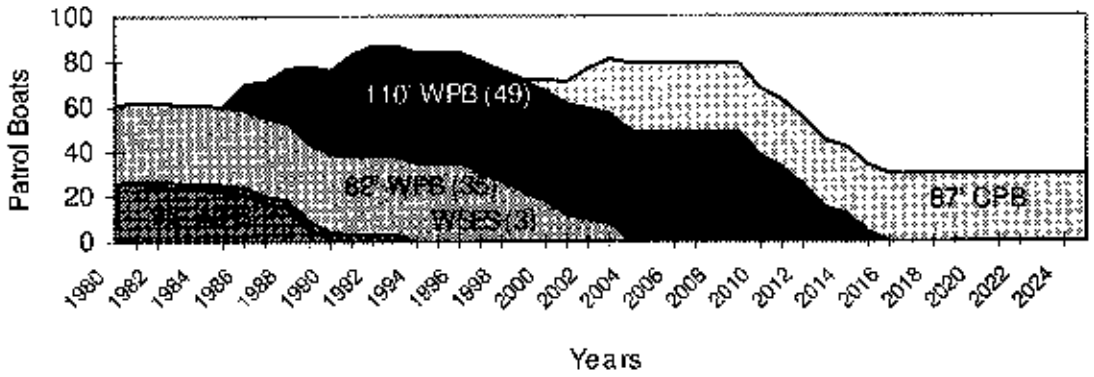
The following chart shows the current end of service life projections for short and medium range search and recovery aircraft. It shows a loss of capability and capacity to perform these activities around 2003. The Near Term Aviation Support Strategy discusses this situation in terms of tradeoffs between replacement of the capability and keeping current assets in service beyond their projected service lives, focusing on cost and mission performance.

Figure 2-8: Short and Medium Range Search and Recovery



Surface: Coast Guard surface assets in the Coastal Zone perform functions primarily associated with their ability to transport, search, assist, enforce, facilitate and operate. These assets need to be able to conduct search and rescue cases, law enforcement boardings, and transportation of equipment in all conditions, including those precluding safe flight. Several different types of surface assets are in our current inventory, each designed to meet differing mission needs. The first type are multi-mission capable assets that provide a more sustained presence – albeit, less than Deepwater needs, generally 3 to 5 days. From the chart below, we see that our current inventory has already begun to reach its projected end of service life and begins to degrade more rapidly at the turn of the century. Each of these charts show the current end of service life projections and the eventual degradation of surface assets. As discussed above, future iterations of this document will discuss this degradation in terms of tradeoffs between costs and mission performance.

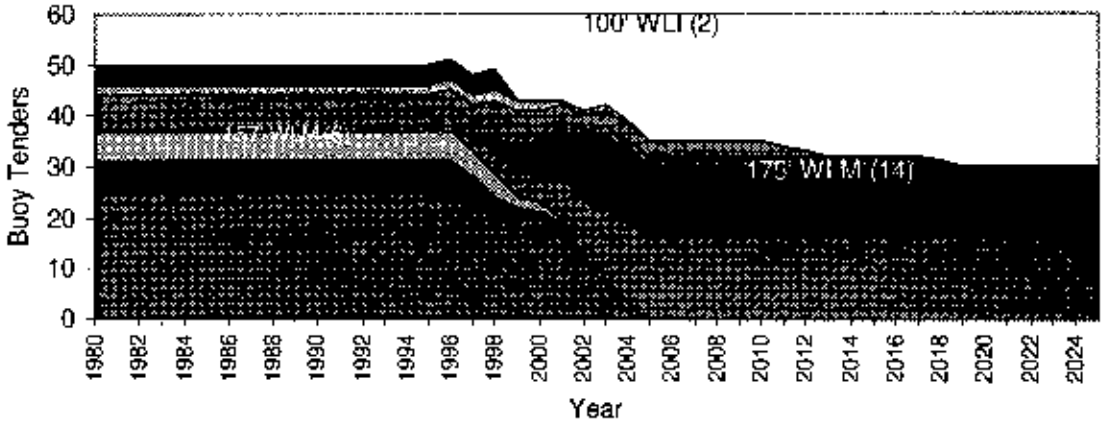
Figure 2-9: WPB Multi-Mission Capability



COASTAL AIDS TO NAVIGATION CAPABILITY

The next set of assets, those primarily conducting aids to-navigation missions, need to transport heavy objects, such as buoys, maneuver and place them with extreme precision. Current assets begin to decline in 1998, however capabilities will be maintained with the current acquisition of WLM and WLB cutters. These cutters can also serve as command and control vessels when needed; for example, the Juniper was first on scene and served as on-scene command and control for rescue operations for the TWA 800 crash in summer 1996.

Figure 2-10: Coastal Buoytending Capability

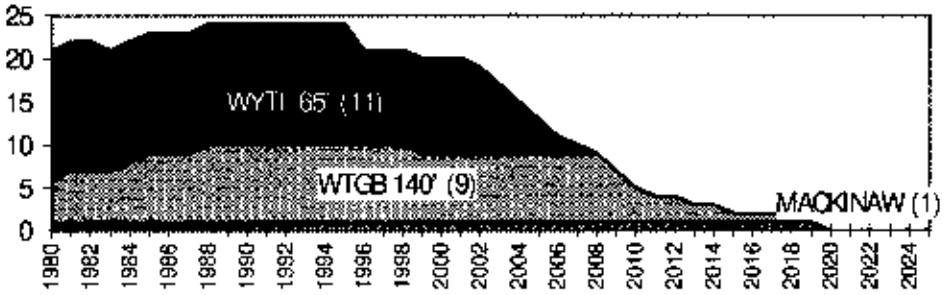


DOMESTIC ICE BREAKING

Domestic Icebreakers facilitate transport during winters months, prevent flooding along major rivers caused by ice dams, and assist vessels in distress in ice-covered waters. Current capabilities will begin to decline in 2002

with the end of service lives of WYTLs, with further degradation in 2009 when the WTGBs reach the end of their service lives.

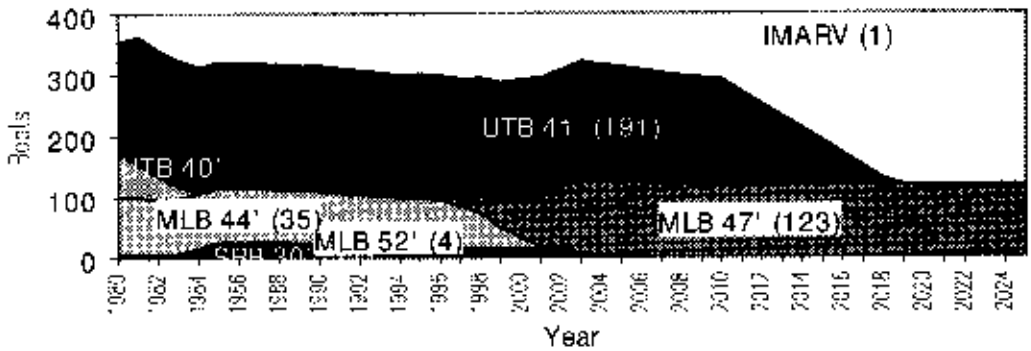
Figure 2-11: Coastal Icebreaking Capability



SMALL BOATS

Finally, small boat capability, including the needed abilities to transport, search, assist, and enforce, will begin to decline around 2008 as 41' UTB's reach the end of their service lives.

Figure 2-12: Coastal Small Boats



CAPABILITY GAP

Other than recognizing that aging assets mean decreased capability and capacity, it is premature to discuss the gap or how it is to be filled. While the approved investments listed below have been justified through other studies and fit into overall Coastal Zone missions, future investments are currently placeholders that will be further defined through the ongoing Mission Analysis project and will be refined over the next year.

INLAND WATERS INVESTMENTS

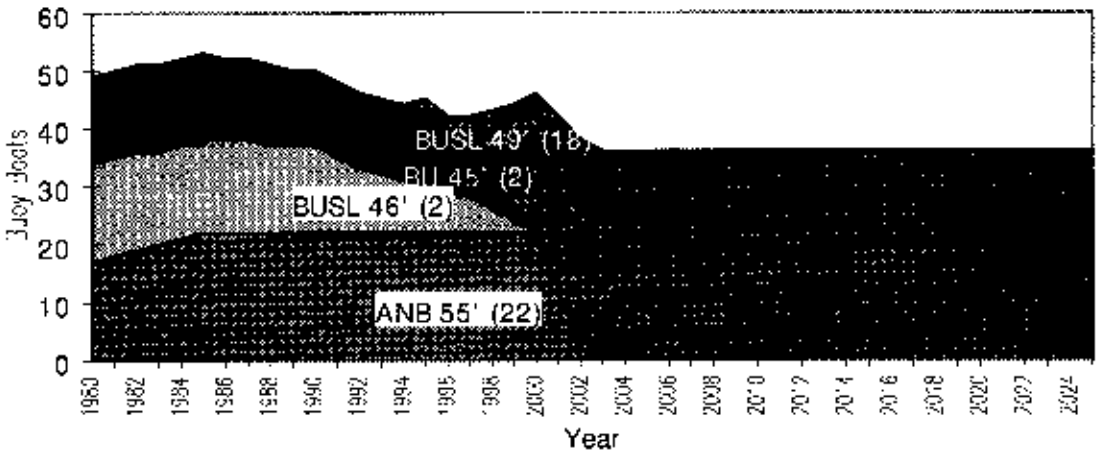
The inland waters mission area is defined roughly as those navigable waters not included by either Deepwater or Coastal Zone definitions. They include rivers and waterways on which the Coast Guard has jurisdiction and authority to enforce Federal laws and regulations, or is statutorily charged to provide service to the American public.

REQUIREMENTS

As in the Deepwater and Coastal Zones, the outcomes Coast Guard assets and activities in Inland Waters contribute to include **Safety, Protection of Natural Resources, Maritime Security and Mobility**. Inland waters operations provide direct fulfillment of program goals within the following major programs: *Marine Environmental Protection, Marine Safety, and Aids to Navigation.* The remainder of these activities are performed by partnering with States and/or local government agencies, or with the Coast Guard Auxiliary, and enable us to achieve outcomes at much lower cost and direct effort. When circumstances require response in these mission areas - for example in providing disaster relief after a major flood - these activities are carried out with Coast Guard resources. While our river aids-to-navigation program has similar functional requirements as coastal or Deepwater aids to navigation, asset capabilities are different because of the differing types of aids serviced, more benign environmental conditions, and the need for maneuverability in the more confined spaces found in the river environment.

CURRENT CAPABILITY

Figure 2-13: Inland Aids to Navigation



Command, Control, Communications, Computers, Intelligence, Sensors and Reconnaissance (C4ISR)

C4ISR is a term used to describe the framework of systems that provide information and services needed to support command and control (C2), decision making, and management of overall mission performance in each of the environments where the Coast Guard operates.

REQUIREMENTS

A study providing a comprehensive analysis of Command and Control (C2) processes and the information infrastructure required to support them has only recently been completed. This study provides an inventory of the current C4I infrastructure and architecture as a baseline for developing the Coast Guard's future information needs, as well as documenting the objective architecture and transition plan. At the senior management level, this study will serve as an aid in evaluating operational requirements in order to make better resource decisions and to avoid lost opportunities to maximize organizational efficiency. At an operational level, it will aid in articulation of operational requirements from a cross mission perspective and provide information about the current state of C4I and sensor capabilities, as well as providing the data architecture required to produce future ACPs.

Below is a listing of the currently approved and funded acquisition projects in the C4ISR portfolio. Although not a complete inventory, it gives an indication of the breadth of systems contained in this portfolio.

- Surface Search Radar
- Marine Information for Safety and Law Enforcement (MISLE)
- Software Conversion
- National Distress System
- Operations Information Processing
- Standard Workstation III Replacement (OE)
- Operations Systems Center Operations and Maintenance (OE)
- Law Enforcement Afloat Capability
- Law Enforcement Aviation Capability.

Support Infrastructure

REQUIREMENTS

The preceding sections discuss mission needs and asset planning in the context of operational and C4ISR needs of the Coast Guard, which focus on direct delivery of service to our customers. This section deals with the support infrastructure required to sustain those operations. Support infrastructure investments are not mission specific. They tend to support multiple Coast Guard missions, assets or activities, and thus only indirectly contribute to the strategic goals of the Service.

Two Types of Support Infrastructure Projects

Engineering and Logistics: Systems in this category are employed in tracking, maintaining or supplying Coast Guard assets and/or human resources. Included in this category are systems that manage pay, supply, finance, accounting, procurement, personnel, configuration management, training and education. They support every asset and person in the Coast Guard

Shore Facilities: Assets in this category support missions performed in all areas in which the Coast Guard operates. The Coast Guard,. as an operating agency and a military service, requires shore facilities to support the operational assets employed in accomplishing it's missions and to provide integrated logistics, training and management functions. Operational support facilities are used to moor cutters, tie up boats, secure aircraft, protect equipment, and provide safe housing and functional facilities for our personnel. Shore facility capital asset management in the Coast Guard is the subject of ongoing study, an effort focused on attaining the most efficient shore infrastructure possible. A methodology similar to the requirements-based model discussed earlier in the ACP is being developed. The methodology is scheduled to be developed by the summer of 1999, with an implementation plan scheduled for development no later than October 1999.

Although this process has not been fully defined or implemented, it will represent an important step forward in proactive shore facility management and reinforces the Coast Guard's commitment to making the best use of AC&I and OE funds. The FY2001 ACP will contain a more comprehensive discussion of the methodology employed in managing the inventory of shore facilities and will present a baseline and outline future requirements. This will include better models for determining annual recapitalization requirements, the basis for making investment ore divestiture decisions, and will more accurately describe shore AC&I and annual OE funding requirements.

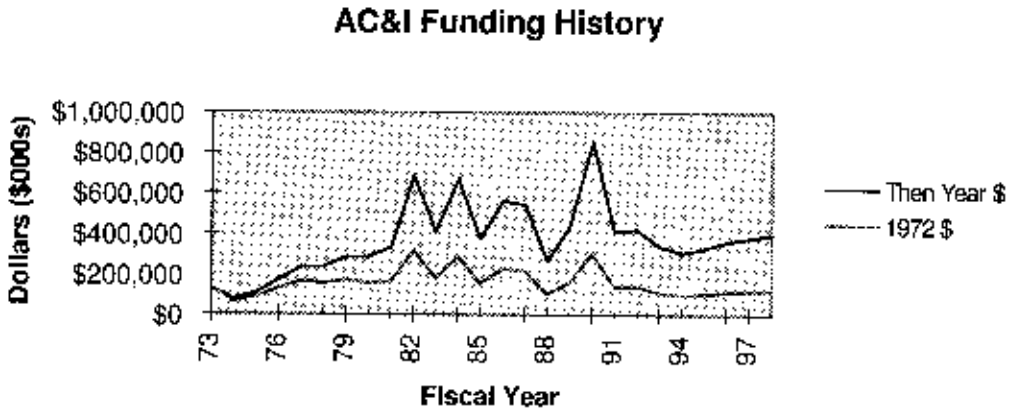
Chapter 3

CHAPTER 3 : CAPITAL ASSET BUDGETING IN A CONSTRAINED FUNDING ENVIRONMENT

Coast Guard's Capital Asset Investment Appropriation

The Coast Guard's Acquisition, Construction and Improvements appropriation (AC&I) provides funding for the procurement, construction, renovation and improvement of aids to navigation, shore facilities, vessels, and aircraft, including equipment not fitting into any of the previous categories. It also funds personnel compensation, benefits, and costs related to administration of the AC&I program. Figure 3-1 depicts the funding history of the AC&I Appropriation. When reflected in constant 1973 dollars, the record clearly shows that recent AC&I funding levels have been among the lowest in the past 23 years.

Figure 3-1: AC&I Funding History ($000s)



CAPITAL ASSET PORTFOLIO VALUE/ESTIMATED ANNUAL RECAPITALIZATION NEEDS

The current replacement value of the Coast Guard's capital plant is approximately $20 billion.[1] Figure 3-2 shows the breakdown of this portfolio by type for selected years. If the trend of declining appropriations continues, the Coast Guard may not be able to replace assets as they reach the end of their planned service life. This represents a serious challenge to Coast Guard planners. For example, recapitalization of the existing $20 billion capital plant at an annual rate consistent with the FY 1998 AC&I appropriation ($398M) would take nearly 50 years, assuming equal investment across all assets. Figure 3-3 represents the recapitilization rate required for each of the industry standard planned service lives. As can be easily seen, continued funding at or near the FY 1998 level is insufficient to recapitalize existing assets prior to the end of their planned service life. More immediately, this level of funding is insufficient to meet already documented requirements for

[1] COMDT (G-CPP) dated 1 May 1996 memo on "Replacement of CG Capital Plant". The $20 billion figure is the recpitalization cost noted in this memo, adjusted for the rate of inflation since 1996. This study will be updated to reflect the latest information regarding replacement costs and planned service lives of assets in time for the next edition of the ACP.

replacement capital assets (i.e. coastal patrol boats, seagoing buoy tenders, & motor lifeboats). Failure to address current capital investment requirements exposes the Coast Guard, and the public it serves, to the risk of obsolescence[2] of aging resources and facilities after the turn of the century. An important goal of this plan is to clearly document upper limits of capital requirements, identify the planning required to execute investment decisions, and provide a means by which to assess resource allocation alternatives.

Figure 3-2: Replacement Value of CG Assets (in 1996 $)[3]

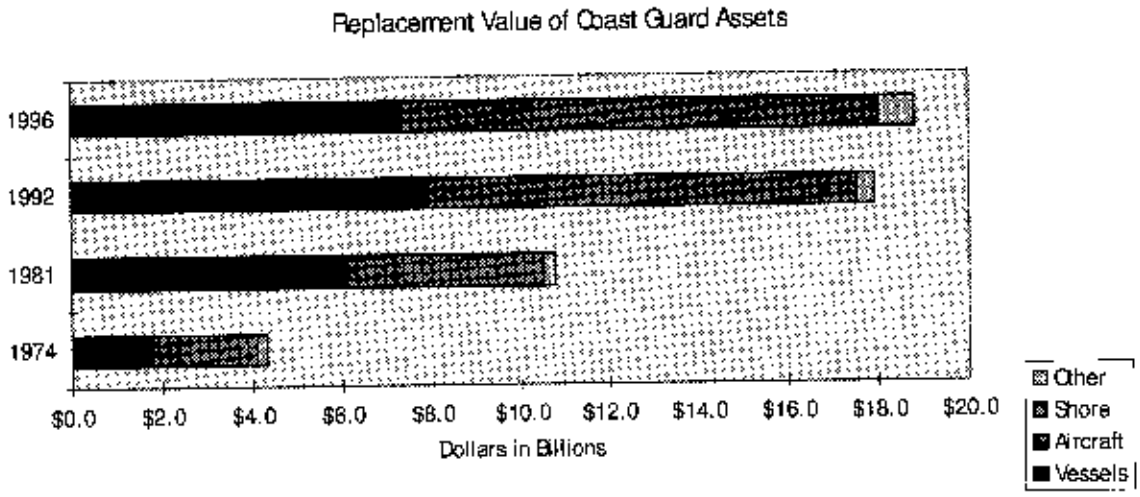


Figure 3-3: Planned Service Life (not including typical service life extensions) with Annual Recapitalization Rates (in 1996 $)[4]

Asset Categories	Planned Service Life	Planing Lead Time	Annual Recapitalization Rates
Vessels	Thirty Years	Eight to Twelve Years	$223 Million
Boats	Fifteen Years	Five to Ten Years	$ 30 Million
Aircraft	Twenty Years	Ten Years	$185 Million
Electronics	Eight Years	Three to Seven Years	$81.1Million
Shore	Fifty Years	Five Years	$156 Million
		Total	$677 Million

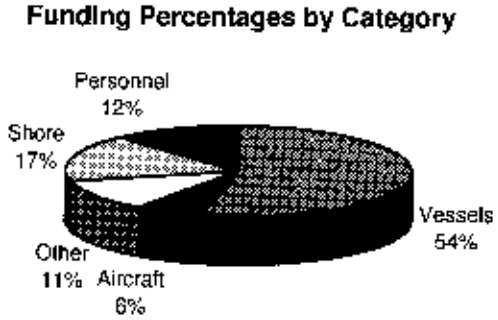
[2] Block Obsolescence assumes all assets of a class must be replaced at a definite point in time based on planned service life (PSL). Since most major systems (ships, aircraft and boats) were acquired in short duration acquisitions, replacement occurs in a correspondingly short window at the end of the PSL in order to maintain capability, assuming service life extension projects are not undertaken. Compounding the problem is varying PSL: multiple systems may have to be replaced in the same time frame despite original acquisitions being staggered over a number of years. See service life table above.

[3] COMDT (G-CPP) dated 1 May 1996 memo on "Replacement of CG Capital Plant".

[4] Ibid.

FY 1998 AC&I Appropriation: The FY 1998 appropriation for acquisition, construction and improvements was $397.85 million. This included $212.1 million for vessels, small boats and related equipment, $25.8 million for aircraft and related programs, $44.65 million for other equipment, $68.3 million for shore facilities and aids to navigation facilities, and $47 million for personnel and related support. While this AC&I funding level was somewhat above the previous year's funding, it is still far below the necessary funding to recapitalize the existing capital infrastructure. The following chart, figure 3-4, provides the distribution of AC&I funds within specific categories.

Figure 3-4: AC&I Funding Percentages By Category



Capital Management Principles in a Constrained Funding Environment

The inset below reflects one of several budgetary concerns as the Coast Guard looks to efficiently manage its capital assets in the future. While the capital asset planning process and vigorous capability analysis the previous chapters may accurately identify current or future capability gaps; however, it does not identify budgetary solutions which allow closing such gaps. It is incumbent upon Coast Guard resource managers to find innovative solutions to closing such gaps given our constrained AC&I appropriation.

General Accounting Office (GAO) Findings

In November 1995, the Government Accounting Office issued an audit report reviewing how federal organizations plan and budget for fixed assets. Specifically, it addressed how federal agencies perceive the budget process affects their capital acquisitions, and whether there are funding mechanisms that might be helpful in planning and budgeting for fixed assets. GAO found that although requiring budget authority for the full cost of acquisition provides Congressional spending control, it presents challenges to the agencies. Because this practice front loads the entire cost, acquisitions must be absorbed in a single year's constrained agency budget. This results in a significant one year "penalty" for a capital asset which will provide long term benefits. The audit recommended Congress consider enabling agencies to use more flexible budgeting mechanisms that accommodate up-front funding over the longer term while providing appropriate Congressional oversight and control. Revolving funds and recurring investment components of annual funding were cited as such techniques. They would allow agencies to accumulate resources over a period of years to finance certain capital needs, promote full program costing and activities by including costs related to capital use in program budgets, and provide a degree of funding predictability to aid in long term planning. The audit concluded that as GPRA moves toward full implementation, these and other tools may take on increased importance in helping managers and Congress identify true program costs and more effectively manage capital assets. As found by the GAO, the up-front fiscal penalty for a long-term asset may be inappropriate. Changing this paradigm may link the asset cost to the long-lived capability it provides and tie its cost into the GPRA outcome it supports.

This section will offers various methods to address identified capability gaps despite the current austere budget climate. These solutions range from innovative (less expensive) approaches to meeting mission requirements, to managing AC&I cash flows to conform to current funding limitations, to finding new funding sources.

Coast Guard capital assets must deliver high performance, show significant productivity returns, and be consistent with the Coast Guard's future vision of itself to be acquired and maintained in service. Supplementing and, in some instances, overlapping these considerations are several recurring themes that must guide Coast Guard resource managers in this era of smaller federal budgets.

First, ***invest to save...*** in every decision involving capital assets. A fundamental objective must be to minimize the direct and indirect life-cycle costs associated with acquiring, maintaining and divesting each asset. Not only are the costs to acquire an asset important - the legacy costs associated with operating and maintaining the asset through its service life must also be carefully considered. Assets must be evaluated both individually and as part of systems that contribute to service outcomes. If a disproportionate funding is required to maintain and operate an asset relative to its contribution to mission performance or outcome, or if operating costs exceed the acquisition and operating cost of a new asset, then that asset should be scrutinized to determine if more efficient options are available. Additional considerations, such as leveraging technology to reduce manning or performing the mission with fewer, more capable assets must also be considered. Thus, minimizing outyear costs and avoiding near-term costs must be a continuously pursued goal of all asset managers in their ongoing business planning and portfolio management efforts. Life cycle costs must be a major factor in the evaluation and selection of proposals in the acquisition process.

Second, ***reduce outyear recapitalization requirements...*** through rigorous, ongoing mission analysis and continual evaluation of technological improvements. This is the foundation of long-range management of the capital asset portfolio, and should be focused on delivering the highest level of capability at the lowest life-cycle cost required to meet mission needs. No asset should be in the portfolio unless there is a clear requirement for it, derived from a mission analysis process that comprehensively analyzes and evaluates the strategies and activities required to achieve Service outcomes. For operational assets, this process must account for trends in the external environment, examine organizational alternatives to current operational methods, consider the performance and condition of assets currently in use, examine technological improvements for effectiveness or efficiency, and identify gaps or inefficiencies/excesses. In the case of shore infrastructure, a comprehensive approach to shore facility master planning must examine the functional requirement for the facility, and systematically lay out a life-cycle strategy to provide optimal service at the lowest overall cost.

Third, ***aggressive and innovative capability tradeoffs must be managed within a well-balanced portfolio of assets.*** A balanced portfolio of assets is one in which every asset contributes to the performance of the whole, and in which the productivity of the whole is greater than the sum of the parts. This level of performance can only be achieved if assets are managed as systems, and if the capability of each asset is maximized relative to the performance requirements of the system. Within the Coast Guard's operational portfolio of assets, the primary means of reaching this goal is through multi-capable platforms designed to meet a variety of mission requirements. While the cost of a multi-mission asset may be slightly higher than a single-purpose asset, on balance the total system cost in which the assets operate is almost always significantly lower. Additionally, when technological improvements are considered, it is important to avoid "bleeding edge" technologies with significant technical risk. Shore facilities and support infrastructure are also considered as key elements of a balanced portfolio, with the emphasis on minimizing investment in infrastructure and gaining economies of scale wherever possible through centralization and consolidation of functions. A critical aspect is balancing the acquisition and divestiture of assets, and incorporating strategies and policies that include both as part of the management of the whole portfolio.

Fourth, ***flexible investment planning to stabilize funding requirements.*** Maintaining a balanced portfolio of assets within the current budget environment means maintaining a stable requirement for funding for the foreseeable future. To minimize "lumpiness" in outyear capital funding requirements, the Coast Guard employs a variety of techniques aimed at balancing acquisition, maintenance, service life extension and divestiture across the entire asset portfolio. Even when each of the first three objectives described above are met, additional steps must be taken to stabilize future funding requirements.

- **Timing of Acquisition:** Timing of acquisitions (when and over what duration) depends on a number of factors, including determining the economical service life of assets currently in the inventory, rates of technological obsolescence, projecting basic cost of managing an acquisition (admin/overhead costs, economical order quantities, duration of contracts, etc.) and the current and future effect of phasing acquisitions to avoid block obsolescence. Staggering costly projects or overlapping less costly projects over a 10 15 year timeline will result in more balanced funding requirements (but may be more expensive in outlays).

- **Maintenance Practices:** Maintenance is a key factor in preserving the capability and longevity of an asset. Careful consideration must be given to routine and major maintenance requirements of every asset and development of maintenance doctrine that ensures performance and longevity standards will be met. Deferring maintenance with a resultant reduction of service life or premature failure of costly components is a poor substitute for maintaining an appropriate level of assets to meet requirements or funding to meet maintenance requirements. However, if we choose to defer maintenance, we must carefully document that decision and track the impact of that decision on system performance. Ultimately, when examining recapitalization requirements, deferred maintenance is accounted for as a cost – not as a savings. Finally, tradeoffs between up-front costs and lifetime maintenance costs must be balanced. High quality systems, or systems that are less technically sophisticated (that require relatively less frequent periodic or major maintenance) may allow acquisition of fewer platforms at lower overall cost while still meeting performance requirements.

- **Extending Service Lives:** Determination of an asset's service life requires careful attention to many factors, including the planned service life (determined when the asset was designed and built); the economical service life (based on maintenance, repair and operating costs); the technological service life (determined by obsolescence of key components; or if the technology of the asset is not equal or superior to available technology in the market; or if adversaries possess higher technology); and the structural service life (based on the basic condition of the asset). When an asset is determined to be a candidate for service life extension, all of these factors must be considered as life-cycle costs and weighed against funding availability. When economically feasible, extending the service life of an asset to permit balancing of portfolio funding needs is appropriate.

- **Appropriate Divestiture of Assets:** In the context of capabilities and requirements, a balanced portfolio implies that ongoing mission analysis identifies both performance gaps and excess capacity. Timely divestiture decisions made in the context of keeping the entire portfolio of assets performing at optimal levels frees OE funding that may otherwise be tied up keeping inefficient or obsolete assets in service, and removes AC&I projects associated with that asset or facility from the backlog. While divesting assets will not necessarily provide a self-funded alternative to future AC&I budgets, divestiture is a balancing tool that allows tradeoffs to be made. With this in mind, the Coast Guard is reengineering its approach to managing its shore facilities. The developing Shore Facility Capital Asset Management (SFCAM) process mentioned earlier will provide a consistent and logical process for making such shore infrastructure investment decisions.

These techniques to maintain a balanced, capable and affordable capital portfolio are increasingly driving Coast Guard resource decisions and were specifically considered in developing the Long Range Resource Acquisition Plan contained in Appendix D.

Capital Management Strategies in a Constrained Funding Environment

The principles identified above can be translated into specific strategies that can be applied to a given capital asset decision. This section identifies some of those specific strategies to be considered by resource managers when faced with capital investment decisions.

EXTENDING SERVICE LIVES OF ASSETS

While industry standards for asset projected service lives were used in the capability discussions of Chapter 2, the Coast Guard has traditionally operated assets long past such planning factors, typically due to constrained investment funds and increasing requirements for asset employment. The Coast Guard has often continued to operate maintenance intensive assets until the capability they provided was seriously jeopardized. In many cases, habitability upgrades and steps to reduce crew requirements have been forgone in the interest of maintaining basic mechanical integrity. Where it is economically and operationally feasible to stretch an assets' employment beyond its originally projected service life, significant near-term AC&I savings can be realized that would allow other high priority projects to be funded. However, such a strategy requires deliberate decisions by senior management to pay a maintenance premium from the Operating Expenses (OE) Appropriation as well as accepting less-than-optimum functionality and habitability in order to delay a burden on the Acquisition, Construction, and Improvement (AC&I) Appropriation. Note that although asset stretching delays, it does not obviate, the capability gap that asset expiration will ultimately create.

SERVICE LIFE EXTENSION PROJECTS (SLEP)

Similar to asset life extension through revised maintenance programs, SLEP is another strategy for delaying a projected capability gap. SLEP is an interim and typically less costly AC&I investment intended to extend an aging asset beyond its planned service life instead of replacing it. For example, the Coast Guard's 210' medium endurance cutters were procured in the late 1960's. Based on a planned service life of 30 years, budget planners would normally anticipate replacement funding in the late 1990's. However, by investing approximately $300M during this fleet's mid life, the Coast Guard has modernized the fleet and extended its life another 20 years until 2010-2015. The Coast Guard is currently considering similar investment in its aircraft fleet, some of which are soon to reach the end of their service life. While this strategy extends a capabilities life at price well below full replacement, as with deliberate asset stretching above, expiration of the asset is delayed, not eliminated.

DEPARTURE FROM ONE-FOR-ONE REPLACEMENT

As noted earlier, past Capital Investment Plan practice was to assume one-for-one replacement of current assets for the purpose of developing long-range recapitalization funding estimates. While this premise worked well in an era of growing federal budgets and operating assets where productivity improvements were not taken into account, such assumptions are no longer valid. The Coast Guard has successfully leveraged vigorous mission analysis to seek fewer, more capable assets that can be operated at lower total ownership costs. The best example is the Coast Guard's sea-going and coastal buoy tender fleets. Pre-acquisition Mission Analysis (the front end to a potential acquisition) and pre-procurement concept exploration (part of the formal acquisition process) yielded a realistic plan to replace 37 cutters with 30 – and each more capable platform is manned with fewer personnel! Exploring options of this nature offer significant opportunities for reduction in both AC&I costs and maintenance overhead.

A SYSTEMS APPROACH TO ACQUIRING CAPABILITY

Along with one-for-one asset replacement assumptions, past capital investment viewed an expiring asset in isolation—merely keying on the best avenue to replace a ship or cutter. As seen in the previous chapter, the Coast Guard has begun to evaluate all assets providing capabilities in a given operating environment. More global planning for all assets in a given regime (Deepwater; Coastal; Inland; C4ISR; and Support Infrastructure) will allow tradeoff decisions for the most effective mission accomplishment. For example, in light of recent Coast Guard investment in aircraft, aviation-based sensors may provide a better Return on Investment than ship-based sensors in meeting long-range surveillance requirements. Such a systematic approach allows the Coast Guard to leverage its current asset base and minimize the future investment burden.

COMMERCIAL OFF-THE-SHELF (COTS) AND NON-DEVELOPMENTAL ITEMS (NDI)

To minimize non-recurring engineering costs increasing the up-front cost of an acquisition, and to minimize risks associated with pioneering new or unique capabilities, increased reliance can be placed on capability produced in the commercial sector. COTS strategy seeks to procure readily available products from the market for which development costs are already amortized (e.g. desktop computers). Non-Developmental Items (NDI) are "state of the market five years from now" technologies that may not be readily available immediately, but that are nearing market entry and will be available when a new system is ready for entry into the fleet (e.g. unmanned surveillance aircraft). In addition to minimizing developmental costs, this strategy permits reliance on maintenance histories and support infrastructure already established (i.e., capitalized) in the private sector.

LEVERAGING TECHNOLOGY

At the same time, the Coast Guard must circumspectly exploit technology advances to provide innovative solutions to mission accomplishment. A sound Coast Guard asset management process begins with the Research and Development program scanning evolving technologies for Coast Guard applications. Accordingly, the Coast Guard's developing business planning process works to better integrate its R&D program to achieve improved mission performance and cost. (i.e., a required business plan appendix speaks specifically to R&D support desired by the Assistant Commandant).

EXTENDING CURRENT ACQUISITIONS

This strategy deliberately reduces the per year production of a current acquisition to minimize annual cash flow burdens on the Coast Guard's AC&I appropriation. While this strategy meets the short-term need to remain within an annual AC&I target, the Service (and taxpayer) pays a three-fold penalty in the long-term.

- First, this eliminates opportunities to leverage production discounts through buying optimal economic order quantities. As such, the contractor must pass on the premium it must pay for dragging out materials and labor costs over protracted periods.
- Second, the Coast Guard often pays an OE premium to maintain an aging asset awaiting replacement: stretching out an acquisition delays potential savings that result from lower lifecycle costs of a new asset compared to the costs of the asset it replaces. For example, the Coast Guard will realize $1.3M in recurring savings through replacement of older engines in its C-130 fleet. However, due to AC&I constraints, these savings will be delayed as the AC&I project is stretched over three years.
- Third, extending acquisitions over a longer period increases the cost of acquisition overhead through project (staff and matrix) personnel and administrative costs applied over the extra time.

Such a multi-year strategy also increases the risk of interrupted funding in mid-acquisition, which could end up being very costly or perhaps lead to a capability gap.

ACQUISITION ALTERNATIVES

Past practice for federal agencies has been to rely heavily on owned assets to perform missions. While this allows for freedom to control an asset's configuration and employment, it often costs far more than use of leased platforms or "renting" capability from other agencies. In the midst of constrained investment funds, this approach must be reexamined. Lease and loan of capabilities are realistic alternatives to address capability gaps. For example, Defense assets in the past have provided significant maritime patrol flight hours in support of Coast Guard law enforcement efforts. Taking advantage of extant but underutilized DOD capacity has allowed the Coast Guard avoid costly initial and maintenance costs. Other examples include leasing office space as an alternative to owning property for Marine Safety offices. Future capital asset planning is likely to rely on greater federal agency cooperation to share capabilities, interagency leasing of surplus capability, as well as leasing commercially available assets to meet short-duration operational requirements.

LEVERAGING CROSS-FEDERAL FUNDS

The federal budget is grouped by functions for allotting budget authority and outlays. The Coast Guard's activities and investments are typically funded under Function 400 - "Transportation". The old paradigm held that such functions essentially capped available resources for a given agency. However, as federal agencies partner to address significant cross-agency public policy concerns, this limiting paradigm may no longer apply. For example, the Office of National Drug Control Policy is seeking to coordinate funding of federal drug efforts consistent with national policy. In such a forum, funding for Coast Guard drug enforcement efforts may potentially be available in function 050 "National Defense", function 150 "International Affairs", or function 750 "Administration of Justice". This era of cross-agency cooperation confronting public policy issues may be the time to challenge past fiscal fire walls which may have thwarted equitable distribution of federal funds—fire walls that potentially deny the Coast Guard capital investment in capabilities performing the national will.

ASSET SALE PROCEEDS

Public Law 104-50, "Department of Transportation and Related Agencies Appropriations Act, 1996" granted the Commandant of the Coast Guard the authority to dispose of surplus real property by sale or lease with the proceeds returning to the Coast Guard's AC&I account. This authority was subsequently repeated in the Coast Guard's 1997 DOT Appropriations Act and is anticipated in future Appropriations Acts. The Coast Guard has realized proceeds that were reinvested in the Coast Guard's shore infrastructure. However, the Coast Guard is finding that the timing and value of surplus Coast Guard property is uncertain: federal property typically lacks zoning which influences potential value. Legislatively mandated transfers often preclude proceeds. Possible historic or environmental reuse restrictions devalue the property; and potential for a no-cost transfer to another federal agency or homeless interest (which is mandated in the federal property disposal process) may negate proceeds of a sale all together. Regardless, the Coast Guard is developing a mechanism by which planners, traditionally geared toward infrastructure acquisition, screen the current shore assets for divestment opportunities. Where asset disposal is feasible, funds will be reinvested in more appropriately sized, economical shore facilities.

SEEK FUNDING ABOVE TARGET LEVELS

The budget process requires agencies to submit budget requests within constrained appropriation targets. Such targets establish flat-lined investment funding for the Coast Guard's near-term and are purely arbitrary. As such, these targets may fail to adequately recognize the public's increasing demand for Coast Guard services. For this reason, Coast Guard resource managers have an obligation to seek, in a responsible manner, AC&I funding consistent with established requirements, even if such funding exceeds outyear funding targets.

USER FEES

As noted in Chapter 1, it is the Coast Guard has the responsibility of providing maritime public goods that are best provided by the federal government. In some cases, it may be appropriate to charge the beneficiary of a Coast Guard service to cover capitalization expenses as well as operating expenses.

PARTNERSHIPS WITH STATE/LOCAL GOVERNMENTS OR PRIVATE PARTIES

A final alternative is to enter into partnerships with non federal governmental or private entities. In the case of Coast Guard housing, construction lease back agreements with local agencies or private firms offer the opportunity to forgo AC&I investments and use OE funds designated for leases to obtain housing for eligible personnel. Other situations, such as siting ATON structures on existing buildings, may eliminate the necessity to acquire land or build structures. Other alternatives may include joint use of property for siting several facilities owned by various entities on a Coast Guard facility, such as a VTS or air station. In each case, legislative authority would have to be obtained and proper lease agreements would have to be executed, but the investment of time in arranging the agreements can yield significant savings compared to sole owenrship.

Conclusion

In summary, it is clear that Coast Guard resource managers will continue to be faced with an austere capital budget climate. Their success in the future will be judged not by how much funding they ask for (or even necessarily how much they receive), but rather by how well they manage current assets to meet operational requirements, how well they manage our current AC&I budget to that same end, and how strong a business case they present for any required additional funding. The foregoing strategies represent some, but not all such approaches. Each has its appropriate place in an effective capital management scheme, and should be applied by Coast Guard capital managers with due regard for the potential gains and risks of each strategic approach.

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Inventory Page Sections:

- Deepwater Assets
  - Vessels

Asset Overview

- 399' (123 M) Polar Class Icebreaker (WAGB)
- HEALY, Polar Ice Breaker (WAGB)
- 378' (115 M) Hamilton Class High Endurance Cutters (HEC)
- 270' (82 M) Famous Class Medium Endurance Cutters (MEC)
- 210' (64 M) RELIANCE Class Medium Endurance Cutters (MEC)
- 110' (34 M) Island Class Patrol Boat (WPB)
- STORIS
- ACUSHNET
- Cutter based Boats: Cutter Boats Large (CB-L), Medium (CB-M), Small (CB-S), and Motor Cargo Boats (MCB)

  - Aircraft

    Asset Overview

    - HC 130H, 4-Engine Turbo Prop Maritime Patrol Aircraft
    - HC 25 A/B/C 2-Engine Advanced Turbofan Jet Maritime Patrol Aircraft
    - RG-8A Single Reciprocating Maritime Patrol Aircraft
    - HH-60J Twin-Engine Turbo Shaft Medium Range Recovery Helicopter
    - HH-65A Twin-Engine Turbo Shat Short Range Recovery Helicopter
  - Shore: None
  - Sensors: TBD

- Coastal Zone Assets
  - Vessels

Asset Overview

- 290' (88M) Great Lakes Icebreaker (WAGB)
- 225' Juniper Class Seagoing Buoy Tender (WLB)
- 180' (54 M) Seagoing Buoy Tender (WLB)
- 175' Keeper Class Coastal Buoy Tender (WLM)
- 157'/133' Coastal Buoy Tender (WLM)
- 140' (130 M) Bay Class Icebreaking Tug (WTGB)
- 87' (26.5 M) Coastal Patrol Boat (WPB)
- 82' (25 M) Point Class Coastal Patrol Boat (WPB)
- 65' (20 M) Harbor Tug, Small (WYTL)
- 64' (20 M) Aids-to-Navigation Boat (ANB)
- 55' (17 M) Aids-to-Navigation Boat (ANB)
- 49' (15 M) Buoy Boat-Stern Loading (BUSL)
- 47' (15 M) Motor Lifeboat (MLB)
- 45' (14 M) Buoy Boat (BU) and 46' (14 M) Buoy Boat-Stern Loading (BUSL)
- 44' (13 M)/52' (16 M) Motor Lifeboat (MLB)
- 41' (13 M) Utility Boat – Big (UTB)
- 30' (9 M) Surf Rescue Boat (SRB)
- 21' Trailerable Aids to-Navigation Boat (TANB)
- Nonstandard Boats – Miscellaneous
- Independent Maritime Response Vessel (IMARV)
- Transportable Port Security Boats (TPSB)

- Aircraft: See Deepwater section
- Shore: None
- Sensors: TBD

- Inland Water Assets
  - Vessels

Asset Overview

- 160'/100'/75' Inland Construction Tenders (WLIC)
- Inland Buoy Tender (WLI)
- River Buoy Tender – Large and Small (WLR)

- Aircraft: None
- Shore: None
- Sensors: TBD

- Command, Control, Communications, Computers, Sensors, Reconnaissance (C4ISR): TBD - Refer to C4I Baseline Study
  - VC-4, 2 Engine Turbo Prop Logistics Aircraft
  - C 20, 2-Engine Turbo Fan Long Range Command & Control Aircraft

- Shore/Support Infrastructure (with notation indicating program manager, where

appropriate)

- General Administration and Finance
  - Finance Center, Shore Facility (major) (G-CFP)
  - National Pollution Funds Center (G-CCS)
- Operational Units (G-O)
  - Coast Guard Activities (ACT)
  - CG Air Stations
  - Aids-to-Navigation Team (ANT)
  - Group
  - Multi-Mission Station
- Operational Units (G-M)
  - Container Inspection Training and Assistance Team
  - Marine Inspection Office (MIO)
  - Marine Inspection Detachment (MIDET)
  - Marine Safety Center (MSC)
  - Marine Safety Office (MSO)
  - Marine Safety Office/Group (GRU/MSO)
  - Marine Safety Detachment (MSD)
  - Marine Safety Field Office (MSFO)
  - Marine Safety Satellite Office (MSSO)
  - Marine Safety Unit (MSU)
  - National Maritime Center (NMC)
  - National Strike Force Coordination Center (NSFCC)
  - National Vessel Documentation Center (NVDC)
  - Strike Team
  - Vessel Traffic Service (VTS)
- Technical and Systems Support Units
  - Aircraft Repair and Supply Center (ARSC)
  - Command and Control Engineering Center (C2CEN)
  - Engineering Logistics Center (ELC)
  - Integrated Support Commands (ISC), Support Center (S/C) and Closure Project Resident Office (CPRO)
  - Marine Safety Laboratory (MSL)
  - Operations Systems Center (OSC)
  - Research and Development Center (RDC)
  - Telecommunication and Information System Center (TISC)
  - Coast Guard Yard
- Human Resource/Workforce Support Units
  - Academy
  - Family Housing
  - Reserve Training Center (RTC) Yorktown

- Training Center Cape May
- Training Center Petaluma

APPENDIX B: PROJECTS APPROVED, FUNDED, AND UNDERWAY

Overview

Project Sections:

- Deepwater Projects
  - Vessels
    - Deepwater Capability Replacement
    - Polar Icebreaker (HEALY)
    - Polar Class reliability Improvement
    - Coastal Patrol Boat
  - Aircraft: None
  - Shore: None
  - Sensors:
    - Surface Search Radar
    - Long Range Search Capability Preservation

- Coastal Zone Assets
  - Vessels
    - 225' Seagoing Buoy Tender Replacement
    - 175' Coastal Buoy Tender Replacement
    - 49' Stern-Loading Buoy Tender (BUSL)
    - 47' Motor Lifeboat (MLB)

- Inland Waters Assets -- None

- Command, Control, Communications, Computers, Sensors, Reconnaissance (C4ISR)
    - Ports and Waterways Safety System
    - National Distress System Modernization
    - Fleet Logistics System
    - Marine Information for Safety and Law Enforcement

- Shore/Support Infrastructure (under development)

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FY 2000 Budget Request by Account: Acquisition, Construction, and Improvements

U.S. Coast Guard Justification – FY 2000 OMB Stage: Acquisition, Construction, and Improvements

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Appendix A: Capital Asset Baseline Inventory

Overview

This appendix consists of a series of Inventory Pages that describe the assets currently in the Coast Guard's capital base. It is arranged by the asset categories laid out earlier in this document: Deepwater, Coastal Zone, Inland, C4ISR and Shore/Support Infrastructure. The purpose of the inventory pages is to provide a standardized, compact but comprehensive overview of each of the classes or individual assets that, as components of a system of systems, provide the tools the Coast Guard employs in carrying out its mandated missions. As a package, the inventory pages form a complete picture of the "current state" of each of the five systems of systems the ACP is built around. It is referred to in the OMB Capital Programming Guide discussion of Agency Capital Plans as the baseline against which all capital asset planning and management are measured and evaluated. For the purpose of the Coast Guard ACP, the inventory pages are the background against which capability gap analysis is conducted, requirements are validated, and current or future capital investments will be measured.

Content and Format

The Asset Inventory Pages are designed to present a comprehensive overview of the current inventory in a standardized format that highlights all of the major attributes of the assets listed. The inventory sheets are arranged by system (Deepwater, Coastal, Inland, C4ISR and Support), and within each system are grouped or listed individually depending on the nature of the asset, number of assets in a class or group, or functional contribution. Each inventory page lists the asset by name or class/functional description; includes a photo or line drawing of a representative unit in the class or functional group (or individually for single major units); has a section describing what the asset is generally used for; has a section discussing the details of the class or functional group; includes a discussion of the funding history and operating/maintenance cost of the assets in a class (or representative asset in a functional group) related to maintaining asset capability; reviews current and anticipated future efforts focusing on preserving or replacing the capability; and a section graphically portraying the history of investments in major/minor AC&I and OE (O&M) funding related to maintaining asset capability. The information is presented on facing pages so the reader can see a complete life history and requirements/capabilities overview of the assets at a glance.

Treatment of Assets by Class, Functional Groups or Individually

In order to keep this section to a manageable size while still communicating useful information, assets are grouped by class, function or are listed individually. The actual groupings follow the following criteria: *Cutters Aircraft and Boats* grouped by overall class (378' WHEC, 270' WMEC, HH-60, 210' WMEC, 110' WPB, 47' MLB, 140' WTGB, WLB, WLM, HC-130, etc.); *functionally similar operational units* by type (Stations, ANTs, MSO, Groups, AIRSTAs, etc); *C4ISR systems* by major types (NDS, VTS, SWIII, DGPS, etc); *administrative units* by function (ISC, NESU, ESU, CEU, etc); and *major shore units* individually (either major HQ units or any unit that has an assigned facilities engineer). Outliers with significant individual or class value, such as Coast Guard housing, also have pages.

Responsibility for Creating, Maintaining the Asset Inventory Pages

Program managers assigned responsibility for managing the assets listed in the inventory pages possess virtually all of the data that is contained in these inventory pages. How each program manager/asset manager captures and maintains the data is up to that individual or program director, however they should attempt to use

standard data whenever possible that is obtained from the core logistics/support manager for that asset (ELC for cutters, AR&SC for aircraft, etc.). As part of the business planning process, the compilation and submission of ACP-formatted Asset Inventory Pages is the responsibility of the designated asset manager in the format specified for Appendix B to the Business Plan. Because these inventory pages form the core of the ACP, and the ACP is generated annually in the fall, updates to inventory pages need only be made once a year for submission to G-CPP by 15 OCT.

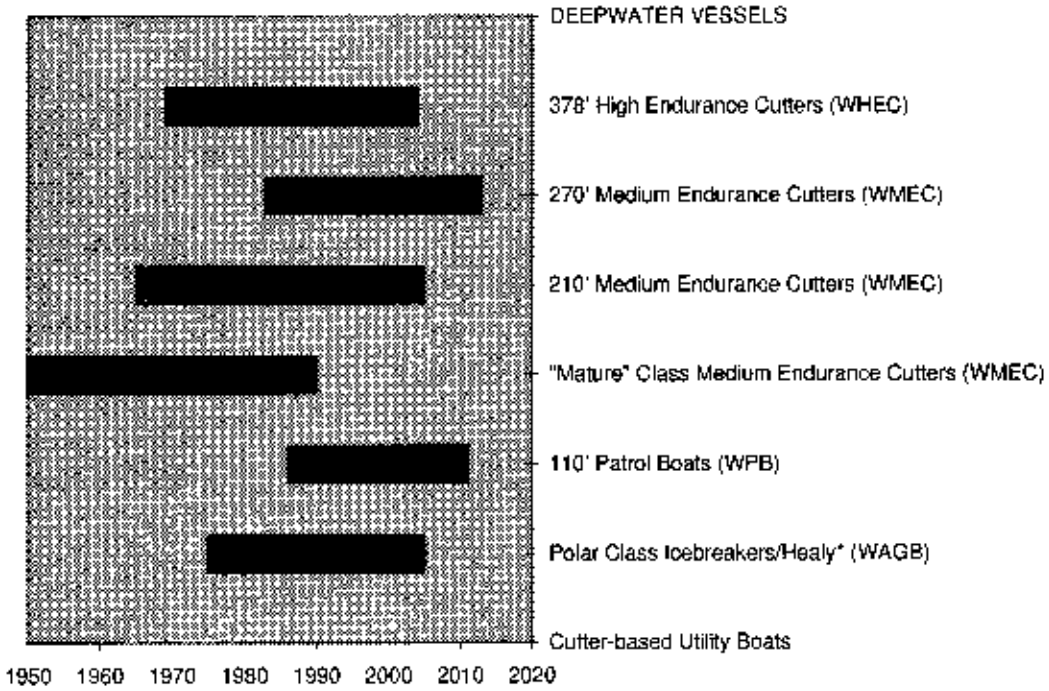
Continuous Improvement of the ACP Baseline Inventory

As the concept of a cradle-to-grave asset portfolio management system matures, the Inventory Page section will be modified to reflect improving asset management abilities on the part of program managers. By the FY2002 ACP, fully supported performance-based ROE/ROI analysis will replace the current generic discussion of costs and capability maintenance. This analysis will include all operating and maintenance funding cash flows and include the results of periodic condition/functionality assessments.

Linkage to Performance Plan

Additional information that links the investments described in these sheets to the annual performance goals and Coast Guard outcomes they support is available in the Coast Guard FY1999 Annual Performance Plan and will be incorporated in future iterations of the ACP. As with the tracking of asset costs and condition throughout an asset's life cycle, linkage of the asset portfolio to the performance plan is an iterative process that will take several years to mature.

ASSET	Commissioned	Service Life	PESL
DEEPWATER VESSELS			
378' High Endurance Cutters (WHEC)	1969	35	2003
270' Medium Endurance Cutters (WMEC)	1983	30	2012
210' Medium Endurance Cutters (WMEC)	1965	40	2004
"Mature" Class Medium Endurance Cutters (WMEC)	1950	40	1989
110' Patrol Boats (WPB)	1986	25	2010
Polar Class Icebreakers/Healy* (WAGB)	1975	30	2004
Cutter-based Utility Boats	N/A		



1. ASSET

399' (123M) Polar Class Ice Breaker (WAGB)

2. WHAT IT DOES

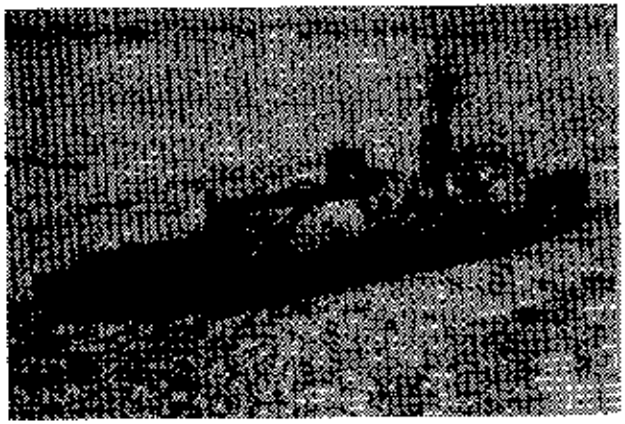
The two Polar Class vessels, POLAR STAR and POLAR SEA, are the largest ships operated by the Coast Guard. These ships are capable of continuous progress through ice six feet thick at a speed of three knots.

3. ASSET FUNDING HISTORY

The POLAR STAR was built in 1975. The Polar SEA was built in 1977. A polar science upgrade was completed in 1994.

4. INVENTORY / LOCATION

Both ice breakers are homeported in Seattle, Washington.



5. CAPABILITY DISCUSSION

Displacement:	13,190 tons full load
Length:	399 ft (123M)
Beam:	84 ft (26M)
Speed:	20 kts
Power Plant:	Three gas turbines, six diesels, three shafts.
Range:	28,000 nm
Armament:	Two .50 cal machine guns
Aircraft:	Two HH-65
Complement:	15 Officers, 119 enlisted.
	4 officers, 10 enlisted for aviation detachment

Projected end of service life is 2007-2012.

6. CAPABILITY PRESERVATION

Overall condition is fair to good. A ship's structural and machinery evaluation board conducted in 1992 determined that there are no major structural problems, and with the Reliability Improvement Project (RIP), 15-20 years of service life remain.

7. FUNDING GRAPHS

Annual O & M costs:
(estimate only, based on POLAR class funding, actual funding levels to be determined)

Personnel	$5,477K
Energy	1,523
AFC 30	2,231
AFC 42	76
AFC 45	3,096
Total	$12,403K

1. ASSET

USCGC HEALY, Polar Ice Breaker (WAGB)

2. WHAT IT DOES

The HEALY will replace the Polar ice breaking capability lost by the decommissioning of the Wind class ice breakers. It will perform as a world class high latitude research platform, designed to function for extended winter operations in both the Arctic and Antarctic. In addition to supporting scientific research, HEALY will provide ice escort to supply vessels supporting Arctic installations and bases, and Antarctic Treaty inspection teams.

3. ASSET FUNDING HISTORY

Initial funding was provided in the 1990 DoD budget. Detailed design began in 1993. The HEALY was delivered in 1998.

4. INVENTORY / LOCATION

The homeport for HEALY is Seattle, Washington.

5. CAPABILITY DISCUSSION

Displacement:	16,000 tons full load
Length:	420 ft (128M)
Beam:	82 ft (25)
Speed:	17 kts
Power Plant:	Diesel Electric, two shafts.
Range:	16,000 nm
Aircraft:	Two HH-65
Complement:	12 Officers, 63 enlisted, 35 scientists.
	4 officers, 10 enlisted for aviation detachment

HEALY can break 4.5 feet of ice continuous at 3 knots.

6. CAPABILITY PRESERVATION

Not applicable.

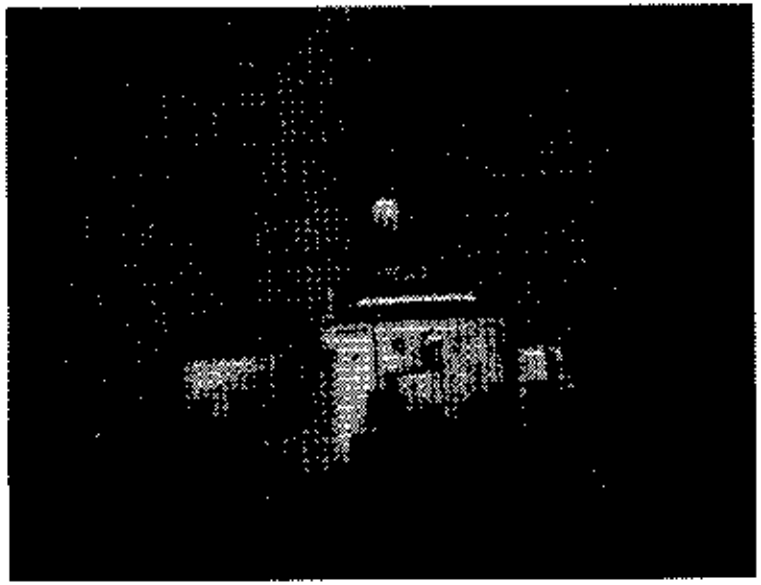
7. FUNDING GRAPHS

Annual O & M costs:
(estimate only, based on POLAR icebreakers, actual funding levels TBD)

Personnel	$5,477K
Energy	1,523
AFC 30	2,231
AFC 42	76
AFC 45	3,096
Total	$12,403K

1. ASSET

378' (115M) Hamilton Class High Endurance Cutter (WHEC)



2. WHAT IT DOES

The 12 ships in the HAMILTON class were commissioned in the late 1960s and early 1970s. All of the cutters have undergone a Fleet Rehabilitation and Modernization (FRAM) program which upgraded the cutters' air search radar, fire control systems, weapons, and added a retractable helicopter hangar. They can land and support one HH-65. They have as their principal missions law enforcement, defense operations, and search and rescue. Roles within the law enforcement mission include fisheries enforcement, drug interdiction, and illegal immigration interception.

3 ASSET FUNDING HISTORY

In October of 1985, the Hamilton class began an extensive Fleet Rehabilitation and Modernization (FRAM) program which included upgrading the cutters' radar, fire control systems, weapons, sensors, and helicopter flight deck facilities. The last cutter completed FRAM in September 1992.

4. INVENTORY / LOCATION

Charleston, SC	2
San Pedro, CA	2
Alameda, CA	4
Seattle, WA	2
Honolulu, HI	2
Total	12

5. CAPABILITY DISCUSSION

Displacement:	3,300 tons full load
Length:	378 ft (115M)
Beam:	42 ft (13M)
Speed:	29 kts
Power Plant:	Two diesel engines, 7,000 bhp Two gas turbines
Range:	14,000 nm
Armament:	One Mk 75/76 Oto Malera, two 25mm, CIWS, 2 Mk 30 SRBOC launchers
Aircraft:	1 HH 65
Complement:	18 officers, 147 enlisted

Projected end of service life ranges from 2004 to 2007.

While this is the most sophisticated class of cutters that the Coast Guard operates, there are significant areas that need improvement to maintain effectiveness. These areas lie mainly in the sensor and command and control areas. In addition, the gas turbines that provide the high speed response capability are increasingly difficult to support. The U.S. Navy is also decreasing its inventory of the Mk 75 Oto Malera and accompanying fire control system, thereby phasing out supportability for the main weapon system.

6. CAPABILITY PRESERVATION

The replacement for these cutters will be determined as part of the Deepwater Replacement Project. The Deepwater concept evaluation will examine the appropriate mix of cutters and aircraft to perform all required missions, in the most cost effective manner. One of the major goals of the project will be to attain significant savings through reduced crewing.

7. FUNDING GRAPHS

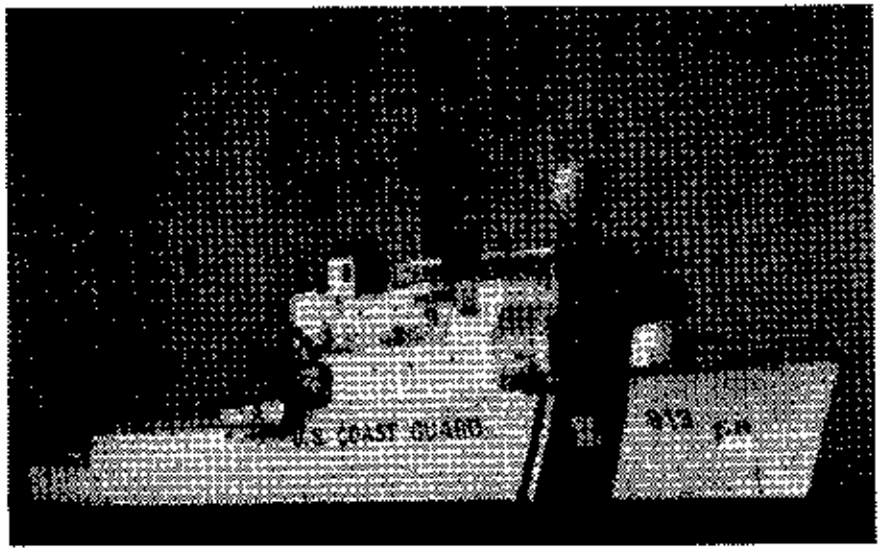
Annual O & M costs:

Personnel	$6,191K
Energy	883
NAVORD	461
AFC 30	700
AFC 42	244
AFC 45	759
Total	$9,240K

note: Maintenance Augmentation Teams and pipeline training add an additional $331K to O& M costs.

1. ASSET

270' (82M) Famous Class Medium Endurance Cutter (WMEC)



2. WHAT IT DOES

The thirteen Famous-class cutters began entering service in 1983, and are primarily assigned law enforcement, defense operations, and search and rescue. Their law enforcement missions include drug and illegal immigrant operations, and fisheries enforcement. These ships can support and hangar one HH-65 or HH-60 helicopter.

3. ASSET FUNDING HISTORY

Commissioned beginning in 1983.

4. INVENTORY / LOCATION

Boston, MA	3
New Bedford, MA	2
Portsmouth, VA	6
Key West	2
Total	13

5. CAPABILITY DISCUSSION

Displacement:	1,820 tons full load
Length:	270 ft (82M)
Beam:	38 ft (11.6M)
Speed:	19.5 kts
Power Plant:	Two diesel engines, 7,300 bhp
Range:	9,900 nm
Armament:	One Mk 75/76 Oto Malera, two .50 cal, 2 Mk 30 SRBOC launchers
Aircraft:	1 HH-65 or HH-60
Complement:	14 officers, 86 enlisted

Projected end of service life starts in 2009.

Like the Hamilton class cutters, the support for the main weapon system of the Famous class cutters is threatened by being phased out of the U.S. Naval inventory.

6. CAPABILITY PRESERVATION

The overall condition of the Famous Cutter class is considered to be good. A ship's structure and machinery evaluation board conducted in 1994 determined that there were 15 years of service life remaining. A mid life renovation is under consideration for replacing some auxiliary systems that have become a concern. This renovation, and the eventual disposition of the class will be part of the Deepwater Replacement Project.

7. FUNDING GRAPHS

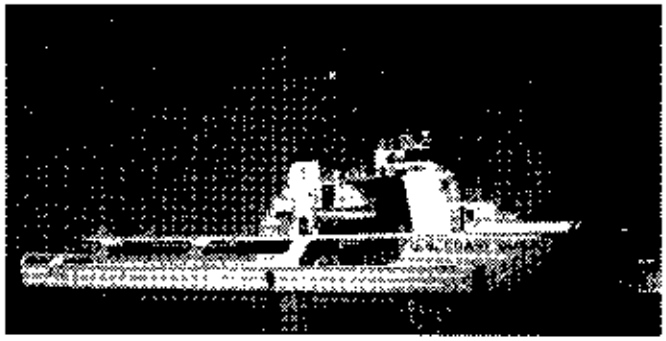
Annual O & M costs:

Personnel	$3,838K
Energy	631
NAVORD	233
AFC 30	652
AFC 42	362
AFC 45	510
Total	$6,227K

note: Maintenance and Weapons Augmentation Teams and pipeline training add an additional $744K to O& M costs.

1. ASSET

210' (64M) RELIANCE Class Medium Endurance Cutter (WMEC)



2. WHAT IT DOES

The sixteen RELIANCE class cutters were built between 1964 69 and are primarily assigned law enforcement and search and rescue missions. They can support one HH-65 helicopter, but have no hangar facilities. The last of the RELIANCE class cutters completed Major Midlife Availability (MMA) in 1998.

3. ASSET FUNDING HISTORY

Commissioned between 1964 and 1969, all RELIANCE class cutters have completed MMA.

4. INVENTORY / LOCATION

New Castle, NH	1
Cape May, NJ	1
Wilmington, NC	1
Florida	7
Galveston, TX	1
Astoria, OR	2
Port Angeles, WA	1
Portsmouth, VA	1
Pascagoula, MS	1
Total	16

5. CAPABILITY DISCUSSION

Displacement:	1,020 tons full load
Length:	210 ft (64M)
Beam:	34 ft (10.4M)
Speed:	18 kts
Power Plant:	Two diesel engines, 5,000 bhp
Range:	6,100 nm
Armament:	One 25mm, two .50 cal machine guns
Aircraft:	One HH-65 (no hangar)
Complement:	12 officers, 63 enlisted

Projected end of service life is 2001-2014.

6. CAPABILITY PRESERVATION

The projected service life following MMA is expected to be 15 years. The first post-MMA Ship's Structure and Machinery Evaluation Board has been conducted but the final report has not been completed. The replacement for the Reliance class MEC will be determined as part of the Deepwater Replacement Project.

7. FUNDING GRAPHS

Annual O & M costs:

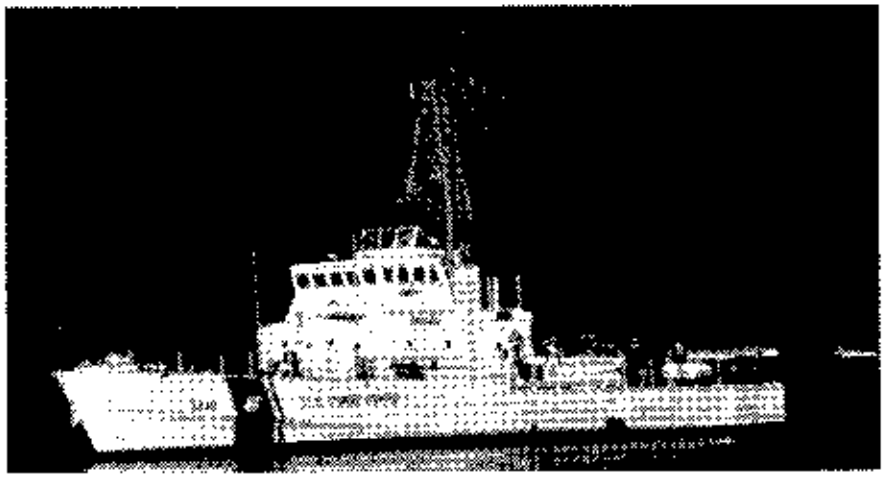
Personnel	$2,873K
Energy	255
NAVORD	5
AFC 30	381
AFC 42	95
AFC 45	465
Total	**$4,074K**

1. ASSET

110' (34M) Island Class Patrol Boat (WPB)

2. WHAT IT DOES

The 49 Island class patrol boats were commissioned between 1986 1992 in two classes. The primary difference is in the configuration of the interior spaces, and hulls 1338 1349 have Caterpillar engines instead of Paxman Valenta diesels. The missions of these cutters are law enforcement, search and rescue, defense operations, and marine environmental response.



3. ASSET FUNDING HISTORY

Commissioned between 1986 and 1992.

4. INVENTORY / LOCATION

District	One	7
	Five	4
	Seven	18 (includes four in Puerto Rico)
	Eight	5
	Eleven	4
	Thirteen	2
	Fourteen	4 (includes one in Guam)
	Seventeen	5
Total		49

5. CAPABILITY DISCUSSION

Displacement:	154 tons full load
Length:	110 ft (34M)
Beam:	21 ft (6.4M)
Speed:	Hulls 1301-1337 29.5 kts +
	Hulls 1338-1349 25 kts +
Power Plant:	Hulls 1301-1337 Two Paxman Valenta Diesels
	Hulls 1338-1349 Two Caterpillar 3516 Diesels
Range:	1,900 nm
Armament:	One 25mm, two .50 cal machine guns
Complement:	2 officers, 14 enlisted

Projected end of service life is 2010-2015.

6. CAPABILITY PRESERVATION

Two Ship's Structure and Machinery Evaluation Boards were convened in 1995 and determined that the "A" and "B" classes (hulls 1301 1337) had over 10 years of service life remaining. Since these cutters operate extensively in the Deepwater mission area as well as Coastal, their replacement will be evaluated as part of the Deepwater Replacement Project.

7. FUNDING GRAPHS

Annual O & M costs:

Personnel	$627K
Energy	102
NAVORD	18
AFC 30	103
AFC 42	31
AFC 45	200
Total	$1,081K

1. ASSET

USCGC STORIS (230' WMEC)

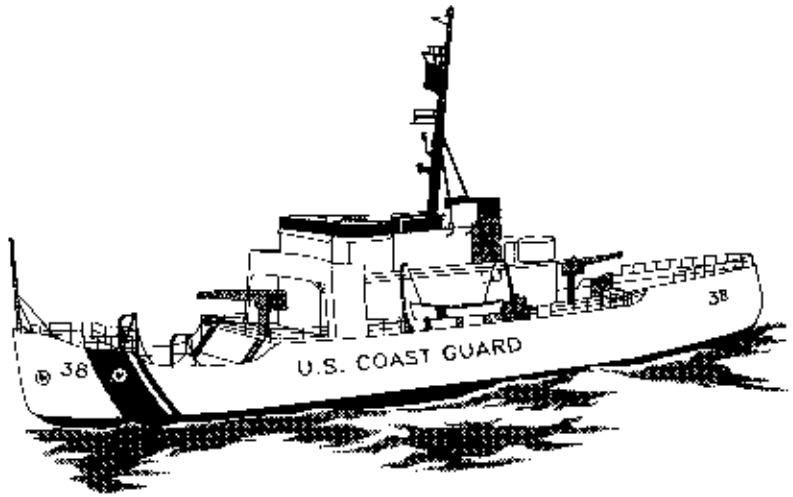
2. WHAT IT DOES

The STORIS was built in the 1940's and performs fisheries enforcement and search and rescue.

3. ASSET FUNDING HISTORY

4. INVENTORY / LOCATION

The STORIS is the only vessel of its kind in the Coast Guard's inventory, and is homeported in Kodiak, Alaska.



5. CAPABILITY DISCUSSION

Displacement:
Length:
Beam:
Speed:
Powerplant:
Range:
Armament:
Complement: 10 officers, 68 enlisted

Projected end of service life is _____.

6. CAPABILITY PRESERVATION

Discussion of plans/studies underway relative to maintaining needed capability, modernization or improvement/upgrade plans approved, whether this (these) assets will be replaced and how as a function of projected future requirements.

(Also address potential savings from reduction in # of assets if more capable asset is built new WLB, etc.)

7. FUNDING GRAPHS

Annual O & M costs:

- Personnel
- Energy
- NAVORD
- AFC 30
- AFC-42
- AFC-45

Total

1. ASSET

USCGC ACUSHNET (213' WMEC)

2. WHAT IT DOES

The ACUSHNET was built in the 1940's and performs fisheries enforcement and search and rescue.

3. ASSET FUNDING HISTORY

4. INVENTORY / LOCATION

The ACUSHNET is the only vessel of its kind in the Coast Guard's inventory, and is homeported in Ketchikan, Alaska.

5. CAPABILITY DISCUSSION

Displacement:
Length:
Beam:
Speed:
Powerplant:
Range:
Armament:
Complement: 9 officers, 66 enlisted

6. CAPABILITY PRESERVATION

7. FUNDING GRAPHS

Annual O & M costs:

- Personnel
- Energy
- NAVORD
- AFC-30
- AFC-42
- AFC-45

Total

1. ASSET

Cutter Based Boats: Cutter Boats-Large (CB-L), Medium (CB M), Small (CB-S) and Motor Cargo Boats (MCB)

2. WHAT IT DOES

3. ASSET FUNDING HISTORY

4. INVENTORY / LOCATION

5. CAPABILITY DISCUSSION

Physical Characteristics:

- Length Overall:
- Beam:
- Draft:
- Cargo:
- Hull Material:
- Fuel Capacity:

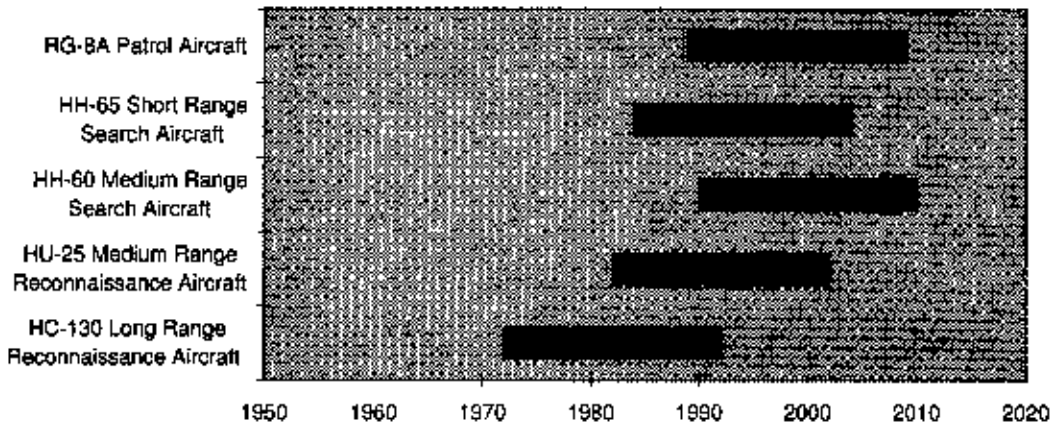
Operational Characteristics:

- Speed:
- Range:

6. CAPABILITY PRESERVATION

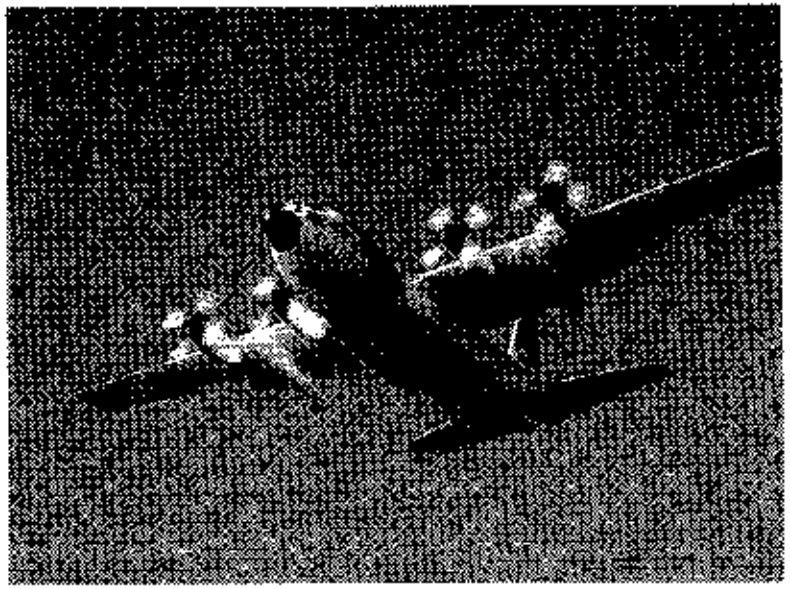
7. FUNDING GRAPHS

ASSET	Commissioned	Service Life	PESL
DEEPWATER AIRCRAFT			
HC-130 Long Range Reconnaissance Aircraft	1972	20	1991
HU-25 Medium Range Reconnaissance Aircraft	1982	20	2001
HH-60 Medium Range Search Aircraft	1990	20	2009
HH-65 Short Range Search Aircraft	1984	20	2003
RG-8A Patrol Aircraft	1989	20	2008



1. ASSET

HC 130H, 4-engine turbo prop maritime patrol aircraft



2. WHAT IT DOES

The HC 130 Hercules is a long range surveillance (LRS) and transport, fixed-wing aircraft that effectively supports the following Coast Guard missions: search and rescue; enforcement of laws and treaties; (including illegal drug interdiction); marine environmental protection; and International Ice Patrol over the North Atlantic as well as cargo and personnel transport and military readiness. Inertial Navigation Systems, Omega, Loran-C, Global Positioning System (GPS), and radar are guidance aids that enhance the HC 130's effectiveness during long-range maritime patrols. The HC-130 is also equipped with scanner windows and a ten-tube flare launch system. The four engine turboprop Hercules is manufactured by Lockheed Martin Company in Marietta, Georgia.

3. ASSET FUNDING HISTORY

Initial HC 130 inventory procured beginning in 1959. Replaced 5 of these initial aircraft with current model in 73-74 at cost of $3M each. Three 1600 series acquired in 1977. The 1700 series were acquired between 82-88 at an average cost of $18M each.

Budgeted Costs: -	$75M or $2.5M/acft
Personnel:	$30M
AFC-41:	$23M
AFC-30:	$22M
Crew size:	2 pilots/1 Flight Engineer/4 aircrew
Personnel required to maintain:	22 mechanics

Upgrades/Improvements:	
FY96-97 T56 engine conversion	$20M
FY95-96 TCAS	$125K/acft
FY95-96 GPS	$820K/acft

4. INVENTORY / LOCATION

Elizabeth City, NC	5
Clearwater, FL	7
Sacramento, CA	4
Kodiak, AK	6
Barbers Point, HI	4
Support Allowance	4
Total	30

5. CAPABILITY DISCUSSION

PESL is based upon economic factors.

The 1500/1600 series C130s PESL is: 1997-1998
The 1700 series C130s PESL is: 2003-2007

HC-130s can exceed 2,600 nautical miles in low-altitude flight with a mission endurance of up to 14 hours.

Current technical or environment issues:
- Corrosion of aircraft structural members.
- Electrical service needs upgrading to prevent voltage irregularities and possible fire or damaged equipment.
- Avionics upgrade planned due to unsupportablility of existing equipment.
- Sensor enhancements (FLIR, etc.) are in current and future budget requests.

6. CAPABILITY PRESERVATION

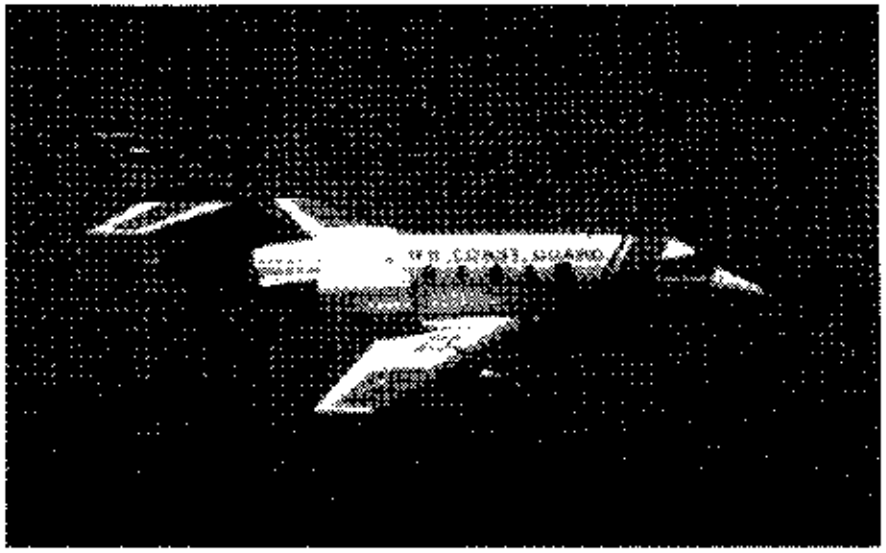
Long Range Search Capabilities Preservation Project to extend service lives of 1500/1600 series aircraft for another 12-15 years and will upgrade antiquated electrical systems and install fleet standard avionics components on all C130s. These initiatives will be instrumental in reducing rapidly increasing support costs.

7. FUNDING GRAPHS

See Section 3 costs.

1. ASSET

HU-25A/B/C 2-engine advanced turbofan jet maritime patrol aircraft



2. WHAT IT DOES

HU-25A, medium range surveillance fan jets replaced the HU-16E Albatross and the C-131A Samaritan prop driven aircraft, in the Coast Guard aviation fleet. The Guardian's modern technology and design enhances it's performance as the service's first multi-mission jet. It is twice as fast as previous Coast Guard fixed wing aircraft. The HU 25A/B/C can operate from sea level to an altitude of 42,000 feet at dash speed, an important capability for the Coast Guard missions of search and rescue, enforcement of laws and treaties, including illegal drug interdiction, marine environmental protection and military readiness. The airframes were assembled in Little Rock, Arkansas at Falcon Jet Corporation, a subsidiary of Dassault-Brequet Aviation. The acrylic search window, drop hatch for delivery of emergency equipment to vessels, and other fuselage modifications unique to Coast Guard aircraft were made at Grumman Aircraft Corporation in New York. The Garrett turbo fan engines were manufactured in Phoenix, Arizona specifically for the aircraft's long flights.

3. ASSET FUNDING HISTORY

Initial procurement began between 1982-1984. Average cost per aircraft is $5 million with a 20 year planned service life.

Budgeted Costs:	**$35M or $1.35M/acft**
Personnel:	**$12M**
AFC-41:	**$18M**
AFC-30:	**$5M**
Crew size:	2 pilots/3 aircrew
Personnel required to maintain:	**11 mechanics**

Upgrades/Improvements:

FY87 (Alpha to Charlie model conversion):	$5M/acft
FY92-93 (C+ conversion: drop hatch back):	$500K/acft
FY93-95 (TCAS):	$75K/acft
FY95-96 (GPS):	$400K/acft

4. INVENTORY / LOCATION

Cape Cod, MA	4
Miami, FL	8
Mobile, AL	5
Corpus Christi, TX	3
Support Allowance	4
Total	24

5. CAPABILITY DISCUSSION

PESL is based upon economic factors.

The HU25A/B/C PESL is 2002-2004.

HU-25A: Multi-mission (SAR & LE)
HU-25B: Multi-mission plus AIREYE. The HU 25B "Aireye" equipped with Side Looking Airborne Radar (SLAR) and a IR/UV line scanner is also capable of conducting oil spill surveillance and ice monitoring.
HU-25C: Multi-mission plus Air Intercept. The HU-25C "Nightstalker" equipped with Air Search Radar and FLIR is also capable of conducting air intercept missions.

6. CAPABILITY PRESERVATION

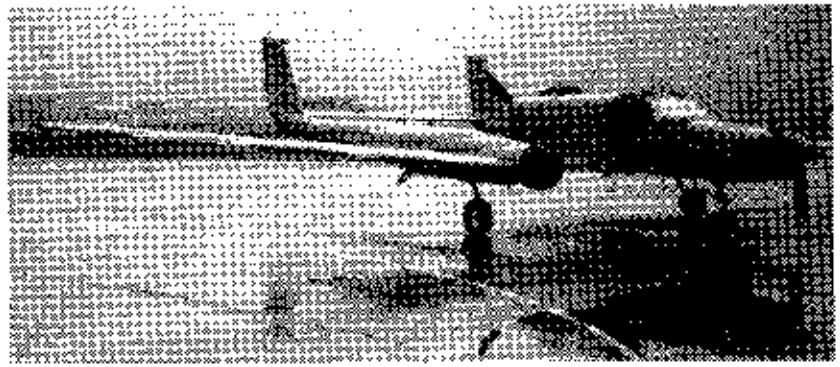
G-SRA is exploring the re-engining of all three HU-25 models. This will provide decreased operating costs with an increase in range and performance. However, this is a cost reduction program and not specfically being pursued as a performance enhancement.

7. FUNDING GRAPHS

See Section 3 costs.

1. ASSET

RG-8A, Single, reciprocating-engine maritime patrol aircraft



2. WHAT IT DOES

Due to its design characteristics, the RG 8 is capable of covert surveillance and high endurance. Equipped with Forward Looking Infrared Radar (FLIR) and Night Vision Goggle (NVG) sensors. Supports law enforcement and environmental protection missions.

3. ASSET FUNDING HISTORY

RG-8 Program Chronology

1988-89	1990	1991-1993	1994	1995
2 aircraft acquired at no cost, program begins. No mission needs statement or documented requirement for aircraft. OPEVAL found they could be safely operated. Personnel, modification & operating cost taken out of hide.	2 aircraft continue to operate. Funding for O&M provided at OPSTAGE by internal reprogramming. 4 officer & 8 enlisted billets established by internal reallocation.	2 aircraft operate from Miami. Single engine safety concerns identified. Operational commander's didn't feel modification is cost justified.	CG8101 turned over to SAC for modification. 1 operational aircraft remains, CG8102.	CG8102 lost at sea. RG-8 program ends.

4. INVENTORY / LOCATION

Miami, FL. 1

Service Life: One RG-8 is currently being modified into a RU-38. The other RG-8 aircraft in the inventory crashed and was lost at sea. For a comparison of the two aircraft see chart below.

	RG-8	RU-38
Covert	<1000 ft	>1800 ft
NVG Capable	Yes	Yes
Radar	No	Yes (Weather Radar)
FLIR	Yes Unsupportable Model	Yes Improved - Similar to HU-25C
Aircrew Size	1 Pilot 1 SSO	1 Pilot 1 SSO
Passengers	No	No
Range	800 NM	To be determined during testing but less than RG-8
Engines	1	2
Environmental Limits	Sea State Air & Water Temp Turbulence & Icing	Turbulence & Icing
Operating Cost	$341/hour	To be determined but similar

6. CAPABILITY PRESERVATION

Technical Problems: Engine Failure.. Manufacturing Defect.. Resolved
Longitudinal Trim.. New Design.. Resolved but Needs Test Flight Validation
Fuel Management.. Labor Intensive.. **Pends**
Noise Signature.. Turbocharger Proposed.. **Pends**
Rear Engine Cooling.. Resolved
Wing Fatigue..OK for now.. Eventual Replacement

	Requested	Received	Obligated	Purpose
FY 92	$ 0	$ 450K	$ 450K	Design
FY 93	$ 0	$ 3,000K	$ 3,000K	Two Aircraft
FY 93	$ 517K	$ 517K	$ 517K	Engines
FY 95	$ 1,513K	$ 1,513K	$ 1,513K	Third Aircraft
Total	**$ 2,030K**	**$ 5,470K**	**$ 5,470K**	

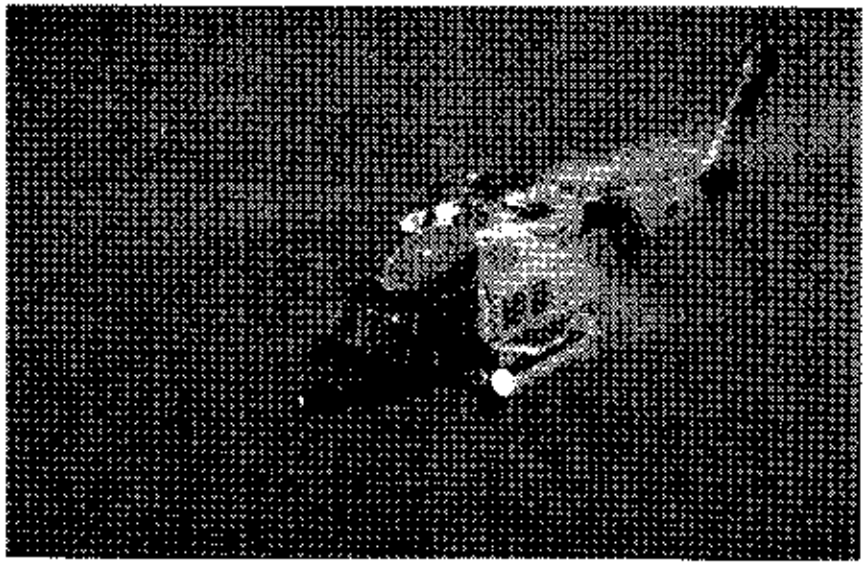
Additional Value ... Air Force Contributions -- <$100K For AF Program Management; FLIRS...$650K EA = $2,600K ; Contract Support

7. FUNDING GRAPHS

See Section 3 costs.

1. ASSET

HH-60J, twin-engine, turboshaft, medium range recovery helicopter



2. WHAT IT DOES

The United States Coast Guard has a fleet of 42 medium range Sikorsky HH-60J Jayhawks to support its search and rescue, law enforcement, military readiness, and marine environmental protection missions efficiently and effectively. The Jayhawk uses the NAVSTAR Global Positioning System as its primary long range navigational aid. On board the Jayhawk, the Collins RCVR-3A radio simultaneously receives information from four of the system's 18 worldwide satellites and converts it into latitude fixes, pinpointing the helicopter's position. The Jayhawk is manufactured by Sikorsky Aircraft Division of United Technologies in Stratford, Connecticut. General Electric builds the T700-GE 401C turboshaft engines and Rockwell International, Collins Avionics Group, manufactures the electronics system in Cedar Rapids, Iowa.

3. ASSET FUNDING HISTORY

The actual implementation of the HH-60J began in March of 1990 with the delivery of the first airframe to NAS Patuxent River, Maryland for developmental testing. ATC Mobile, Alabama was the first unit to fly the aircraft as instructor pilots prepared to begin pilot training in March 1991.

Budgeted Costs:	$70M or $1.7M/acft
Personnel:	$33M
AFC-41:	$29M
AFC-30:	$08M
Crew size:	2 pilots/1 Flight Mechanic/1 Rescue Swimmer
Personnel required to maintain:	17 mechanics

Upgrades/Improvements:	
FY96-97 TCAS	$75K/acft

*Aircraft delivered GPS equipped.

4. INVENTORY / LOCATION

HH-60J Air Stations:

ATC Mobile, Alabama	3
Kodiak, Alaska	4
Sitka, Alaska	3
San Diego, California	3
Clearwater, Florida	12
Cape Cod, Massachusetts	4
Elizabeth City, NC	3
Astoria, OR	3
Support Allowance	7
Total	42

5. CAPABILITY DISCUSSION

PESL is based upon economic factors.

The HH60J PESL is now 2011.

The Jayhawk can fly 300 miles offshore, remain on scene 45 minutes, hoist six people on board, and return to its point of origin with a safe fuel reserve. Normal cruising speeds of 135-140 knots can be increased to a "dash" speed of 180 knots when necessary. The H-60 will fly comfortably at 140 knots for 6-7 hours. Though normally stationed ashore, the Jayhawk can be carried aboard 270-foot WMEC and 378-foot WHEC Coast Guard Cutters. They assist in the missions of search and rescue, enforcement of laws and treaties including drug interdiction, marine environmental protection, and military readiness.

Major support issues have already been identified with the HH60J. Structural cracks have been identified in the main beam of the aircraft. As our aircraft are operated beyond 2005 the Coast Guard can expect a rise in the number of airframe structural cracks and a commensurate increase in support and maintenance costs.

6. CAPABILITY PRESERVATION

Crack mitigation kits currently planned for installation in our airframes are interim fixes which will enable our fleet to attain the designed service life of 2011.

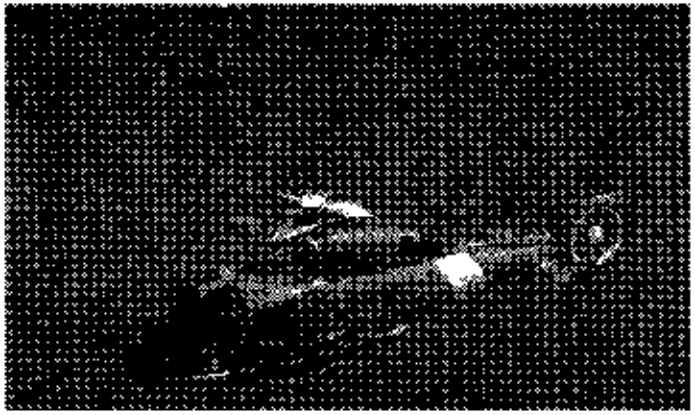
7. FUNDING GRAPHS

See Section 3 costs.

1. ASSET

HH 65A, twin-engine, turboshaft, short range recovery helicopter

2. WHAT IT DOES



The 93 short range HH 65A helicopters support the missions of search and rescue, enforcement of laws and treaties, polar ice breaking, marine environmental protection, and military readiness. The HH-65As are made of corrosion resistant, composite structure materials. The shrouded tail rotor is unique to the Dolphin. Also a unique feature of the Dolphin is its computerized flight management system which integrates state-of-the-art communications and navigation equipment. The Dolphin is manufactured by Aerospatiale Helicopter Corporation in Grand Praire, Texas. Textron Lycoming builds the LTS 101 750B 2 turboshaft engines in Williamport, Pennsylvania, and Rockwell International, Collins Avionics Group manufactures the electronics system in Cedar Rapids, Iowa.

3. ASSET FUNDING HISTORY

Initial procurement began in 1984-85. Average cost per aircraft $3.5 million.

Budgeted Costs:	$111M or $1.17M/acft
Personnel:	$46M
AFC 41:	$55M
AFC-30:	$10M
Crew size:	2 pilots/1 FlightMechanic/1 Rescue Swimmer
Personnel required to maintain:	10 mechanics

Upgrades/Improvements:

FY94-95	N2 Gearbox	$50K/acft
FY96 97	TCAS	$75K/acft
FY96-97	GPS	$360K/acft
FY96-98	NVG Cockpit Conversion	$65K/acft

4. INVENTORY / LOCATION

HH-65A Air Stations:	
Traverse City, Michigan	5
Barbers Point, Hawaii	4
Borinquen, Puerto Rico	4
Brooklyn, New York	3
Cape May, NewJersey	4
Corpus Christi, Texas	3
Detroit, Michigan	3
Houston, Texas	4
Humbolt Bay, California	3
Los Angles, California	3
Miami, Florida	9
ATC Mobile, Alabama	8
New Orleans, Louisiana	5
North Bend, Oregon	5
San Francisco, California	4
Port Angles, Washington	3
Savannah, Georgia	5
Support Allowance	10
Total	93

5. CAPABILITY DISCUSSION

PESL is based upon economic factors. The HH-65A PESL is 2005-2007. The twin engine Dolphins operate up to 150 miles off shore and will fly comfortably at 120 knots for three hours. Though normally stationed ashore, the Dolphins can be carried on board medium and high endurance Coast Guard Cutters. Current technical or environmental issues: 1) Hydro-mechanical fuel control is both maintenance intensive and at times unreliable. 2) Unsupportable avionics due to obsolescence; 3) Under utilization of current optical technologies.

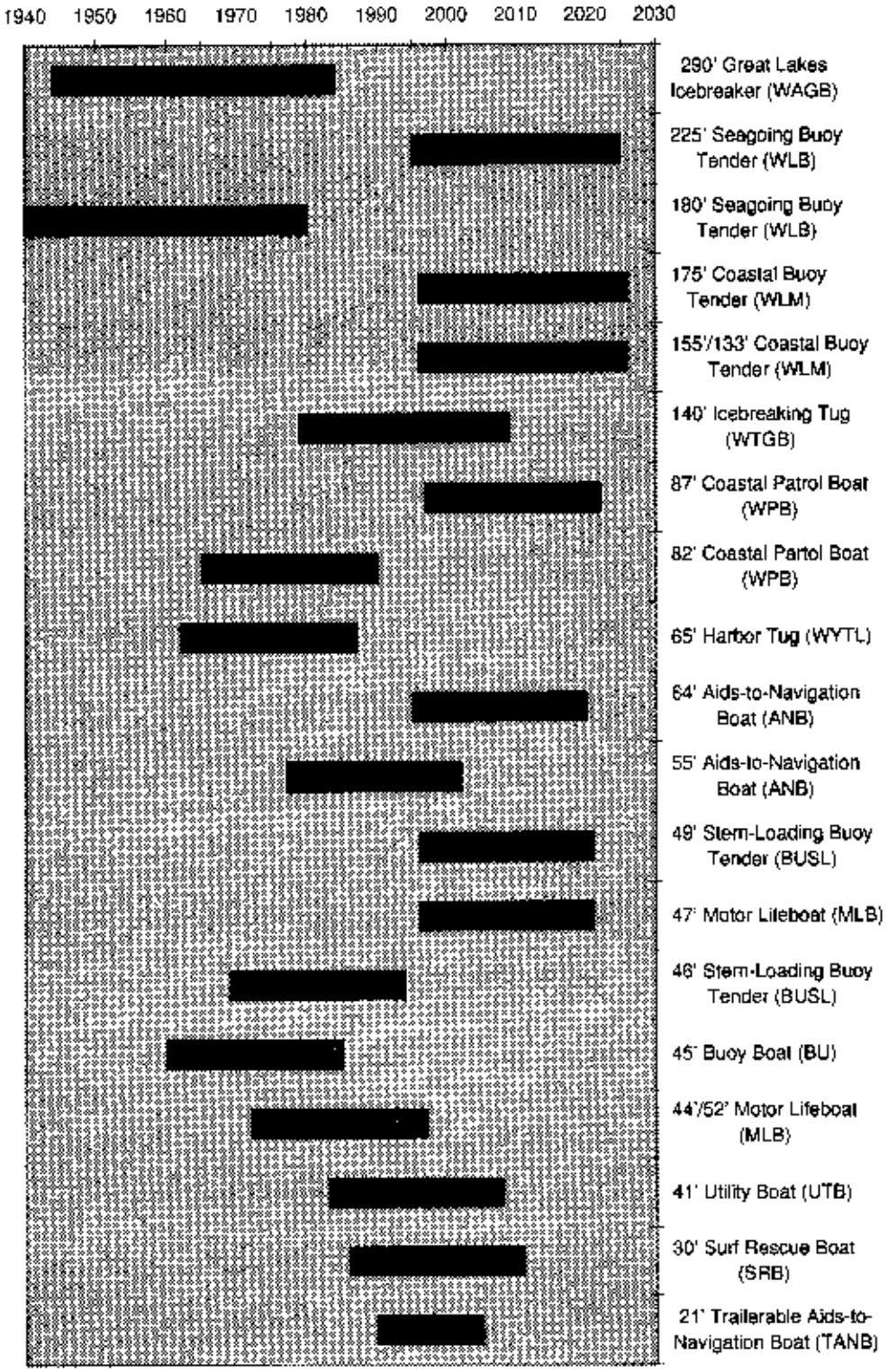
6. CAPABILITY PRESERVATION

Pursuing engine upgrades with engine manufacturer to increase power output for increased payload. Full Authority Digital Electronic Control (FADEC) for fuel supply is potential solution to fuel control issue. Avionics upgrade (CDU) planned due to unsupportablility of existing equipment Sensor enhancements (FLIR, etc.) are in future aviation plans.

7. FUNDING GRAPHS

See Section 3 costs.

ASSET	Commissioned	Service Life	PESL
COASTAL VESSELS			
290' Great Lakes Icebreaker (WAGB)	1944	40	1983
225' Seagoing Buoy Tender (WLB)	1995	30	2024
180' Seagoing Buoy Tender (WLB)	1940	40	1979
175' Coastal Buoy Tender (WLM)	1996	30	2025
155'/133' Coastal Buoy Tender (WLM)	1996	30	2025
140' Icebreaking Tug (WTGB)	1979	30	2008
87' Coastal Patrol Boat (WPB)	1997	25	2021
82' Coastal Partol Boat (WPB)	1965	25	1989
65' Harbor Tug (WYTL)	1962	25	1986
64' Aids-to-Navigation Boat (ANB)	1995	25	2019
55' Aids-to-Navigation Boat (ANB)	1977	25	2001
49' Stern-Loading Buoy Tender (BUSL)	1996	25	2020
47' Motor Lifeboat (MLB)	1996	25	2020
46' Stern-Loading Buoy Tender (BUSL)	1969	25	1993
45' Buoy Boat (BU)	1960	25	1984
44'/52' Motor Lifeboat (MLB)	1972	25	1996
41' Utility Boat (UTB)	1983	25	2007
30' Surf Rescue Boat (SRB)	1986	25	2010
21' Trailerable Aids-to-Navigation Boat (TANB)	1990	15	2004
Nonstandard Boats	N/A		
IMARV	N/A		
Transportable Port Security Boats (TPSB)	N/A		


1940
1950
1960
1970
1980
1990
2000
2010
2020
2030
290' Great Lakes Icebreaker (WAGB)
225' Seagoing Buoy Tender (WLB)
180' Seagoing Buoy Tender (WLB)
175' Coastal Buoy Tender (WLM)
155'/133' Coastal Buoy Tender (WLM)
140' Icebreaking Tug (WTGB)
87' Coastal Patrol Boat (WPB)
82' Coastal Patrol Boat (WPB)
65' Harbor Tug (WYTL)
64' Aids-to-Navigation Boat (ANB)
55' Aids-to-Navigation Boat (ANB)
49' Stern-Loading Buoy Tender (BUSL)
47' Motor Lifeboat (MLB)
46' Stern-Loading Buoy Tender (BUSL)
45' Buoy Boat (BU)
44'/52' Motor Lifeboat (MLB)
41' Utility Boat (UTB)
30' Surf Rescue Boat (SRB)
21' Trailerable Aids-to-Navigation Boat (TANB)

1. ASSET

290' (88M) Great Lakes IceBreaker (WAGB)

2. WHAT IT DOES

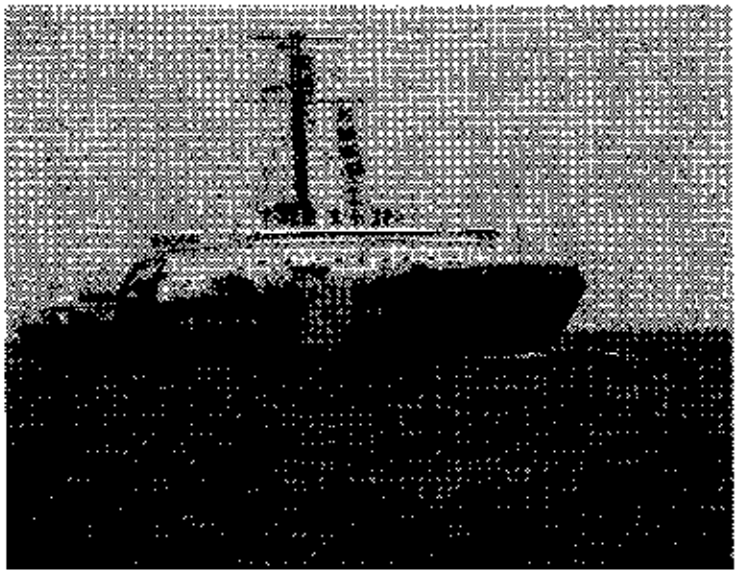
The MACKINAW is the largest U.S. ice breaker on the Great Lakes, and is the only ship of its class. It can break three feet of ice continuously at a speed of three knots and supports the mobility missions of the Coast Guard.

3. ASSET FUNDING HISTORY

Built in 1944.

4. INVENTORY / LOCATION

Homeport: Cheboygan, MI



5. CAPABILITY DISCUSSION

Displacement:	5,252 tons full load
Length:	290 ft (88M)
Beam:	74 ft (23M)
Speed:	18.7 kts
Power Plant:	Six diesels, three shafts (one fwd, two aft)
Complement:	75

Projected end of service life is 2007 2012.

6. CAPABILITY PRESERVATION

MACKINAW is expected to remain in service for the foreseeable future. Periodic upgrades will be undertaken to maintain capability.

7. FUNDING GRAPHS

Annual O & M costs:

Personnel	$2,985K
Energy	316
AFC 30	351
AFC 42	21
AFC 45	731
Total	$4,404K

1. ASSET

225' Juniper Class Seagoing Buoy Tender (WLB)

2. WHAT IT DOES

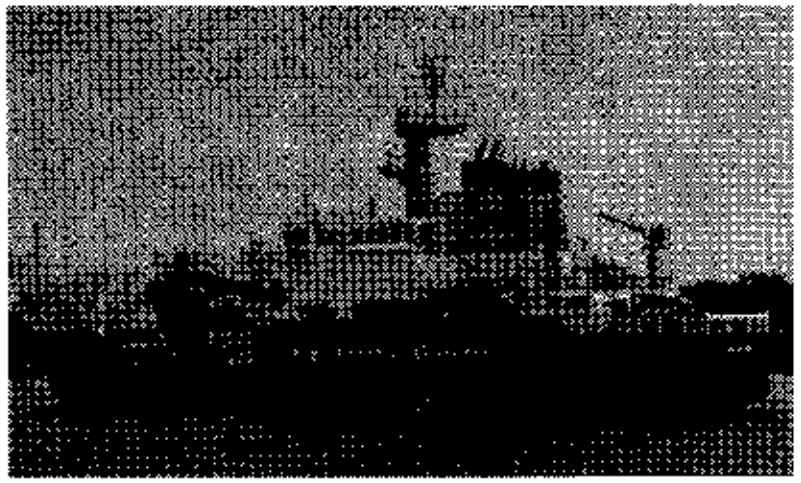
Three JUNIPER class buoy tenders have now been commissioned as part of a project to replace the 1940's era BALSAM class. These feature a twin diesel propulsion system to supply the speed and maneuverability necessary to tend off-shore buoys in exposed locations. The most important advance in capability is the use of a Dynamic Positioning System (DPS). DPS uses a differential Global Positioning System to fix positions. Using this technology, the tender can maintain position within a 10-meter circle in winds up to 30 knots and waves to 8 feet.

3. ASSET FUNDING HISTORY

None provided.

4. INVENTORY / LOCATION

Three 225' WLBs are currently in service; two are homeported in Newport, Rhode Island, and one in Honolulu, Hawaii. Eventually 16 vessels are planned to be distributed throughout East, West and Gulf Coast locations.



5. CAPABILITY DISCUSSION

6. CAPABILITY PRESERVATION

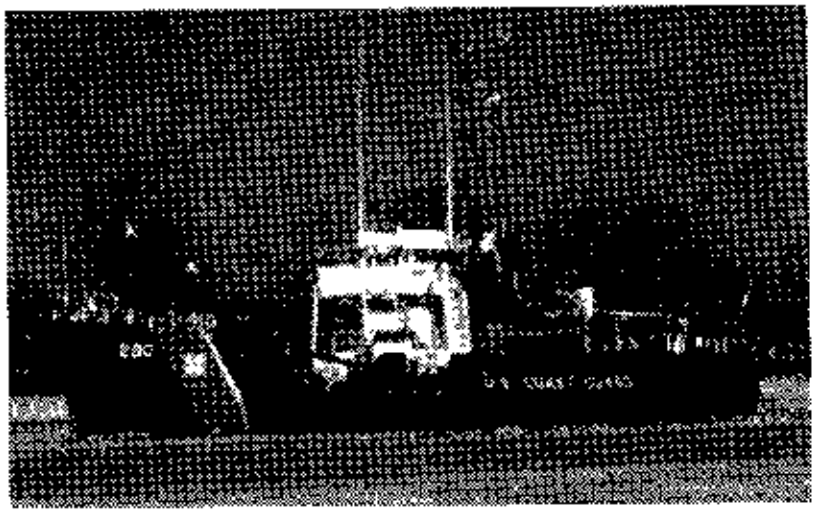
7. FUNDING GRAPHS

Annual O & M costs:

Personnel	$1,695K
Energy +AFC 30	$806
AFC42+AFC45	$543
Total	$3,044

1. ASSET

180' (54m) Seagoing Buoy Tender (WLB)



2. WHAT IT DOES

- Supports primarily the Aids to Navigation program
- Supports Mobility Goal

The 180 foot Seagoing Buoy Tenders are over 50 years old and have all been modernized at least once. These cutters are highly versatile, durable, and reliable, and capable of performing a variety of missions. They principally perform the heavy work of servicing short range aids to navigation. They also perform search & rescue, ice operations, law enforcement and provide valuable defense readiness operations.

3. ASSET FUNDING HISTORY

None provided.

4. INVENTORY / LOCATION

Total: 23

District 1:	1	District 13:	2
5:	2	14:	3
7:	2	17:	6
8:	2		
9:	3		
11:	2		

5. CAPABILITY DISCUSSION

- Projected End of Service Life: 1999—2005
- Displacement: 1,025 tons
- Power Plant: Two diesel engines
- Max Range/Speed: 4,500 13,500 miles/12-14 knots
- Typical Crew: 49 (7 Officers/42 Enlisted)

6. CAPABILITY PRESERVATION

- Being Replaced by Juniper Class Cutters
  Number planned – 16
  Crew – 40 (6 Officers/34 Enlisted)

7. FUNDING GRAPHS

Annual O & M costs:

	CONUS/OUTCONUS
Personnel	$2,105/$2,580K
Energy	79/80
AFC 30	179/179
AFC 42	16/16
AFC 45	342/342
Total	$2,721/$3,197K

1. ASSET

175' Keeper Class Coastal Buoy Tender (WLM)

2. WHAT IT DOES

The first of fourteen cutters of the Keeper Class have been commissioned. Equipped with Z-drive propulsion units combined with a thruster in the bow, these cutters are unmatched in maneuverability. With state of the art electronics and navigation systems, these buoy tenders maneuver and position aids more accurately and efficiently. Other improvements will allow the Coast Guard to decrease crew from the 24 to 34 now on current vessels of similar type, to 18. In addition to reductions in crewing for these cutters, the greater speed and buoy handling capabilities of the 30 Juoiper and Keeper class buoy tenders will enable the Coast Guard to maintain the same service formerly provided by 38 cutters.

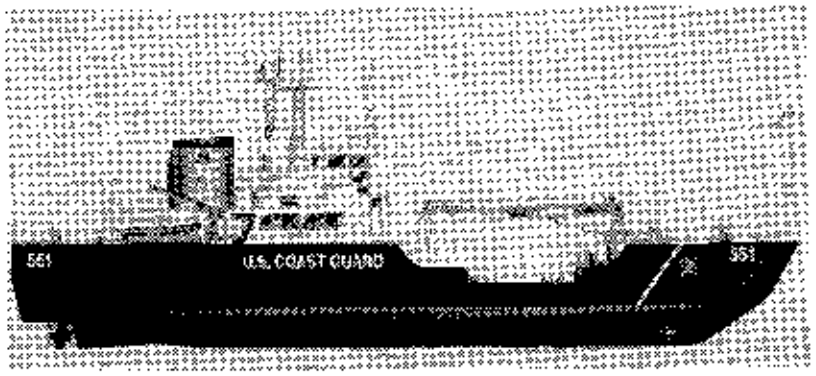
3. ASSET FUNDING HISTORY

None provided.

4. INVENTORY / LOCATION

The IDA LEWIS, commissioned in November 1996 is homeported in Newport, Rhode Island. Three additional Keeper class cutters, the KATHERINE WALKER, ABBIE BURGESS, and MARCUS HANNA were delivered in 1997, and are homeported in Bayonne, New Jersey, Rockland, Maine, and Portland, Maine.

Baltimore, Maryland, and St. Petersburg, Florida both became homes to Keeper Class ships in 1998 (JAMES RANKIN and JOSHUA APPLEBY). The FRANK DREW is scheduled to go to Portsmouth, VA in June 1999. Eight more of this class will be delivered, but their homeports are not yet determined.



5. CAPABILITY DISCUSSION

None provided

6. CAPABILITY PRESERVATION

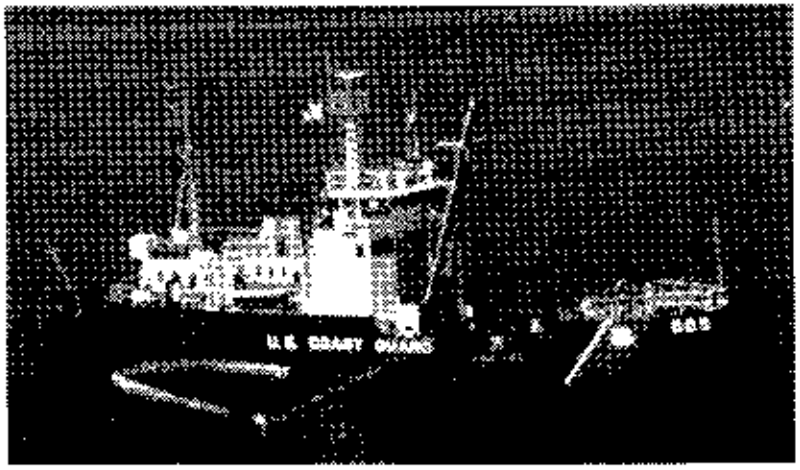
None provided

7. FUNDING GRAPHS

None provided

1. ASSET

157'/133' Coastal Buoy Tenders (WLM)



2. WHAT IT DOES

- Primarily supports Aids to Navigation program
- Supports Mobility Goal

Coastal Buoy Tenders compliment Seagoing Buoy Tenders in servicing short range aids to navigation. Along with the seagoing and inland buoy tenders, they keep our waterways properly marked for safe navigation. They also provide icebreaking, search & rescue, and defense readiness operations.

3. ASSET FUNDING HISTORY

None provided.

4. INVENTORY / LOCATION

		157'	133'
District	5:	2	
	8:		2
Total:		2	2

5. CAPABILITY DISCUSSION

- Range: 3,000—4,500 miles
- Max Speed: 10 knots
- Crew (133'): 24 (1 Officer/23 Enlisted)
  (157'): 33 (5 Officers/28 Enlisted)

6. CAPABILITY PRESERVATION

- Both remaining 157's to be decommissioned by 1999. Both remaining 133's by 2002.
- Replaced by Keeper Class 175' Coastal Buoy Tenders (WLM)

7. FUNDING GRAPHS

None provided.

1. ASSET

140' (43M) Bay Class Ice Breaking Tug (WTGB)

2. WHAT IT DOES

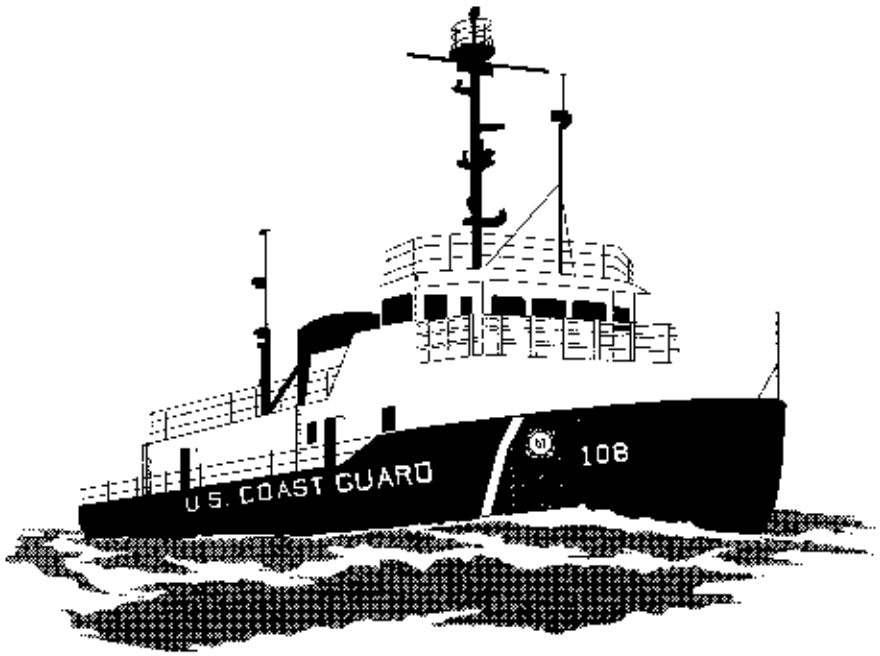
These small, multi-mission cutters are especially configured for ice breaking on the Great Lakes, in coastal waters, and in rivers. In addition, they conduct search and rescue, enforcement of laws and treaties, deployment of marine environmental protection equipment, port safety operations, and support for aids to navigation on the Great Lakes.

3. ASSET FUNDING HISTORY

Commissioned between 1979-1984

4. INVENTORY / LOCATION

District	One:	3
	Five:	1
	Nine:	5



5. CAPABILITY DISCUSSION

Displacement:	690 tons full load
Length:	140 ft (43M)
Beam:	37 ft (11M)
Speed:	14.7 kts
Power Plant:	Two diesels, one shaft
Complement:	2 officers, 15 enlisted

Projected end of service life is 2009-2014.

This class of ships incorporates an advanced hull design and engineering plant, along with a hull air lubrication (bubbler) system for effective ice breaking and winter flood relief operations. The Bay class cutters embody the Coast Guard's minimally manned cutter concept.

Two of the cutters have been provided with barges to service floating aids to navigation on the Great Lakes.

6. CAPABILITY PRESERVATION

No service life extension or renovation is currently scheduled.

7. FUNDING GRAPHS

Annual O & M costs:

Personnel	$648K
Energy	262
AFC 30	189
AFC 42	10
AFC 45	209
Total	$1,318K

1. ASSET

87' (26.5M) Coastal Patrol Boat (CPB)

2. WHAT IT DOES

The 87' Patrol Boat will replace the 37 Point class cutters and will perform law enforcement and search and rescue missions. The first of this class is currently under construction at Bollinger Shipyard.

3. ASSET FUNDING HISTORY

Seven hulls were delivered in 1998.

Delivery Schedule:
1999 - 11
2000 - 13

4. INVENTORY / LOCATION

The Coastal Patrol Boats will replace the 82' Point class. The final number and disposition will be determined from the results of the Coastal Zone Mission Analysis.

5. CAPABILITY DISCUSSION

Displacement:	91 Tons @ full load
Length:	87ft (26.5)M
Beam:	19.5ft (6M)
Speed:	25kts +
Power Plant:	Two MTU 396TE94 Diesels
Range:	900 nm +
Armament:	Two .50 cal machine guns
Complement:	1 officer, 10 enlisted

Projected end of service life is 2003 (lead ship) to 2025.

Displacement, speed, and range are based on the latest design calculations.

6. CAPABILITY PRESERVATION

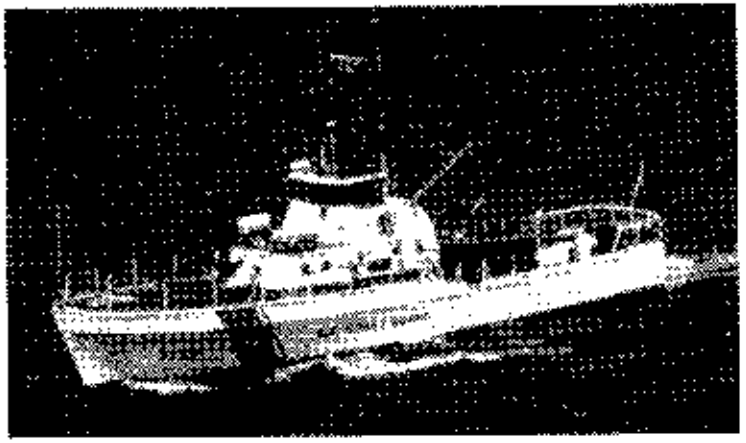
Not applicable.

7. FUNDING GRAPHS

None provided.

1. ASSET

82' (25M) Point Class Patrol Boat (WPB)



2. WHAT IT DOES

The 37 Point class cutters were built between 1960-1970, and perform law enforcement and search and rescue. These cutters will be replaced by the 87' Coastal Patrol Boat, the first of which is currently under construction at Bollinger Shipyard.

3. ASSET FUNDING HISTORY

Of the 79 Cutters built between1959 1979, 26 were turned over to the South Vietnamese government in 1969-1970. 16 have been decommissioned due to damage, poor condition, or as part of budget streamlining.

4. INVENTORY / LOCATION

District	One	4
	Five	6
	Seven	6
	Eight	9
	Eleven	8
	Thirteen	3
	Fourteen	1
Total		37

5. CAPABILITY DISCUSSION

Displacement:	67.6 tons full load
Length:	82 ft (25M)
Beam:	17.6 ft (5.4M)
Speed:	22 kts
Power Plant:	Two Caterpillar D341 2 Diesels
Range:	1,580 nm
Armament:	Two .50 cal machine guns
Complement:	10

Projected end of service life is 1999.

6. CAPABILITY PRESERVATION

The overall condition of the Point Class fleet has been assessed as fair. Based on Ship's Structure and Machinery Evaluation Boards held in 1993, the hull and structure are expected to last until 2003. Replacement of this class by the 87' Coastal Patrol Boat (CPB) started in 1998.

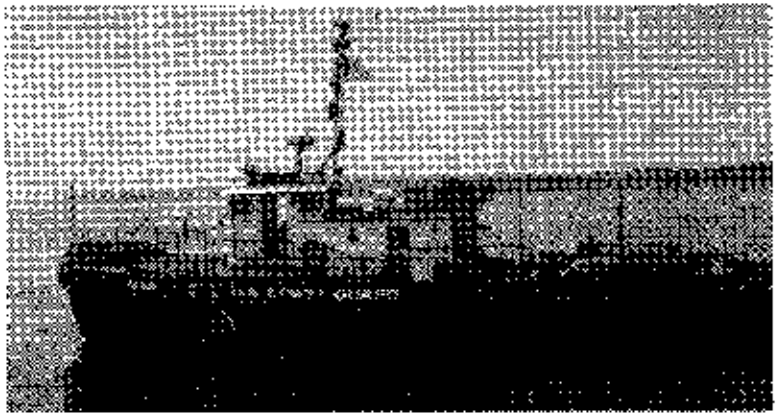
7. FUNDING GRAPHS

Annual O & M costs:

Personnel	$389K
Energy	27
NAVORD	1
AFC 30	44
AFC 42	29
AFC 45	97
Total	$ 590K

1. ASSET

65' (20M) Harbor Tugs, Small (WYTL)



2. WHAT IT DOES

The primary activities of these small harbor tugs are domestic ice breaking, port security, search and rescue, and law enforcement operations in rivers and near shore areas.

3. ASSET FUNDING HISTORY

Commissioned between 1962-1967.
"A" Class re-engined 1993-94.
Three cutters decommissioned in 1995.

4. INVENTORY / LOCATION

Maine:	3
Massachusetts:	1
Connecticut:	1
New York:	3
Pennsylvania:	1
Virginia:	2
Total	**11**

5. CAPABILITY DISCUSSION

Displacement:	72 tons full load
Length:	65 ft (20M)
Beam:	19 ft (6M)
Speed:	10 kts
Power Plant:	One 400hp diesel.
Complement:	6

Projected end of service life is 2002-2007.

6. CAPABILITY PRESERVATION

Overall condition is considered good based on a ships' structure and machinery evaluation board conducted in 1991.

7. FUNDING GRAPHS

Annual O & M costs:

Personnel	$221K
Energy	72
AFC 30	43
AFC 42	3
AFC 45	51
Total	$ 360K

1. ASSET

64' (20M) Aids to Navigation Boat (ANB)

2. WHAT IT DOES

The 64' ANB project was initiated to provide an off-the shelf vessel to work in the riverine environments deemed unsuitable for a stern loading buoy boat (i.e. 49' BUSL). The 64' ANB supports the following programs: Aids to Navigation, Marine Environmental Protection, Port Safety and Security, Search and Rescue.

3. ASSET FUNDING HISTORY

The 64' ANB project began in 1995 with a $2.7 million, three boat contract with Owen-Short Manufacturing, Inc. in Bayou La Batre, Alabama. In 1996 an option was awarded to build one additional boat for $785,000. The funding per hull is currently $31,000 for AFC-30, $5,000 for AFC 45 funding, and $1,300 for AFC 42 funding.

4. INVENTORY / LOCATION

All four 64' ANBs are located in the Eigth District. One boat at ANT Eufala, one boat at ANT Corpus Christi, one boat at ANT Galveston, and the last boat scheduled to be assigned to ANT Colfax.

5. CAPABILITY DISCUSSION

Physical Characteristics:

Length Overall:	63'8"
Beam:	24'
Draft:	4'
Cargo:	24,000 lbs
Hull Material:	steel

Operational Characteristics:

Speed:	10 kts
Range:	300 NM
Crew	4
Maximum Seas:	3'
Maximum Winds:	30 mph
Not Surf Capable	

The 64' ANB is limited in its ability to work in non-protedted open environments and ice conditions.

The projected end of service life for these boats begins in 2016.

6. CAPABILITY PRESERVATION

The 64' ANBs are the ideal replacement for the gap identified in the Short Range Aids Mission Analysis (SRAMA). Operational Test and Evaluation has been completed and has proven this is the right platform for the job assigned. We plan to conduct additional analyses to identify all areas where the requirements may dictate a need for a 64' ANB. However, a new solicitation would be needed before more could be purchased. Present support funding levels may be inadequate and additional data is being collected to determine whether this is the case.

7. FUNDING GRAPHS

Graphs showing funding history/investment history of the unit(s) and average O&M costs related to maintaining capability over service life of asset. For classes, average across individual units. For major shore, look at total facility. For C4ISR, look at systems not components of other major assets. Plot from pre acquisition to today, indicate PESL point.

1. ASSET

55' (17) Aids to Navigation Boat

2. WHAT IT DOES

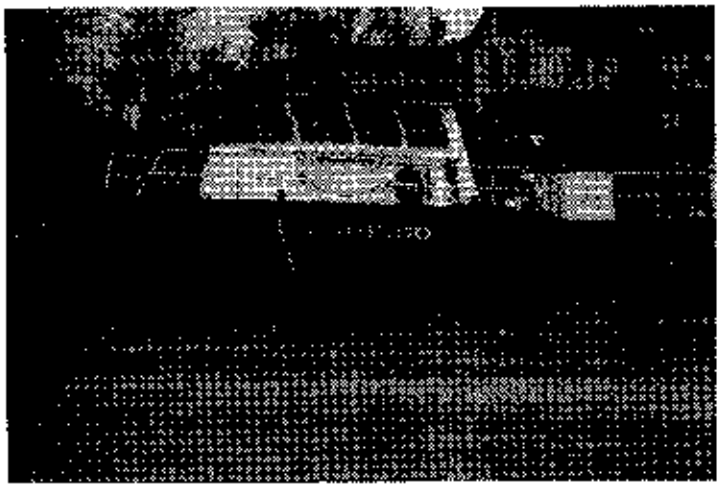
To be developed.

3. ASSET FUNDING HISTORY

None provided.

4. INVENTORY / LOCATION

To be developed.



5. CAPABILITY DISCUSSION

Physical Characteristics:

- Length Overall:
- Beam:
- Draft:
- Cargo:
- Hull Material:
- Cruising Range:

Operational Characteristics:

- Speed:
- Range:

6. CAPABILITY PRESERVATION

None provided.

7. FUNDING GRAPHS

To be developed.

1. ASSET

49' Buoy Boat-Stern Loading (BUSL)

2. WHAT IT DOES

The 49' BUSL was designed primarily to work floating Aids to Navigation up to 5'11' in size (4500 lbs). The 49' BUSL supports the following programs: Aids to Navigation, Marine Environmental Response, Port Safety and Security, Search and Rescue.

3. ASSET FUNDING HISTORY

The 49' BUSL project began in 1985. However, while DOT sought to see if commercializing ATON would be more efficient, funding was cut off. Once it was discovered commercialization was not more cost effective, the project was refunded and it began again in 1990. In late 1995, the first two pre-production boats were built and eventually delivered to the Coast Guard in 1996 at a cost of $4 million. In late 1996, the Coast Guard decided to build the remaining 34 boats at the Coast Guard Yard. The total acquisition is expected to cost $60 to 66 million. Standard maintenance funding for each hull is: AFC-30 $31,000 per year, AFC-45 $3,300; and AFC-42 $1300; and will be offset by 45'BU and 46' BUSLs taken out of service.

4. INVENTORY / LOCATION

To date we have only the two pre-production boats: one in the First District and one in the Fifth District. The remaining boats will be spread throughout the Coast Guard replacing all 45' Bus, 46' BUSLs, and WLIs.

5. CAPABILITY DISCUSSION

Physical Characteristics:

Length Overall:	49'6"
Beam:	16'8"
Draft:	5'4"
Cargo:	16,000 lbs
Hull Material:	steel

Operational Characteristics:

Speed:	10 kts
Range:	300 NM
Crew:	4
Maximum Seas:	6'
Maximum Winds:	30 mph

Not Surf Capable

There still remains a gap in the capability to work aids in some riverine environments. More mission analysis needs to be completed. The 64' ANB may be key to filling this gap. The projected end of service life for these vessels will begin the year 2016.

6. CAPABILITY PRESERVATION

The 49' BUSL will replace all the 45' Bus, 46' BUSLs, and WLIs. It will also replace some WLICs and backfill for the WLB/WLM in some regions. All of these actions are recommendations in the Short Range Aids Mission Analysis (SRAMA). SRAMA was completed in 1993 and has been updated/revalidated continuously since its inception. Upon completion of SRAMA it is estimated that we will realize approxiamtely $3.8 million in cost avoidances. The 49' BUSL incorporates tremendous improvements over the older 45' BU and 46' BUSLs, which it will replace. Some of those improvements are: improved habitability, icebreaking capability, seakeeping ability, and twin engine propulsion.

7. FUNDING GRAPHS

To be developed.

1. ASSET

47' (15M) Motor Lifeboat (MLB)

2. WHAT IT DOES

The 47' MLB is primarily designed as a fast response rescue resource in high seas, surf and heavy weather environments. It is the replacement for the aging 44' MLB fleet which is quickly nearing the end of its useful service-life.

Strategic goals supported:

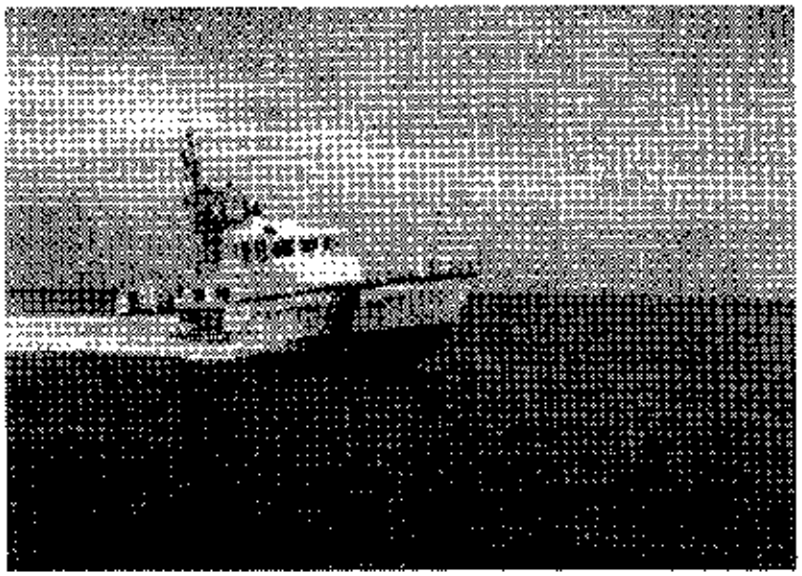
- Search and Rescue
- Maritime Law Enforcement
- Port Security
- Marine Environmental Protection

3. ASSET FUNDING HISTORY

This AC&I project was begun in 1986 and $11M was expended in pre-production efforts. In FY-95, $31M was spent on the first 20 production boats, with the first delivery occurring in June 1997. In exercising our next option in FY 97, another $26M was obligated for an additional 20 vessels. The remaining project is expected to cost between $85.4M and $105.4M depending on whether or not the Coast Guard simply replaces current capability or meets the actual full SAR demand for this platform.

4. INVENTORY / LOCATION

Presently, the Coast Guard operates one prototype, 5 pre production, and 5 production models within the First, Fifth and Thirteenth Districts. In addition to the districts presently assigned 47' MLBs, the Ninth and Eleventh Districts will also receive production boats. Final inventory numbers range from 86 to 106, Coast Guard wide, pending results of final on-going analysis.



5. CAPABILITY DISCUSSION

Physical Characteristics:

Length Overall:	47' 11"	Beam:	14' 6"
Draft:	4' 6"	Cargo:	
Hull Material:	Aluminum	Cruising Range:	200 NM

Operational Characteristics:

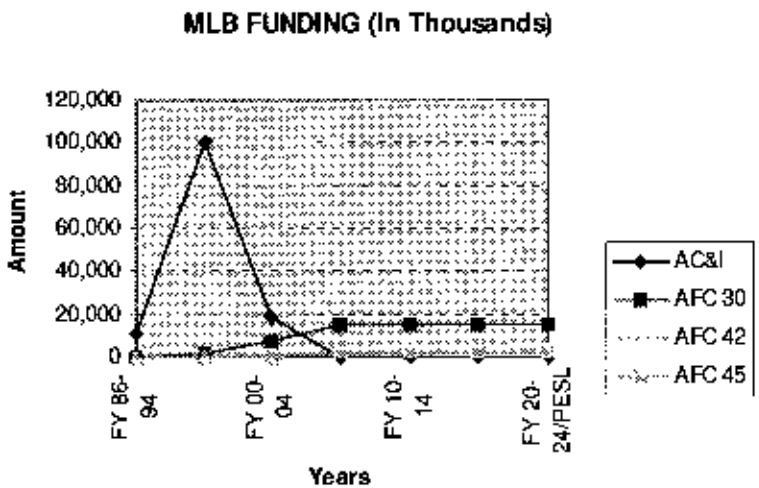
Speed:	25+ Knots	Range:	200 NM
Crew:	4	Maximum Seas:	30' (20' surf)
Self Righting/Self Bailing (in 8 seconds or less)		Maximum Winds:	50 kts

The acquisition of the 47' MLB represents a significant improvement in capability over the Coast Guard's present heavy weather resource fleet. It incorporates inherent self-righting capability with the fast response dimension lacking in the 44' MLB fleet.

6. CAPABILITY PRESERVATION

Since this is one of the Coast Guard's newest boat assets, capability preservation is presently limited to accurately determining and providing the proper maintenance funding required. This will ensure the 47' MLB effectively serves throughout the entire expected 25 year service life. On-going efforts such as the Coastal Zone Mission Analysis and the Value Added Analysis will determine the actual number of replacement MLBs required.

7. FUNDING GRAPHS



1. ASSET

45' (14M) Buoy Boat (BU) and 46' (14M) Buoy Boat-Stern Loading (BUSL)

2. WHAT IT DOES

The 46' BUSL and the 45' BU were designed to service aids to navigation in inland waters, and support the following programs:

- Aids to Navigation
- Marine Environmental Response
- Port Safety and Security

The 45' BUs have been in service since the 1950s and all will be replaced by the 49' BUSL this year.

3. ASSET FUNDING HISTORY

Fifteen 46' BUSLs were built between 1966 and 1969 at a cost of $154,000 each. Seventeen 45' BUs were purchased between 1954 and 1962 at a cost of $132,000 each. Standard maintenance funding for ATON boats did not commence until 1986. AFC 30 funding for each hull (of both classes) was then set at $31,000 per year, AFC-45 at $3,300 and AFC 42 at $1300.

4. INVENTORY / LOCATION

There are thirteen 46' BUSLs and six 45' BU's remaining in service.

		46' BUSL	45' BU
District	1:	10	4
	5:	1	2
	9:	2	
Total:		13	6

5. CAPABILITY DISCUSSION

Physical Characteristics:	46' BUSL	45' BU
Length Overall:	46'4"	45'3"
Beam:	16'2"	15'
Draft:	5'1"	3'2"
Cargo:	16,000 lbs	20,800 lbs
Hull Material:	steel	steel

Operational Characteristics:		
Speed:	9 kts	8.5 kts
Range:	440 NM	550 NM
Crew:	4	4
Maximum Seas:	3 ft	2 ft
Maximum Winds:	30 mph	20 mph

Limited berthing areas and crew support capability, no mixed gender provisions. Hoisting capabilities limited to buoys up to 4,000 lbs. All 46' and 45' BU's are scheduled to be replaced by 49' BUSLs by the end of 1999. This replacement is in keeping with recommendations of the Short Range Aids Mission Analysis. Id asset in terms of cost and capability/capacity.

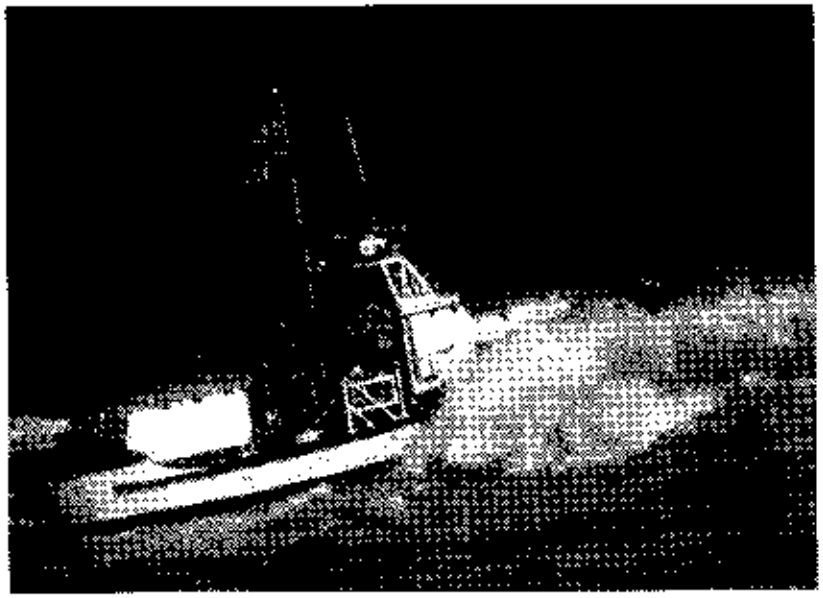
6. CAPABILITY PRESERVATION

Maintenance funding continues until the boats are replaced.

7. FUNDING GRAPHS

1. ASSET

44' (13) and 52' (16M) Motor Lifeboats (MLB)
(44' MLB pictured)



2. WHAT IT DOES

The 44' MLB is the Coast Guard's standard heavy weather and surf rescue response platform. It is quickly nearing the end of its useful service life and replacements by the 47' MLB have begun and will continue through the year 2002. Strategic goals supported are Search and Rescue, Maritime Law Enforcement, Port Security, Marine Environmental Protection, and Recreational Boating Safety.

3. ASSET FUNDING HISTORY

Production of the 44' MLB began at the Coast Guard Yard in 1961 and continued until 1972, with 105 boats begin built during that period. Average cost for each hull was $225,000 (based upon 1972 dollars). Presently, $3.5M is spent annually in operating and maintenance costs for the 89 MLBs remaining in the fleet. This represents a cost of $40.7K for each hull in service.

4. INVENTORY / LOCATION

The fleet of 44' MLBs is presently comprised of 89 boats. Five are used as training platforms at the National Motor Lifeboat School (Ilwaco, WA), 16 operate in the Great Lakes region, 36 serve in the Northeast and Mid-Atlantic coastal areas and the remaining 32 vessels are operated in the Pacific Northwest (22) and California (10). There are only four 52' MLBs and all augment the 44' MLB capabilities within the Thirteenth District.

5. CAPABILITY DISCUSSION

Physical Characteristics:

Length Overall:	44' 2"
Beam:	12' 8"
Draft:	3' 6"
Cargo:	3780 lbs/21 persons
Hull Material:	Alloy steel

Operational Characteristics:

Speed:	13 KTS
Range:	215 NM
Crew:	3
Maximum Seas:	30'/20' Surf

Self-Righting/Self-Sailing (in 30 seconds or less)

The 44' MLB fleet is being systematically replaced with the newer, faster, more capable 47' MLB. Transition to the 47' MLB will be completed by the year 2002.

6. CAPABILITY PRESERVATION

Despite its age, the 44' MLB has proven itself to be a very reliable asset. Mechanical supportability has emerged as a concern since some parts are no longer being manufactured. However, overall the fleet is in fair condition and should serve without major problems until the transition to the new MLB is complete.

DGPS capability is being added to enhance navigation capability. There are no other planned upgrades.

7. FUNDING GRAPHS

1. ASSET

41' (13M) Utility Boat Big (UTB)

2. WHAT IT DOES

The 41' UTB is the general workhorse at multi mission units. It is designed to operate under moderate weather and sea conditions where its speed and maneuverability make it an ideal platform for a variety of missions.

Strategic goals supported:

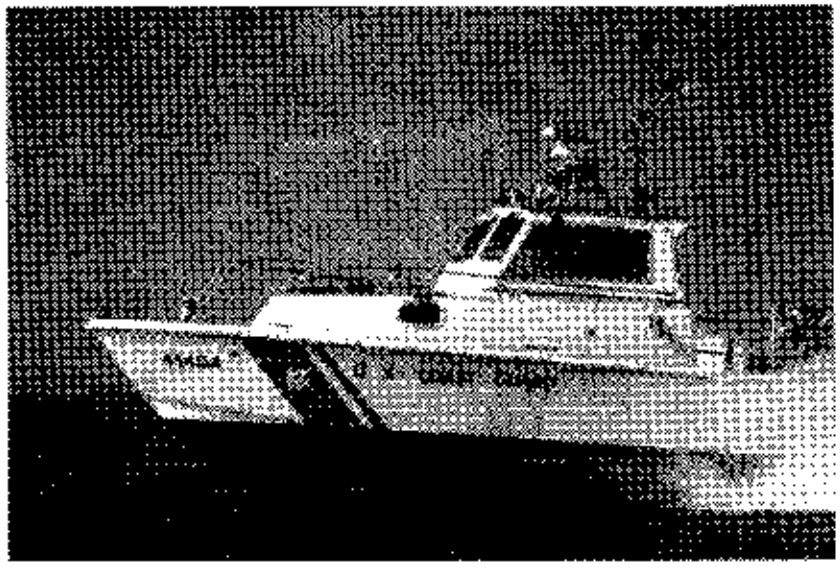
- Search and Rescue
- Maritime Law Enforcement
- Port Security
- Marine Environmental Protection
- Recreational Boating Safety

3. ASSET FUNDING HISTORY

The 41' UTB was built at the Coast Guard Yard beginning in 1973. The production run ended in 1983 with 207 UTBs being built. The average cost per hull, based upon 1979 figures, was $235,000. Annually, support costs for each UTB averages $38,200, totaling just over $7.5M for the entire fleet. This figure is rising as the "multi-mission workhorse" ages and accumulated operating hours (610/year) require engine overhauls ($35K each).

4. INVENTORY / LOCATION

The 197 boats comprising the 41' UTB fleet can be found in service in all Coast Guard districts. 12 are located at the UTB Systems Center in Yorktown, VA where training and prototyping efforts are carried out. 22 UTBs are assigned on the West Coast, including Hawaii and Alaska. The remainder (163) are assigned throughout the East and Gulf Coasts and Puerto Rico.



5. CAPABILITY DISCUSSION

Physical Characteristics:

Length Overall:	40' 8"
Beam:	13' 6"
Draft:	4' 0"
Cargo:	4000 lbs/22 persons
Hull Material:	Aluminum

Operational Characteristics:

Speed:	26 Knots
Range:	300 NM
Crew:	3
Maximum Seas:	10'
Maximum Winds:	30 Knots
Not Surf Capable	

Continued high tempo operations at or near established operating limits have resulted in numerous structural weld cracks in the UTB's hull. These have been systematically corrected as a class wide problem. The advent of numerous go-fast vessels with superior speed capabilities over the UTB has reduced its effectiveness in certain law enforcement and chase/fast response situations. In 1998, a Ship's Structure and Machinery Evaluation Board will be convened to assess the UTB's condition class-wide. Presently, the UTB is expected to continue serving until approximately the year 2010.

6. CAPABILITY PRESERVATION

Presently, the UTB fleet is undergoing an upgrade of its electronics package, which includes GPS integrated with radar and the addition of an HF radio for reliable offshore communications.

Even though the manufacturer has stopped producing the Cummins VT903 engines used in the UTB, sufficient spares exist within our inventory to continue safe and reliable operations. Other accessories (helm assembly, etc.) have become obsolete and are no longer produced.

Upon completion, the Coastal Zone Mission Analysis will describe the capabilities required of a replacement boat.

7. FUNDING GRAPHS

1. ASSET

30' (9M) Surf Rescue Boat (SRB)

2. WHAT IT DOES

The 30' SRB is a Search and Rescue response platform designed to augment the capabilities of the 44' (13M) Motor Lifeboat (MLB) in moderately heavy seas and surf conditions (6'-8' surf) where high transit speeds are important.

Strategic goals supported:

- Search and Rescue

3. ASSET FUNDING HISTORY

Willard Marine built the original 14 SRBs placed into service during the period 1982 to 1986. Average cost for each hull was $113,000.

Annual operating cost per hull is $16,550 which amounts to ~$150,000 for the entire fleet of nine boats still in service.

4. INVENTORY / LOCATION

Almost all the nine 30' SRBs currently in service today are located on the West Coast – two in the Eleventh District and six in the Thirteenth District. The remaining SRB is located on the East Coast in the First District.

5. CAPABILITY DISCUSSION

Physical Characteristics:

Length Overall:	30' 4"
Beam:	9' 4"
Draft:	3' 7"
Cargo:	1080 lbs/6 persons
Hull Material:	Solid Glass Reinforced Plastic

Operational Characteristics:

Speed:	31 Knots
Range:	150 NM
Crew:	2
Maximum Seas:	15'/10' Surf
Self Righting/Self Bailing	

The 30' SRB was specifically designed and built to meet the fast response/high speed requirement not provided by the capabilities of the much slower 44' MLB. It is also capable of safely towing distressed vessels up to 40' in length. Its maneuverability, coupled with speed capability makes it an excellent surf zone response vessel.

6. CAPABILITY PRESERVATION

A Ship's Structure and Machinery Evaluation Board convened in September of 1996 to determine the materiel condition of the SRB fleet. Overall, it was determined the fleet was in "Good to Fair" condition and had an estimated remaining service-life of 5-10 years. The only major class-wide problem noted was water intrusion in the hull. No action on a class-wide basis is planned to correct this problem.

On-going efforts such as the Coastal Zone Mission Analysis will determine if a replacement of this capability is required, especially in light of the recent introduction of the 47' MLB into the Coast Guard's inventory.

7. FUNDING GRAPHS

1. ASSET

21' Trailerable Aids to Navigation Boat (TANB)

2. WHAT IT DOES

The 21' TANB is a multi mission platform, primarily designed to bring versatility and speed to the ATON rapid discrepancy response mission. It can also service small buoys up to 250 lbs. Strategic goals supported:

- Aids to Navigation
- Marine Environmental Response
- Port Safety and Security

3. ASSET FUNDING HISTORY

Seventy eight 21' TANBs were built between 1986 and 1990 at a cost of $34,000 each. Standard maintenance funding for ATON boats commenced in 1986. AFC 30 funding for each hull was set at $8,500 per year, AFC 45 at $300, and AFC-42 at $200.

4. INVENTORY / LOCATION

There are seventy 21' TANBs remaining in service, as a result of boats becoming excess to units' needs after district ATON restructuring. The boats are located as follows:

District	1:	12
	5:	9
	7:	14
	8:	16
	9:	11
	11:	4
	13:	4
Total:		70

5. CAPABILITY DISCUSSION

Physical Characteristics:

Length Overall:	21' 6.5"
Beam:	7' 6"
Draft:	1' 4"
Cargo:	2000 lbs
Hull Material:	Aluminum

Operational Characteristics:

Speed:	30 Knots
Range:	100 NM
Crew:	3
Maximum Seas:	3'
Maximum Winds:	20 Knots

Not Surf Capable

6. CAPABILITY PRESERVATION

The 21' TANB has been an outstanding platform for the Coast Guard since its inception. We are currently renovating TANBs when their engines wear out. This renovation program has proven itself successful. Five to seven years of additional service are gained at half the cost of a new boat. At the conclusion of the renovation of the remaining boats we will have realized approximately $1.6 million in cost avoidances.

7. FUNDING GRAPHS

To be developed.

1. ASSET

Non-standard Boats (NSB) -- Miscellaneous, shore based

2. WHAT IT DOES

NSBs can be single (cable boats, flood relief punts, etc.) or multi-mission (UTL) boats filling in the capability gaps (fast response, shallow water response, cargo, etc.) of other unit assigned resources.

Startegic goals supported:

- Search and Rescue
- Maritime Law Enforcement
- Port Security
- Aids to Navigation
- Marine Environmental Protection
- Recreational Boating Safety

3. ASSET FUNDING HISTORY

NSBs have not been the subject of centralized procurement efforts at HQ involving AC&I funds. District Commanders are authorized to procure non standard boats to fill operational needs linked to authorized allowances. Annually the Coast Guard spends between $1.3 million and $2.5 million (AFC 30) funds on NSB replacements. The replacement value of our current shore based NSB inventory (excluding RIBs and IMARV) is approximately $7.1 million. Support costs total $857,000 annually.

4. INVENTORY / LOCATION

The 220 NSBs in 10 different categories serve throughout the Coast Guard, though not all categories are represented Coast Guard-wide. These platforms represent 27% of our entire boat inventory. Many perform a variety of missions, while others are used exclusively for specialized missions (ie. Cable laying/retrieval boats, ferry, ice rescue skiffs, etc.) NSBs offer flexibility, at a reduced cost.

Additionally, 25 transportable port security boats are also maintained by various Port Security Units (PSUs) and the PSU Training Detachment in Port Clinton, Ohio.

5. CAPABILITY DISCUSSION

Physical Characteristics:

Length Overall:	15' to 90'
Beam:	3' to 30'
Draft:	6" to 3'10"
Cargo:	800 lbs to 5 tons
Hull Material:	aluminum
	fiberglass
	reinforced plastic
	steel
	rubber
Crew:	0 to 5

Operational Characteristics:

Speed:	2 to 30+ kts
Range:	5 to 120 NM
Maximum Seas:	1' to 10'
Maximum Winds:	15 to 20 kts

NSBs are excellent resources to fill gaps at shore-based units where geographic area or specific employment requirements necessitate their need.

6. CAPABILITY PRESERVATION

UTLs and PWB/Ms experience gel coat cracks, water intrusion into the hull, and transom stress failures like the RIB. Due to the age of these hulls, close evaluation and good maintenance are required to extend their useful lives. Many of the NSBs, such as PWB and UTL, are being phased out in favor of RIBs, or are approaching the end of their useful life (ie. Cable boat and LARC).

7. FUNDING GRAPHS

To be developed.

1. ASSET

Rigid Inflatable Boats - Big (RIBB), Medium (RIBM), and Little (RIBL)

2. WHAT IT DOES

Discussion of contribution to mission. For operational assets, which strategic goals it serves, program it works in, functional capability, employment history and highlights.

3. ASSET FUNDING HISTORY

Date and cost of acquisition (or distribution of acquisition/cost of elements of major shore plant over time), history of major maintenance or upgrade investments, average annual O&M costs related to preserving capability (by class for ships/boats/AC; by representative unit for shore of similar type; by individual unit for major shore; by system for C4ISR not installed on other major assets).

4. INVENTORY / LOCATION

What we have and where. For classes of cutters/boats or aircraft either list individually with homeports, or generically discuss number and general location. For shore facilities (major) list what we have at that location and what it does (minor) list typical locations, total number, etc.

5. CAPABILITY DISCUSSION

Physical Characteristics:
- Length Overall:
- Beam:
- Draft:
- Cargo:
- Hull Material:
- Cruising Range:

Operational Characteristics:
- Speed:
- Range:

ID performance gaps that need to be addressed in 2 5 year term.

Also highlight problem areas, technology issues, etc. For newest assets, discuss improvement over old asset in terms of cost and capability/capacity.

(NOTE - this block is the bridge to chapter 2 discussion and project sheets/LRRAP)

6. CAPABILITY PRESERVATION

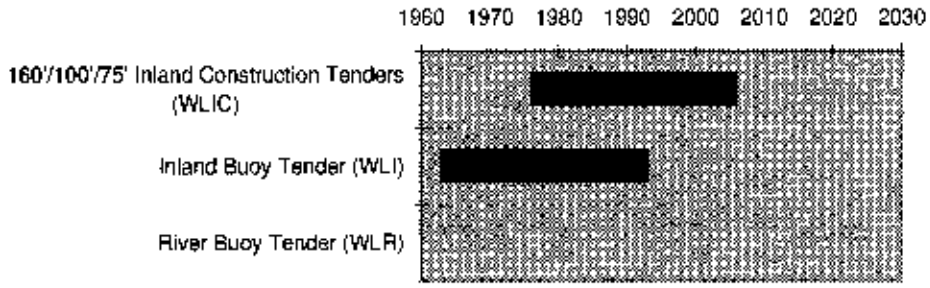
Discussion of plans/studies underway relative to maintaining needed capability, modernization or improvement/upgrade plans approved, whether this (these) assets will be replaced and how as a function of projected future requirements.

(Also address potential savings from reduction in # of assets if more capable asset is built - new WLB, etc.)

7. FUNDING GRAPHS

Graphs showing funding history/investment history of the unit(s) and average O&M costs related to maintaining capability over service life of asset. For classes, average across individual units. For major shore, look at total facility. For C4ISR, look at systems not components of other major assets. Plot from pre-acquisition to today, indicate PESL point.

ASSET	Commissioned	Service Life	PESL
INLAND VESSELS			
160'/100'/75' Inland Construction Tenders (WLIC)	1976	30	2005
Inland Buoy Tender (WLI)	1963	30	1992
River Buoy Tender (WLR)	VARIES	30	



1. ASSET

160', 100', 75' Construction Tenders (WLIC)

2. WHAT IT DOES

- 75% + ATON
- Supports Mobility Goal

Three classes of construction tenders, totaling 15 vessels are used for the construction, repair and maintenance of fixed aids to naviation along U. S. navigable rivers and in Coastal areas. The 75' WLICs push 68' construction barges. Two of the 100' WLICs push construction barges. Barges are equipped with cranes and other ATON equipment to drive piles and work smaller buoys.

3. ASSET FUNDING HISTORY

Date and cost of acquisition (or distribution of acquisition/cost of elements of major shore plant over time), history of major maintenance or upgrade investments, average annual O&M costs related to preserving capability (by class for ships/boats/AC; by representative unit for shore of similar type; by individual unit for major shore; by system for C4ISR not installed on other major assets).

4. INVENTORY / LOCATION

	160'	100'	75'	Total
Distict 1:				
5:				
7:				
8:				

1A. PHOTOGRAPH / ILLUSTRATION

5. CAPABILITY DISCUSSION

Range: 2200—2500 Miles
Max Speed: 8—10 knots
Crew: 160' – 15 (1 Officer, 14 Enlisted)
100' – 15 (1 Officer, 14 Enlisted)
75' – 13 Enlisted

6. CAPABILITY PRESERVATION

- 100' WLICs Commissioned 1943 – Beyond Projected End of Service Life
- 75' WLICs Commissioned between 1962-65 – Projected End of Service Life – 2005
- 160' WLICs Commissioned 1976 – Projected End of Service Life – 2010
- Vesssel reduction and realignment – SRAMA and Construction Tender Analysis
  WLICs for construction work
  Decommission three 100' WLICs
  Six 49' BUSLs to assume buoy work
  Shift 100' WLICs to Configuration Control Status

7. FUNDING GRAPHS

1. ASSET

Inland Buoy Tenders (WLI)

2. WHAT IT DOES

- 75% + ATON
- Supports Mobility Goal

Inland Buoy Tenders service short range aids to navigation along coastal and inland waters. Servicing both floating and fixed aids to navigation, these ships keep our waterways properly marked. They also provide icebreaking and search & rescue operations when needed.

3. ASSET FUNDING HISTORY

None provided.

4. INVENTORY / LOCATION

	100'	65'
Total	2	4
District 5:		2
9:	1	
13:	1	1
17:		1

1A. PHOTOGRAPH / ILLUSTRATION

5. CAPABILITY DISCUSSION

Range: 1200-1500 miles
Max Speed: 9-10 knots
Crew: 100': 15 (1 Officer, 14 Enlisted)
65': 8-15 Enlisted

6. CAPABILITY PRESERVATION

- 1-100' WLI commissioned 1943 – is now beyond projected end of service life; other 100' WLI commissioned 1963 – projected end of service life – 2005.
- 2-65' WLI commissioned 1946 – are now beyond projected end of service life; 2-65' WLI commissioned 1954 - projected end of service life – 1997.
- No major rehabs planned
- Vessel reduction and realignment per SRAMA
- Conversion of Buckthorn to a WLIC

7. FUNDING GRAPHS

1. ASSET

River Buoy Tenders Large and Small (WLR)

2. WHAT IT DOES

- 75% + ATON
- Supports Mobility Goal

River Buoy Tenders service short range aids to navigation along the Mississippi and Ohio rivers. These tenders push barges equipped with cranes and jetting devices to set and anchor Aids to Navigation, buoys and day boards to mark the ever changing river channels. These assets also provide search and rescue operations when needed.

3. ASSET FUNDING HISTORY

None provided.

4. INVENTORY / LOCATION

	115'	75'	65'
Total:	1	12	6
Upper Miss River:	1	3	2
Lower Miss River:		7	
Ohio River Valley:		2	4

1A. PHOTOGRAPH / ILLUSTRATION

5. CAPABILITY DISCUSSION

Range: 3,100 11,600 miles
Max Speed: 8-10 knots
Crew – 115': 22 Enlisted
75': 13 Enlisted
65': 13 Enlisted

6. CAPABILITY PRESERVATION

- 115' commissioned 1943 – beyond projected end of service life
- 11 · 75' and 65' commissioned between 1960—66; projected end of service life –2005
- 4—75' commissioned between 1969 70; projected end of service life 2010
- 2 · 75' commissioned 1990; projected end of service life – 2020
- Remote locations hamper Group support
- Homeports restrict dockside maintenance
- Reduction gear out of production
- Main diesel engines support decreasing
- New generators
- Upgrade OWS
- New A/C plant

7. FUNDING GRAPHS

1. ASSET

VC-4, 2-engine turbo prop Logistics Aircraft

2. WHAT IT DOES

Utilized as a logistics support aircraft.

3. ASSET FUNDING HISTORY

Budgeted Costs - $1136/hr. This cost does not include personnel.

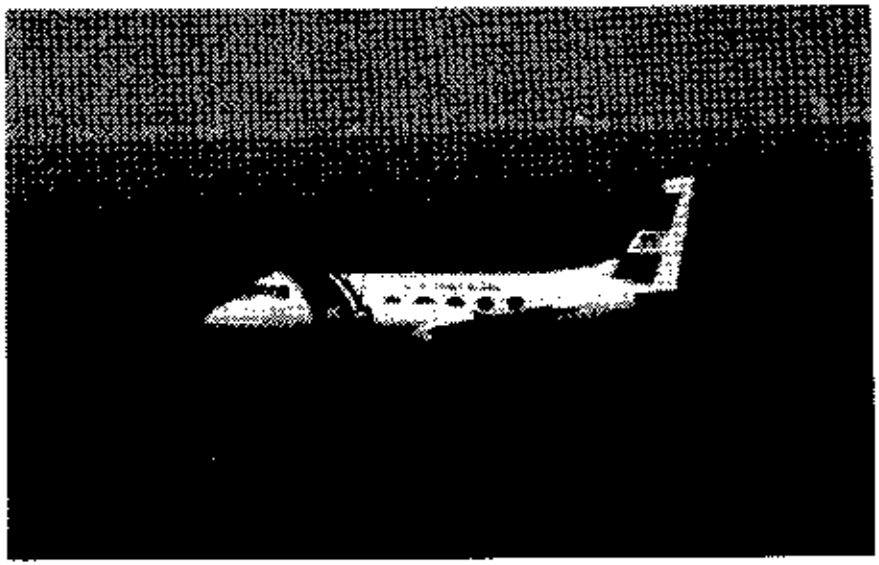
Crew size 2 pilots/1 aircrew
Personnel required to maintain 8 mechanics

Upgrades/Improvements:

FY95 TCAS	$125K
FY95 GPS	$24K
FY99 Cargo Door	$250K

4. INVENTORY / LOCATION

Miami, FL 1



5. CAPABILITY DISCUSSION

PESL is based upon economic factors.

6. CAPABILITY PRESERVATION

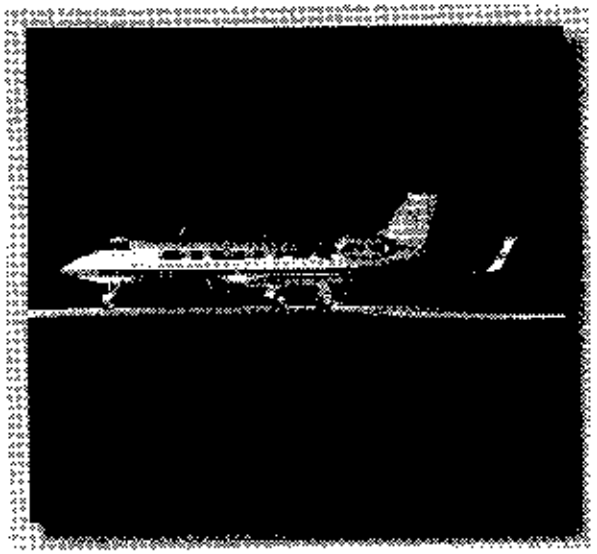
No upgrades currently planned.

7. FUNDING GRAPHS

See Section 3 costs.

1. ASSET

C-20, 2-engine turbo fan Long Range Command & Control Aircraft



2. WHAT IT DOES

Only administrative aircraft in CG inventory. Provides transportation for senior level Coast Guard, Department of Transportation and Congressional personnel. Serves as Commandant of the CG's Long Range Command and Control Aircraft.

3. ASSET FUNDING HISTORY

Acquired thru excess property from the Air Force at no cost.

Budgeted Costs - $1471/hr. This cost does not include personnel.

Crew size 2 pilots/1 Flight Engineer
Personnel required to maintain 10 mechanics

Upgrades/Improvements:

FY95 TCAS	$125K
Re-Engine FY2000	$10M

$500K spent on research & development

4. INVENTORY / LOCATION

Washington, DC	1

5. CAPABILITY DISCUSSION

PESL is based upon economic factors.

Capable of flying non-stop coast to coast.
Equipped with necessary avionics, radios, and flight phones to keep key command and control personnel fully informed.

6. CAPABILITY PRESERVATION

Aircraft recently acquired from DOD. Necessary modifications made at that time. No other upgrades currently planned.

7. FUNDING GRAPHS

See Section 3 costs.

1. ASSET

USCG Finance Center, Shore Facility (major)
Chesapeake, Virginia

2. WHAT IT DOES

Supports Coast Guard missions by providing accounting and financial services to a global customer base. Purpose is to provide quality accounting and financial information services for the U. S. Coast Guard.

3 ASSET FUNDING HISTORY

	Rent	RWAs	Maintenance
FY-97	$1,059,239	$40,000	$32,322
FY-96	$1,059,239	$59,800	$25,249
FY-95	$1,031,513	$55,100	$56,021
FY-94	$1,000,483	$16,048	$204,530
FY-93	$975,948	$21,500	$210,432
FY-92	$606,907	$75,056	$149,767
FY-91	$488,151	$43,547	$50,284

4. INVENTORY / LOCATION

Offices	54,012 sq. ft.
Toilets/Clinics	290 sq. ft.
Food Service	1,294 sq. ft.
ADP	2,476 sq. ft.
Conference - Training	2,826 sq. ft.
Light Industrial	1,094 sq. ft.
Outside Parking	101,500 sq. ft.

5. CAPABILITY DISCUSSION

FINCEN operates these Major Systems:

- DAFIS - Departmental Accounting and Financial Information System
- LUFS - Latge Unit Financial System
- VEM - Voucher Examination Module
- IMAGE Document Tracking/Workflow
- Consolidated Billing - VISA
  Federal Express
- FREDIM - Electronic Data Interchange
- TRAVEL - Claims and Collections
- PCS Utilities

Migration to SWIII required recabling FINCEN with 84 miles of Category 5 Cable.

6. CAPABILITY PRESERVATION

The FINCEN is a GSA rental facility and preservation is not a CG funding concern.

7. FUNDING GRAPHS

1. ASSET

National Pollution Funds Center (NPFC)

2. WHAT IT DOES

The NPFC is the fiduciary agent for the Oil Spill Liability Trust Fund and the portion of Superfund accessible to the U.S. Coast Guard. It provides funding for removal actions and the initiation of Natural Resource Damage Assessments (oil only), compensates claimants who demonstrate that certain damages were caused by oil pollution, recovers pollution costs and damages from responsible parties, and certifies the financial responsibility of vessel owners and operators. Strategic goals supported are:

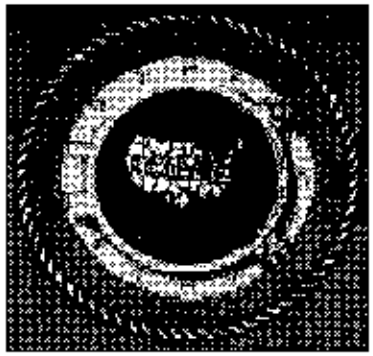
- Protection of Natural Resources

3. ASSET FUNDING HISTORY

Note: The following table summarizes only those facility support costs borne by the Marine Safety and Marine Environmental Protection Programs. GSA lease costs were unavailable.

Acquisition Date: Various
Acquisition Cost: N/A; the NPFC is a GSA leased facility/property.

Approp\Yr	94	95	96
OE	$.841M	$.606M	TBD
AC&I	TBD	TBD	TBD
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD



4. INVENTORY / LOCATION

The National Pollution Funds Center is located at:

4200 Wilson Blvd, Suite 1000
Arlington, VA
22203-1804

5. CAPABILITY DISCUSSION

To be developed.

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the NPFC.

7. FUNDING GRAPHS

Projected out-year spending for the NPFC is shown below. These figures are based on planned projects in the year indicated and the average OE cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	$.734M	$.744M	$.754M
AC&I	$0	$0	$0
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. ASSET

Coast Guard Activities (ACT)

2. WHAT IT DOES

The ACT combines the responsibility for all Coast Guard missions under one regional commander reporting to a Coast Guard District. The Commander of an ACT is responsible for the management and oversight of marine safety and environmental protection, law enforcement, search and rescue, and aids to navigation functions. An ACT performs the missions of the Captain of the Port, the Officer in Charge of Marine Inspection, On Scene Coordinator, and SAR Mission Coordinator and exercises operational and administrative control of over all assigned CG assets. Strategic goals supported are:

- Safety
- Protection of natural resources
- Mobility
- Maritime Security
- National Defense

3 ASSET FUNDING HISTORY

Note: Only integrated command prototypes are funded separately. ACT San Diego and ACT South Texas are not distinct shore facilities and therefore receive no separate shore facility funding. Shore facilities are maintained by subordinate units (MSO).

Acquisition Date: Various;
Acquisition Cost: TBD

Approp\Yr	94	95	96
OE	N/A	$.100M	$.199M
AC&I	N/A	TBD	TBD
EC&R	N/A	TBD	TBD
Total	N/A	TBD	TBD

4. INVENTORY / LOCATION

There were four prototype ACT's established between 1994 and 1995, two of which are fully integrated units performing collocated missions/functions. The remaining two ACTs are command and control organizations only and are not accompanied by a distinct shore facility. The prototype ACT are located at:

Integrated Prototypes
ACT New York, NY
ACT Baltimore, MD

Command and Control Prototypes -
ACT San Diego
ACT South Texas

5. CAPABILITY DISCUSSION

To be developed

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the ACT's.

7. FUNDING GRAPHS

Projected out year spending for ACTs is shown below. These figures are based on planned projects in the year indicated and the average OE cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	$.152M	$.154M	$.156M
AC&I	$0	$0	$0
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. ASSET

CG Air Stations – 26 Air Stations (A/S), 4 Air Facilities, Example of Large A/S: A/S Miami; Small A/S: A/S Port Angeles

2. WHAT IT DOES

Typically, large & small air stations perform search & rescue and law enforcement missions, contributing to the CG's strategic goal of safety. Larger air stations such as Miami may receive heavy tasking across all CG missions. Historically, A/S Miami has been the focal point for major ops in the Gulf of Mexico, Caribbean & waters off the southeastern shore of the United States. Examples include maritime drug interdiction and Alien Migrant Interdiction operations.

3. ASSET FUNDING HISTORY

Miami: CG acquired the Opa Locka Hangar structure in 1965. Structure approximately 45 yrs. old, and does not properly support the current aircraft inventory at Miami. Current Major AC&I shore facility projects:

HH-65 Hangar Expansion: $8.4M (project nearing completion)

HU-25 Hangar Rehab: $7.1M (on SFRL list for FY99 funding)

Port Angeles: Existing hangar is 60 years old. Does not meet life safety codes and is 8,000 sf deficient of the minimum shop & storage space standard requirements.

Current Major AC&I shore facility project:

Hangar Rehab: PPR(B) estimate $6.3M (PPR(B)) pending approval

4. INVENTORY / LOCATION

Air Station Miami, located in Opa Locka, FL, supports 8 HU-25C+, 9 HH-65A, 2 RG-8A, and 1 VC-4.

Air Station Port Angeles, located in Port Angeles, WA, supports 3 HH-65A helicopters.

1A. PHOTOGRAPH / ILLUSTRATION

5. CAPABILITY DISCUSSION

CG policy requires that all rotary wing aircraft and 50% of fixed wing aircraft be hangared. Many of our current aviation facilities are inadequate and we are unable to fully comply with this policy. A/S Miami, a WWII structure, was never designed to support our present level of operations. The hangar does not meet electrical wiring or National Fire Protection Association standards, is significantly undersized, and has never received a major renovation or modernization until just recently with the beginning of the hangar expansion project. Although the hangar at A/S Port Angeles is able to support 3 HH-65A helicopters, it does not meet current seismic code, and is inefficient in that its support activities are currently located in adjoining, outdated buildings.

6. CAPABILITY PRESERVATION

Projects such as those listed in Section 3 are currently underway or planned for several air stations.

7. FUNDING GRAPHS

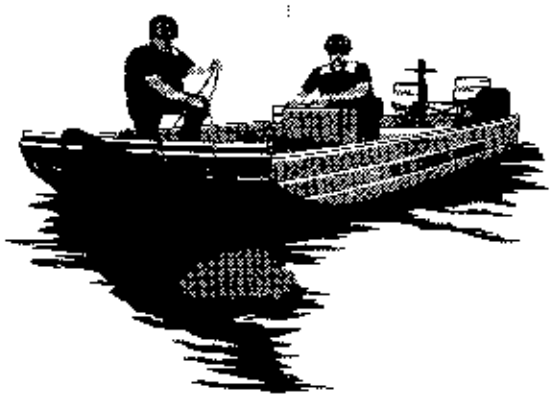
O&M costs vary widely from air station to station. Some of the larger air stations such as Miami and Clearwater pay airfield operating expenses, hangar rental and landing user fees. Other air stations that are tenant commands at DoD units have historically paid minimal fees to operate out of those facilities.

1. ASSET

Aids to Navigation Teams (ANTs)

2. WHAT IT DOES

ANTs are small shore units staffed by personnel specially trained to operate aids to navigation boats and vehicles in the protected and semi-exposed marine environment for the servicing of short range minor aids to navigation. ANT responsibilities include the performance of scheduled maintenance and the correcting of any reported or discovered aid discrepancies within the limits of their capabilities.



3 ASSET FUNDING HISTORY

The average annual O+M cost for an ANT is $137,000. This figure is based on the average O+M costs for the First District ANTs (funding history for other districts was not available). The average acquisition cost for a new ANT is $600,000 to $800,000. Facilities are scheduled for major rehab once every 25 years.

4. INVENTORY/LOCATION

CG ANT BOSTON
CG ANT LONG ISL SOUND
CG ANT NEW YORK
CG ANT SAUGERTIES
CG ANT WOODS HOLE
CG ANT CAPE MAY
CG ANT KENNEBEC
CG ANT PHILADELPHIA
CG ANT PRIMROSE
CG ANT FORT PIERCE
CG ANT JACKSONVILLE BE
CG ANT MIAMI
CG ANT PUERTO RICO
CG ANT TYBEE
CG ANT CORPUS CHRISTI
CG ANT EL PAULA
CG ANT GULFPORT
CG ANT MORGAN CITY
CG ANT PANAMA CITY
CG ANT PORT MANSFIELD
CG ANT SABINE
CG ANT BUFFALO
CG ANT DULUTH
CG ANT GRAND HAVEN
CG ANT HURON
CG ANT BRISTOL
CG ANT MORICHES
CG ANT S WEST HARBOR
CG ANT SOUTH PORTLAN
CG ANT CAPE HATTERAS
CG ANT CHINCOTEAGUE
CG ANT MILFORD HAVEN
CG ANT POTOMAC
CG ANT SLEDGE
CG ANT GEORGETOWN
CG ANT KEY WEST
CG ANT PONCE DE LEON
CG ANT ST PETERSBURG
CG ANT COLFAX
CG ANT DULAC
CG ANT GALVESTON
CG ANT MOBILE
CG ANT NEW ORLEANS
CG ANT PENSACOLA
CG ANT PORT O'CONNOR
CG ANT VENICE
CG ANT DETROIT
CG ANT ESCANABA
CG ANT GREEN BAY
CG ANT KENOSHA

CG ANT SAULT STE MARIE
CG ANT LOS ANGELES/LB
CG ANT SAN FRANCISCO
CG ANT COOS BAY
CG ANT PUGET SOUND
CG ANT SITKA

CG ANT HUMBOLDT BAY
CG ANT SAN DIEGO
CG ANT ASTORIA
CG ANT KENNEWICK
CG ANT HONOLULU

TOTAL: 61 ANT STATIONS

5. CAPABILITY DISCUSSION

ANTs very in size relative to the number of aids assigned and size of the geographic area of responsibility. Shore facilities include at least one building for admin and maintenance of aton, boats, and vehicles. They also include pier and shore side space for storage of aton equipment. Assets assigned to ANTS consist of boats and vehicles used to complete the SRA mission. Boat types include: 64' ANB (new), 55' ANB, 49' BUSL (new), 46' BUSL, 45' BU, and 21' TANB.

The new 49' BUSL will replace the 46' and 45' and will also serve as a back fill in places were the new WLMRs (175') are over tasked. These new assets will require reallocation of some ANT billets and the relocation or establishment/disestablishment of some ANT facilities. This is based on the Surface Force Mix 2000 study and the Short Range Aids to Navigation Mission Analysis (SRAMA).

The Projected End of Service (PESL) life for a permanent shore facility is 63 years.

6. CAPABILITY PRESERVATION

ANT shore facilities are projected to be rehabilitated after 25 years, however, all rehabs will be placed on the Shore Facilities Requirements List (SFRL) and funding will be awarded based on priority.

Potential Savings:
Through SRAMA two ANTs will be combined and two will be disestablished. This will provide potential savings of approximately $600,000.

7. FUNDING GRAPHS

None provided.

1. ASSET

Coast Guard Group

2. WHAT IT DOES

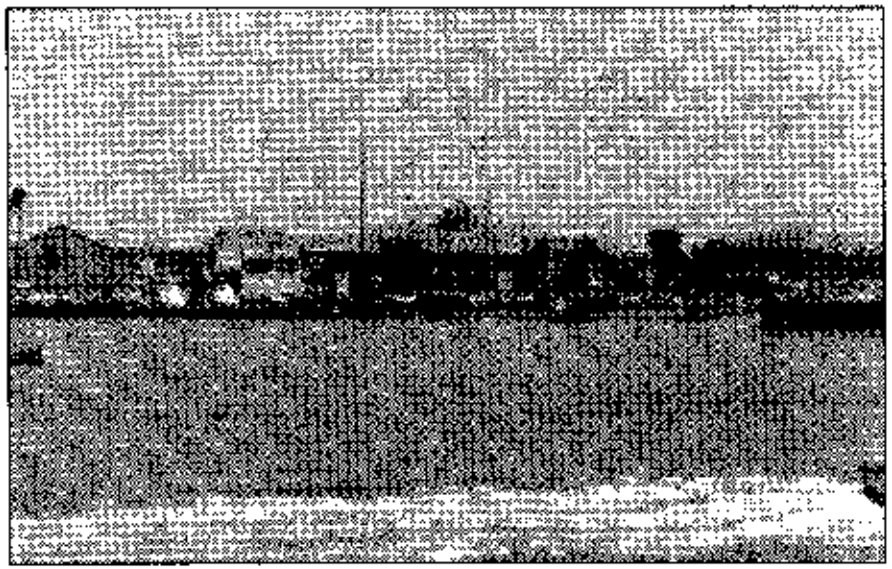
A Group is a shore unit which provides command and general support for various units in a geographic area. Among units commonly found in a Group are stations, air stations, bases, aids to navigation teams, patrol boats and buoy tenders.

3. ASSET FUNDING HISTORY

The most recent Group acquisitions were medical/dental facilities constructed at both Group North Bend, OR ($2.9M) and Group Port Angeles, WA ($3.3M) in FY95. Of the 39 Groups, 35 have shore facility inventories recorded in CEDS. For these 35 Groups, the total Plant Replacement Value (PRV) is $21.5M. The average PRV is $613K per Group. The average annual O&M Cost is approximately $478K per Group.

4. INVENTORY / LOCATION

There are a total of 39 Groups distributed throughout the United States as follows: 17 along the Atlantic coast, 9 along the Pacific coast, 4 along the Gulf coast, 5 throughout the Great Lakes, 3 along the Mississippi River and one in Hawaii. The Greater Antilles Section, located in San Juan, Puerto Rico also performs Group-like functions.



USCG GROUP GALVESTON, TX

5. CAPABILITY DISCUSSION

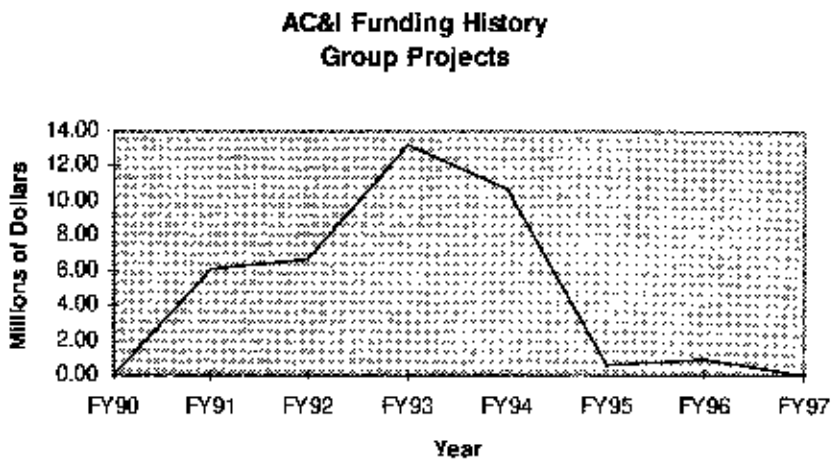
The missions of a Coast Guard Group are limited to Command and Control and Administrative Support.

The projected service life for a Group (or any permanent shore facility) is 63 years. Of the 39 Groups, only 5 have property acquisition data entered in CEDS. The CEDS records have acquisition dates ranging from 1783 (Group Boston) to 1988 (Group Grand Haven and Group Philadelphia). Two of the five Groups have exceeded their projected end of service lives (PUSL).

Since 1990, AC&I funding for Group projects has averaged $4.8M per year.

6. CAPABILITY PRESERVATION

Since the mission of a Group is Command and Control and Administrative Support, "capabilities" are difficult to characterize. No specific technological improvements have been scheduled that would require facility alterations. There are some initiatives on the horizon, such as the USCG C4I Objective Architecture and Transition Plan, and the D7 Communication Center Study, which may recommend facility upgrades as part of their implementation plans.



1. ASSET

Multi Mission Station

2. WHAT IT DOES

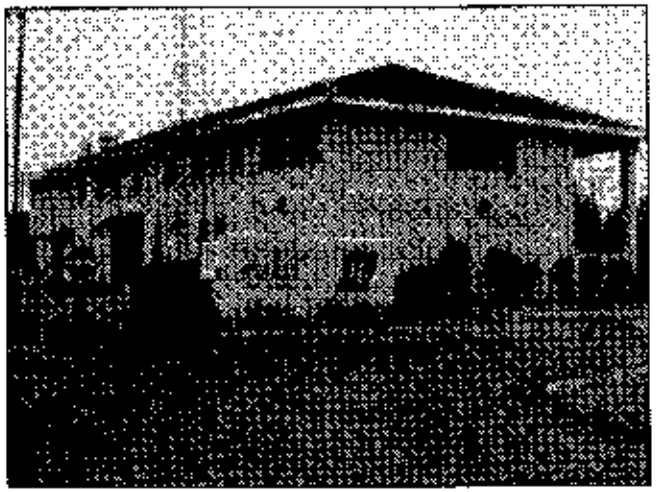
A multi-mission station is a shore facility designed to operate boats in support of designated missions. It is provided with boat and personnel allowances, and facilities for boat moorings, boat maintenance, station administration, berthing and messing. In order to accomplish assigned missions, a station provides unit level training and equipment maintenance. A Station is responsible for its own internal supervision, but receives support and services from a district office, group office, base, integrated support command, air station or other host command.

3. ASSET FUNDING HISTORY

The most recent Station acquisition is STA Portage, constructed in 1996 at a cost of $4.2M. Of the 191 Stations, 151 have shore facility inventories recorded in CEDS. For these 151 Stations, the total Plant Replacement Value (PRV) is $923M. The average PRV is $6.1M per station The average annual O&M Cost is approximately $83K per station.

4. INVENTORY / LOCATION

There are a total of 191 Stations, including 40 Stations (small), 7 Auxiliary Operated Stations, 3 Independent Maritime Response Vessels (IMARV's) and 2 Boat House Operations. They are distributed throughout the United States as follows: 90 along the Atlantic Coast, 32 along the Pacific Coast, 16 along the Gulf Coast, 48 throughout the Great Lakes, 3 in Hawaii and 2 in Alaska.



USCG STATION GEORGETOWN, GA

5. CAPABILITY DISCUSSION

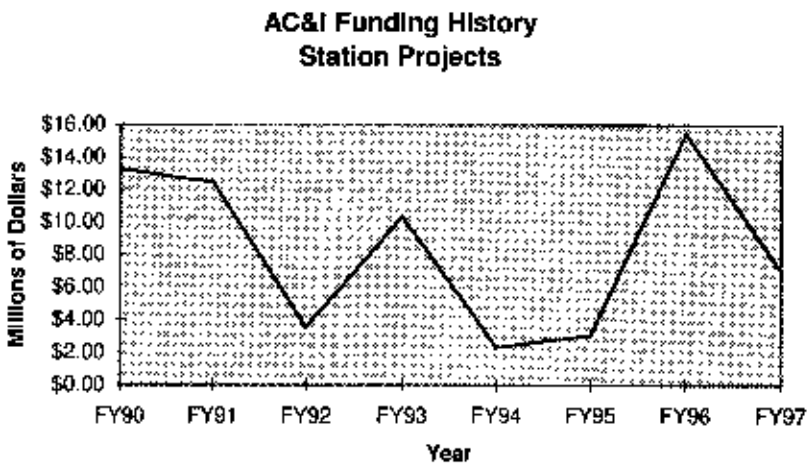
Each multi-mission station performs a variety of Coast Guard missions, including SAR, ELT, MER, RBS, SRA, RA, and PSS.

The projected service life for a multi-mission station (or any permanent shore facility) is 63 years. Of the 191 Stations, only 38 have property acquisition data entered in CEDS. The CEDS records have acquisition dates ranging from 1838 (STA New Orleans) to 1995 (STA Lake Worth Inlet). Eleven of the 38 Stations have exceeded their projected end of service life (PESL).

Since 1990, AC&I projects for stations have averaged $8.4M per year, so station facilities are being recapitalized at the rate of 1 2 stations per year.

6. CAPABILITY PRESERVATION

Over the next three years, Stations will undergo waterfront improvements including shore tie upgrades and boathouse renovations to accommodate the new 47' MLB. The total cost of facility upgrades for the first sixty 47' MLB's is $4.8M, or an average of $80K/boat.



1. ASSET:

Container Inspection Training and Assistance Team (CITAT)

2. WHAT IT DOES

The CITAT provides container inspection assistance to Coast Guard units implementing the national container inspection program. It promotes the standardization of inspection procedures by providing deployable on site training packages to CG units involved in container inspection, assisting MSOs during CG participation in multi-agency strike force operations, coordinated joint inspection with other federal state and local agencies.
Strategic goals supported are:

- Safety
- Protection of natural resources
- Mobility

3. ASSET FUNDING HISTORY

Note: The following table summarizes only those facility support costs borne by the Marine Safety and Marine Environmental Protection Programs. GSA lease costs were unavailable.

Acquisition Date: Various
Acquisition Cost: N/A; the CITAT is a GSA leased facility/property.

Approp\Yr	94	95	96
OE	TBD	TBD	TBD
AC&I	TBD	TBD	TBD
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

4. INVENTORY / LOCATION

The CITAT is collocated with the Transportation Safety Institute in Oklahoma City at:

P.O. Box 25082
Oklahoma City, OK
73125-5050

5. CAPABILITY DISCUSSION

To be developed

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the CITAT.

7. FUNDING GRAPHS

Projected out year spending for CITAT is shown below. These figures are based on planned projects in the year indicated and the average OH cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	TBD	TBD	TBD
AC&I	$0	$0	$0
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. ASSET

Marine Inspection Office (MIO)

2. WHAT IT DOES

MIOs are independent units which perform Officer in Charge of Marine Inspection functions. MIOs, therefore, inspect U.S. commercial vessels undergoing new construction and/or major repair work in foreign shipyards, and conduct routine periodic inspection of U.S. commercial vessels operating predominantly out of foreign ports. Due to their overseas location, MIOs also perform limited International Affairs functions, including the development of informal contacts with various foreign government agencies, and the provision of teaching assistance to the IMO's World Maritime University. Strategic goals supported are:

- Safety
- Mobility
- National Defense

3. ASSET FUNDING HISTORY

Note: The following table summarizes only those facility support costs borne by the Marine Safety and Marine Environmental Protection Programs.

Acquisition Date: 1995
Acquisition Cost: TBD

Apptop\Yr	94	95	96
OE	N/A	$51K	TBD
AC&I	N/A	TBD	TBD
EC&R	N/A	TBD	TBD
Total	N/A	TBD	TBD

4. INVENTORY / LOCATION

There are 2 MIOs in the Coast Guard and both are located outside the continental United States. Their names and locations are:

MIO Europe - Rotterdam, The Netherlands (This unit is concurrently known as CG Activities Europe (ACTEUR))
MIO Asia - Yokota, Japan (This unit is concurrently known as Far East Activities (FEACT)

5. CAPABILITY DISCUSSION

To be developed

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the MIOs.

7. FUNDING GRAPHS

Projected out year spending for MIOs is shown below. These figures are based on planned projects in the year indicated and the average OE cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	$51.7K	$52.4K	$53.2K
AC&I	$0	$0	$0
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. ASSET

Marine Inspection Detachment (MIDET)

2. WHAT IT DOES

The MIDET is a subordinate unit of the MIO and it performs Officer in Charge of Marine Inspection functions. MIDET's inspect U.S. commercial vessels undergoing new construction and/or major repair work in foreign shipyards, and conduct routine periodic inspection of U.S. commercial vessels operating predominantly out of foreign ports. Strategic goals supported are:

- Safety
- Mobility

3. ASSET FUNDING HISTORY

Note: MIDET and MIO facilities are not funded separately, therefore, the MIO inventory's funding history also reflects MIDET facility support financial data.

Acquisition Date: TBD
Acquisition Cost: TBD

Approp\Yr	94	95	96
OE	See Note	See Note	See Note
AC&I	See Note	See Note	See Note
EC&R	See Note	See Note	See Note
Total	See Note	See Note	See Note

4. INVENTORY / LOCATION

There is one MIDET in the Coast Guard and it located outside the continental United States. It is a sub unit of FEACT/MIO Asia and its physical address is:

PSA Sembawang Terminal
Bldg 7-4, Stores Rd
Singapore
759819

5. CAPABILITY DISCUSSION

To be developed

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the MIDET.

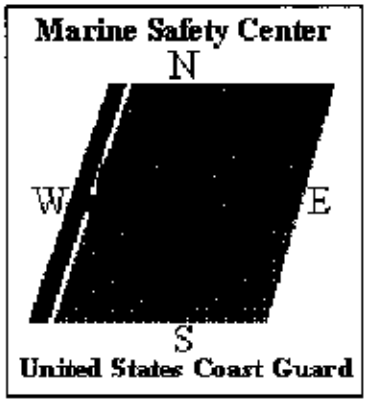
7. FUNDING GRAPHS

Note: The MIDET and its parent MIO are not funded separately, therefore, the MIO inventory's funding graph also reflects MIDET out-year spending/re-capitalization plans.

Approp\Yr	99	00	01
OE	See Note	See Note	See Note
AC&I	See Note	See Note	See Note
EC&R	See Note	See Note	See Note
Total	See Note	See Note	See Note

1. ASSET

Marine Safety Center (MSC)



2. WHAT IT DOES

The MSC is responsible for design review of commercial vessels to ensure compliance with domestic and international requirements. It also conducts oversight of third party organizations which have been delegated authority to act on behalf of the Coast Guard. Day to day operations at the facility involve the development of interpretations of technical requirements, and providing technical support to the Commandant, the National Transportation Safety Board, MSOs, MIOs, OSCs, and the maritime community. Strategic goals supported are:

- Safety
- Protection of Natural Resources
- Mobility

3. ASSET FUNDING HISTORY

Note: The following table summarizes only those facility support costs borne by the Marine Safety and Marine Environmental Protection Programs. GSA lease costs were unavailable.

Acquisition Date: TBD
Acquisition Cost: N/A; the MSC is a GSA leased facility/property.

Approp\Yr	94	95	96
OE	$42.7K	$70.9K	TBD
AC&I	TBD	TBD	TBD
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

4. INVENTORY / LOCATION

The Marine Safety Center is located in the Nassif Building in downtown Washington, DC. The physical address of the unit is:

400 7th Street, SW
Room 6302, Nassif Building
Washington, DC
20590-0001

5. CAPABILITY DISCUSSION

To be developed

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the MSC.

7. FUNDING GRAPHS

Projected out year spending for MSC is shown below. These figures are based on planned projects in the year indicated and the average O&S cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	$57.5K	$58.4K	$59.2K
AC&I	$0	$0	$0
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. ASSET

Marine Safety Office (MSO)

2. WHAT IT DOES

The MSO is the basic Marine Safety shore facility and combines under one command the functions of the Captain of the Port, the Officer in Charge of Marine Inspection and the On-Scene Coordinator. MSOs, respond to and investigate oil spills and hazardous material releases, ensure the safety and security of waterfront facilities and navigable waters, investigate marine casualties, inspect U.S. commercial vessels for certification, perform port state control and examination of foreign vessels, and plan and prepare for emergencies, contingencies and marine related disasters. Strategic goals supported are:

- Safety
- Protection of natural resources
- Mobility
- Maritime Security
- National Defense

3 ASSET FUNDING HISTORY

Note: The following table summarizes only those facility support costs born by the Marine Safety and Marine Environmental Protection Programs. GSA lease costs were unavailable. **Acquisition Date**: Various; **Acquisition Cost**: N/A; most MSOs are GSA leased facilities/ properties.

Approp\Yr	94	95	96
OE	$2.2M	$2.6M	$2.3M
AC&I	TBD	TBD	TBD
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

4. INVENTORY / LOCATION

District 1: 3 (Boston, Providence, and Portland (ME))
District 5: 2 (Hampton Roads, and Wilmington)
District 7: 6 (Miami, Jacksonville, Tampa, Savannah, Charleston, San Juan)
District 8: 12 (New Orleans, Morgan City, Corpus Christi, Houston-Galveston, Mobile, Port Arthur, St. Louis, Huntington, Louisville, Memphis, Paducah, and Pittsburgh)
District 9: 7 (Buffalo, Chicago, Cleveland, Detroit, Duluth, Milwaukee, and Toledo)
District 11: 2 (San Diego, and San Francisco)
District 13: 2 (Puget Sound, and Portland (OR))
District 14: 2 (Honolulu, Guam)
District 17: 3 (Juneau, Anchorage, and Valdez)

5. CAPABILITY DISCUSSION

To be developed.

6. CAPABILITY PRESERVATION

Three of the Coast Guard owned shore facilities in this category are tentatively scheduled for the modernization or improvement projects described below by 2001. The funding required by these projects is described in section seven of the MSO inventory.

Major Projects --	2001	MSO San Francisco	Space modernization and expansion
Minor Projects --	1999	MSO Guam	Space reconfiguration & renovation
	2000	MSO San Diego	Expansion/building addition

7. FUNDING GRAPHS

Projected out year spending for MSO's is shown below. These figures are based on planned projects in the year indicated and the average OE cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	$2.4M	$2.5M	$2.5M
AC&I	$.943M	$.450M	$5.9M
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. ASSET

Group/Marine Safety Office (GRU/MSO)

2. WHAT IT DOES

he GRU/MSO is responsible for the management and oversight of marine safety and environmental protection, law enforcement, search and rescue, and aids to navigation functions. As such it performs the missions of the Captain of the Port, the Officer in Charge of Marine Inspection and the On-Scene Coordinator, may serve as SAR Mission Coordinator and usually exercises operational and administrative control of WPBs and stations conducting coastal drug interdiction, fisheries enforcement and recreational boating safety. The unit also oversees the inspection and maintenance of small federally owned aids to navigation. Strategic goals supported are:

- Safety
- Protection of natural resources
- Mobility
- Maritime Security
- National Defense

3 ASSET FUNDING HISTORY

Note: The following table summarizes only those facility support costs borne by the Marine Safety and Marine Environmental Protection Programs. GSA lease costs were unavailable.

Acquisition Date: Various;
Acquisition Cost: TBD

Approp\Yr	94	95	96
OE	$1.1M	$.827M	TBD
AC&I	TBD	TBD	TBD
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

4. INVENTORY / LOCATION

There are 4 Group/MSOs in the Coast Guard and they are located in the Fifth, Ninth, and Eleventh Coast Guard Districts. There names and geographic locations are:

Group/MSO Long Island Sound NY
Group/MSO Philadelphia PA
Group/MSO Sault St. Marie MI
Group/MSO Los Angeles/Long Beach CA

5. CAPABILITY DISCUSSION

To be developed

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the GRU/MSOs.

7. FUNDING GRAPHS

Projected out-year spending for GRU/MSO's is shown below. These figures are based on planned projects in the year indicated and the average OE cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	$.977M	$.991M	$1M
AC&I	$0	$0	$0
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. ASSET

Marine Safety Detachment (MSD)

2. WHAT IT DOES

The MSD is a subordinate unit of the MSO. They perform the combined functions of the Captain of the Port, the Officer in Charge Marine Inspection and the On-Scene Coordinator where there is a need for these functions in a remote location. The MSD operates under the supervision/direction of the Commanding Officer of the parent unit and exercises COTP/OCMI/OSC powers in the portion of the MSO's zone in which the MSD is located. Strategic goals supported are:

- Safety
- Protection of natural resources
- Mobility
- Maritime Security
- National Defense

3 ASSET FUNDING HISTORY

Note: MSD and MSO facilities are not funded separately, therefore, the MSO inventory's funding history also reflects MSD facility support financial data.
Acquisition Date: Various
Acquisition Cost: N/A; most MSDs are GSA leased facilities/properties.

Approp\Yr	94	95	96
OE	See Note	See Note	See Note
AC&I	See Note	See Note	See Note
EC&R	See Note	See Note	See Note
Total	See Note	See Note	See Note

4. INVENTORY / LOCATION

District 1: 0
District 5: 0
District 7: 2 (Marathon, St. Thomas)
District 8: 10 (Minneapolis/St. Paul, Davenport, Cincinnati, Greenville, Nashville, Brownsville, Broussard, Baton Rouge, Houma, and Lake Charles)
District 9: 3 (Sturgeon Bay, Massena, and Grand Haven)
District 11: 2 (Santa Barbara, and Concord)
District 13: 0
District 14: 2 (American Samoa, and Saipan)
District 17: 5 (Kodiak, Kenai, Unalaska, Sitka, and Ketchikan)

5. CAPABILITY DISCUSSION

To be developed.

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the MSDs.

7. FUNDING GRAPHS

Note: MSD and MSO facilities are not funded separately, therefore, the MSO inventory's funding graph also reflects MSD out-year spending/re-capitalization plans.

Approp\Yr	99	00	01
OE	See Note	See Note	See Note
AC&I	See Note	See Note	See Note
EC&R	See Note	See Note	See Note
Total	See Note	See Note	See Note

1. ASSET

Marine Safety Field Office (MSFO)

2. WHAT IT DOES

The MSFO is a subordinate unit of the MSO. It operates under the supervision/direction of the Commanding Officer of the parent MSO and exercises very limited Captain of the port, Officer in Charge Marine Inspection, and/or On-Scene Coordinator powers in remote portions of the MSO's zone. The MSFO differs from MSDs in that the MSFO is smaller and is located in a remote area where the operational tempo and complexity is expected to be relatively limited. Strategic goals supported are:

- Safety
- Protection of natural resources
- Mobility
- Maritime Security
- National Defense

3. ASSET FUNDING HISTORY

Note: MSFO and MSO facilities are not funded separately, therefore, the MSO inventory's funding history also reflects MSFO facility support financial data.

Acquisition Date: Various
Acquisition Cost: N/A; most MSFOs are GSA leased facilities/ properties.

Approp\Yr	94	95	96
OE	See Note	See Note	See Note
AC&I	See Note	See Note	See Note
EC&R	See Note	See Note	See Note
Total	See Note	See Note	Se Note

4. INVENTORY / LOCATION

All 5 MSFOs are located in the First Coast Guard District. These Offices are (parent command shown in parenthesis):

MSFO Bucksport ME (MSO Portland (ME))
MSFO Portsmouth NH (MSO Portland (ME))
MSFO Cape Cod MA (MSO Providence)
MSFO New Bedford MA (MSO Providence)
MSFO Coram NY (Group/MSO Long Island Sound)

5. CAPABILITY DISCUSSION

To be developed

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the MSFO.

7. FUNDING GRAPHS

Note: MSFO and MSO facilities are not funded separately, therefore, the MSO inventory's funding graph also reflects MSFO out-year spending/re capitalization plans.

Approp\Yr	99	00	01
OE	See Note	See Note	See Note
AC&I	See Note	See Note	See Note
EC&R	See Note	Se Note	See Note
Total	See Note	See Note	See Note

1. ASSET

Marine Safety Satellite Office (MSSO)

2. WHAT IT DOES

The MSSO is a subordinate unit of the MSO. It operates under the supervision/direction of the Commanding Officer of the parent MSO and exercises very limited Captain of the port, Officer in Charge Marine Inspection, and/or On-Scene Coordinator powers in remote portions of the MSO's zone. The MSSO differs from MSDs in that the MSSO is smaller and is located in a remote area where the operational tempo and complexity is expected to be relatively limited. Strategic goals supported are:

- Safety
- Protection of natural resources
- Mobility
- Maritime Security
- National Defense

3. ASSET FUNDING HISTORY

Note: MSSO and MSO facilities are not funded separately, therefore, the MSO inventory's funding history also reflects MSSO facility support financial data. **Acquisition Date**: Various; **Acquisition Cost**: N/A; the MSSO is a GSA leased facility/ property.

Approp\Yr	94	95	96
OE	See Note	See Note	See Note
AC&I	See Note	See Note	See Note
EC&R	See Note	See Note	See Note
Total	See Note	See Note	See Note

4. INVENTORY / LOCATION

There is one MSSO in the Coast Guard, MSSO Port Lavaca, and it is located at:

225 N. Virginia Suite 2B
Port Lavaca, TX
77979

5. CAPABILITY DISCUSSION

To be developed.

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the MSSO.

7. FUNDING GRAPHS

Note: MSSO and MSO facilities are not funded separately, therefore, the MSO inventory's funding graph also reflects MSSO out-year spending/re-capitalization plans.

Approp\Yr	99	00	01
OE	See Note	See Note	See Note
AC&I	See Note	See Note	See Note
EC&R	See Note	See Note	See Note
Total	See Note	See Note	See Note

1. ASSET

Marine Safety Unit (MSU)

2. WHAT IT DOES

The MSU is a subordinate unit of the MSO. It performs the combined functions of the Captain of the Port, the Officer in Charge Marine Inspection and the On-Scene Coordinator. It differs from an MSD in that it is led by a Commanding Officer and is established in remote locations where the mix of anticipated operations is extremely complex. The MSU is under the supervision/direction of the parent MSO and exercises COTP/OCMI/OSC powers in the portion of that unit's zone in which the MSU is located. Strategic goals supported are:

- Safety
- Protection of natural resources
- Mobility
- Maritime Security
- National Defense

3 ASSET FUNDING HISTORY

Note: The following table summarizes only those facility support costs borne by the Marine Safety and Marine Environmental Protection Programs. GSA lease costs were unavailable. **Acquisition Date**: Various; **Acquisition Cost**: N/A; the MSU is a GSA leased facility/property.

Approp\Yr	94	95	96
OE	$20K	$23K	$11K
AC&I	TBD	TBD	TBD
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

4. INVENTORY / LOCATION

There is one MSU in the Coast Guard, MSU Galveston, and it is located at:

Post Office Bldg. Room 313
601 Rosenberg
Galveston, TX
77550-1705

5. CAPABILITY DISCUSSION

To be developed.

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the MSU.

7. FUNDING GRAPHS

Projected out-year spending for the MSU is shown below. These figures are based on planned projects in the year indicated and the average OE cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	$18K	$18.5K	$19K
AC&I	$0	$0	$0
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. ASSET

National Maritime Center (NMC)

2. WHAT IT DOES

The NMC is the headquarters unit responsible for the management, coordination, and execution of marine safety activities and services. The CITAT, MSC, NVDC, and MSL are administratively controlled by the NMC and report to it for guidance and support. Strategic goals supported are:

- Safety
- Protection of natural resources
- Mobility

3. ASSET FUNDING HISTORY

Note: The following table summarizes only those facility support costs borne by the Marine Safety and Marine Environmental Protection Programs. GSA lease costs were unavailable.

Acquisition Date: 1995
Acquisition Cost: N/A; the NMC is a GSA leased facility/property.

Approp\Yr	94	95	96
OE	N/A	TBD	TBD
AC&I	N/A	TBD	TBD
EC&R	N/A	TBD	TBD
Total	N/A	TBD	TBD

4. INVENTORY / LOCATION

The National Maritime Center is located at:

4200 Wilson Blvd, Suite 510
Arlington, VA
22203-1904

5. CAPABILITY DISCUSSION

To be developed

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the NMC.

7. FUNDING GRAPHS

Projected out year spending for the NMC is shown below. These figures are based on planned projects in the year indicated and the average OE cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	TBD	TBD	TBD
AC&I	$0	$0	$0
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. ASSET

National Strike Force Coordination Center (NSFCC)

2. WHAT IT DOES

The NSFCC provides support and standardization guidance to the three Strike Teams. The Center also supports the Public Information Assist Team (PIAT), maintains the National oil spill response resources inventory (RRI), and facilitates the implementation of the National Preparedness for Response Exercise Program (PREP). Strategic goals supported are:

- Protection of Natural Resources

3. ASSET FUNDING HISTORY

Note: The following table summarizes only those facility support costs borne by the Marine Safety and Marine Environmental Protection Programs.

Acquisition Date: TBD
Acquisition Cost: TBD

Approp\Yr	94	95	96
OE	$.182M	$.127M	TBD
AC&I	TBD	TBD	TBD
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

4. INVENTORY / LOCATION

The National Strike Force Coordination Center is located at:

1461 US Hwy 17 North
Elizabeth City, NC
27909

5. CAPABILITY DISCUSSION

To be developed

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the NSFCC.

7. FUNDING GRAPHS

Projected out-year spending for the NSFCC is shown below. These figures are based on planned projects in the year indicated and the average OE cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	$.157M	$.159M	$.161M
AC&I	$0	$0	$0
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. ASSET

National Vessel Documentation Center (NVDC)

2. WHAT IT DOES

The NVDC operates the national vessel identification system that provides evidence of nationality, ownership, and the intended use of qualifying commercial and recreational vehicles. The Center performs three key functions; it enrolls vessels into the documentation system data base, establishes a detailed file on each vessel and it fastidiously maintains these files throughout the life of the vessel. The operations of the Center supports the following strategic goal:

- Mobility

3. ASSET FUNDING HISTORY

Note: The following table summarizes only those facility support costs borne by the Marine Safety and Marine Environmental Protection Programs. GSA lease costs were unavailable.

Acquisition Date: 1995
Acquisition Cost: N/A; the NVDC is a GSA leased facility/property.

Approp\Yr	94	95	96
OE	N/A	TBD	TBD
AC&I	N/A	TBD	TBD
EC&R	N/A	TBD	TBD
Total	N/A	TBD	TBD

4. INVENTORY / LOCATION

The National Vessel Documentation Center is located 12 miles north of Martinsburg, WV and 76 miles northwest of Washington, DC on Interstate 81. The physical address of the center is:

2039 Stonewall Jackson Drive
Falling Waters, WV
25419-9502

5. CAPABILITY DISCUSSION

The NVDC occupies an 18,862 sq ft GSA leased facility in Falling Waters, WV. The principle feature of the facility is a file storage area capable of storing more than 300,000 vessel files in a high capacity state of the art filing system. The remainder of the building contains administrative and telecommunication spaces that allow Center's 92 employees to process approximately 336,200 transactions each year.

Primary telephone services are provided by Bell Atlantic. Internal routing and switching is performed by a modern digital distribution system. The facility also accommodates numerous high capacity, automatic call-back, programmable facsimile machines and other office automation equipment including a bar code identification and tracking system to complement the high capacity filing system.

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the NVDC.

7. FUNDING GRAPHS

Projected out-year spending for the NVDC is shown below. These figures are based on planned projects in the year indicated and the average OE cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	TBD	TBD	TBD
AC&I	$0	$0	$0
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. ASSET

Strike Team

2. WHAT IT DOES

The Strike Teams provide a cadre of highly trained, rapidly deployable personnel and equipment to support response to oil spills or hazardous material releases by Federal On Scene Coordinators from the Coast Guard or the Environmental Protection Agency (EPA). They also train OSC response management personnel, and monitor or direct cleanup efforts on behalf of the OSC. Strategic goals supported are:

- Protection of Natural Resources

3. ASSET FUNDING HISTORY

Note: The following table summarizes only those facility support costs borne by the Marine Safety and Marine Environmental Protection Programs.

Acquisition Date: Various
Acquisition Cost: TBD

Approp\Yr	94	95	96
OE	$.277M	$.379M	TBD
AC&I	TBD	TBD	TBD
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

4. INVENTORY / LOCATION

There are three Strike Teams. They are located in:

Atlantic Strike Team - Fort Dix, NJ
Gulf Strike Team - Mobile, AL
Pacific Strike Team Novato, CA

5. CAPABILITY DISCUSSION

The Strike Team shore facilities provide a location at which national spill response and mitigation equipment can be stored, staged and maintained. This equipment includes oil recovery and containment systems, air and water quality monitoring devices, personal protective equipment and decontamination systems, and mobile command, control, communication, and information systems. The facilities also provide a location at or from which strike team personnel can deploy, train, and test new response and clean up techniques and methods, and administer deployed teams. Strike Team shore facilities are strategically located so as to minimize response times and to ensure access to adequate commercial or government transportation infrastructure (e.g. commercial airports, military air bases and/or major highways).

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the Strike Teams.

7. FUNDING GRAPHS

Projected out-year spending for the Strike Teams is shown below. These figures are based on planned projects in the year indicated and the average OE cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	$.332M	$.337M	$.341M
AC&I	$0	$0	$0
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. ASSET

Vessel Traffic Service (VTS)

2. WHAT IT DOES

A VTS can be an independent unit, a subordinate unit of an MSO or part of an MSO. However organized, VTSs provide either voluntary or mandatory vessel traffic control within established marine channels and traffic separation schemes. Focused primarily on the more congested waterways of the near coastal zone, VTSs ensure that navigable waters of the U.S. are safe and accessible to all forms of vessel traffic and that the use of the waterways is balanced between commercial and recreational customers. Strategic goals supported are:

- Safety
- Protection of natural resources
- Mobility

3. ASSET FUNDING HISTORY

Note: Three VTSs (Houston/Galveston, San Francisco, & Puget Sound) are funded as separate operating facilities. The remaining VTSs are collocated with a MSO or GRU/MSO and are funded through the parent command.

Acquisition Date: Various
Acquisition Cost: TBD

Approp\Yr	94	95	96
OE	TBD	TBD	TBD
AC&I	TBD	TBD	TBD
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

4. INVENTORY / LOCATION

There are 7 VTSs in the Coast Guard and they are located in the First, Eighth, Eleventh, Thirteenth, and Seventeenth Districts. Three of the VTSs are considered distinct operating facilities; the remaining four are considered organizational elements of a parent MSO, MSO/GRU, or ACT. The locations of all recognized VTSs (and their parent MSO if applicable) are:

VTS New York (ACT New York)
VTS Houston-Galveston
VTS San Francisco
VTS Prince William Sound (MSO Valdez)
VTS Morgan City (MSO Morgan City)
VTS Los Angeles/Long Beach (GRU/MSO Los Angeles/Long Beach)
VTS Puget Sound

5. CAPABILITY DISCUSSION

To be developed

6. CAPABILITY PRESERVATION

Plans are currently being developed to modernize the telecom munications and sensor systems of four VTSs. The project, planned for 1999, would replace the current computer platforms at these facilities, quadrupling their current computing power. The project will reduce long term telecommunications and maintenance costs, provide better traffic management capability, and improve data service to port users/customers. The cost of this project is summarized in section seven of this inventory sheet. The following VTSs would be affected by the project:

VTS New York
VTS Puget Sound
VTS San Francisco
VTS Houston/Galveston

7. FUNDING GRAPHS

Projected out year spending for VTSs is shown below. These figures are based on planned projects in the year indicated and the average OE cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	TBD	TBD	TBD
AC&I	$2.7M	$0	$0
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. COMMAND

Coast Guard Aircraft Repair & Supply Center (ARSC)
Elizabeth City, NC 27909-5001

2. MISSION/DESCRIPTION

The Aircraft Repair and Supply Center (ARSC) is the core logistics center for Coast Guard aviation. Since its commissioning in 1947 ARSC has continuously provided support to an ever changing mix of aircraft types and operating units. Today, ARSC delivers integrated logistics support to four major aircraft systems which include 209 aircraft at 26 air stations. It is one of the major employers in the region with a workforce of 628, including 38 commissioned officers, 98 enlisted and 492 civilian employees.

3. FUNDING HISTORY

	Fiscal Year		
	94	95	96
OE	$125,955K	$124,826K	$116,680K
AC&I	$ 0	$ 0	$ 0
TOTAL	$125,955K	$124,826K	$116,685.1K

4. PHYSICAL PLANT

ARSC is a tenant command of Support Center Elizabeth City. Its physical plant encompasses 10 buildings totaling approximately 432,000 square feet sited on 55 acres. Key ARSC facilities include a maintenance hangar, an electrical component shop, an aircraft overhaul and repair shop, a paint and refinishing shop, an electronics laboratory and administrative offices. Replacement cost for these facilities is estimated at $115,514K.

5. CAPABILITY DISCUSSION

The current mission responsibility of ARSC is: "To effect programmed depot maintenance, overhaul, major repair, and modification of aircraft and aeronautical equipment; provide for procurement, storage, stocking of inventory, control, accounting, issue and shipping of aircraft supplies, parts and aeronautical equipment; preserve, store, and maintain replacement aircraft and parts; provide technical engineering support in the aeronautical and avionics fields; and provide salvage advisory expertise when required." To carry out this mission ARSC is currently organized into five major functional divisions; the Aviation Repair Division, the Aviation Engineering Division, the Aviation Supply Division, the Management Information Services Division and the Administrative Division. However, as discussed in the next section, ARSC is redesigning its existing organizational structure.

6. ONGOING IMPROVEMENT INITIATIVES

ARSC is currently engaged in a major organizational redesign effort. Based upon the recommendations of a concept design team, ARSC is transitioning from a traditional functional organization to one centered around aircraft product lines. The primary focus of ARSC's effort is a radical change in how work is accomplished in order to reduce the cost of aircraft ownership and improve customer service. Workers will become multi skilled members of "cells" designed in detail by the people who actually perform the work. January 1997 marked the stand up of the first cell of the HH-60 product line, the aviation Supply Cell.

7. PLANNED CAPITAL IMPROVEMENTS

No major capital improvements are currently scheduled for this facility.

A minor capital improvement project to upgrade the ventilation in the paint hangar is currently scheduled for FY1998

Source; FY97 Shore Facilities Requirements List

1. COMMAND

U.S. Coast Guard Command & Control Engineering Center (C2CEN)
(Formerly COMDAC Support Facility)
4000 Coast Guard Blvd
Portsmouth, VA 23703-2199

2. MISSION/DESCRIPTION

C2CEN provides Coast Guard-wide life-cycle engineering support, evolutionary systems engineering, training, and configurations control of Command and Control (C2) systems, electronic sensors, and navigation systems excluding Loran-C. As a System Management Engineering Facility (SMEF), C2CEN provides engineering support and development, configuration management and tracking for all Coast Guard marine electronics navigation systems.

3. FUNDING HISTORY

	Fiscal Year		
	94	95	96
OE	$867.8K	$2002.4K	$2249.6K
AC&I	$ 0	$1017.2K	$3666.1K
TOTAL	$867.8K	$3019.6K	$5915.7K

4. PHYSICAL PLANT

Applied Instruction Building (1986) occupies 32,838 sf at ISC Portsmouth, VA. Also, the current building space is supplemented by fourteen double wide trailers that provide an additional 20,563 sf.

5. CAPABILITY DISCUSSION

Provides Systems Management and Engineering for afloat and ashore Command & Control (C2) systems and for all navigation and sensor systems, including radars, Short Range Aids to Navigation (SRAN), Vessel Traffic Service (VTS), Differential Global Positioning System (DGPS), Electronic Charting Systems (ECS), and various Shipboard Command and Control Systems (SCCS). As the SMEF, they provide lifecycle engineering support, training configuration management of the software and hardware, on-site technical assistance to field units, and orchestrate related developmental efforts. In addition, C2CEN will be the Land Based Support Facility (LBSF) for the integrated bridge system for the new WLB(r)/WLM(r) class cutters.

6. ONGOING IMPROVEMENT INITIATIVES

None provided.

7. PLANNED CAPITAL IMPROVEMENTS

In FY98, a $4.7M project will construct a two-story addition, providing an additional 31,400 sf along with renovations to the existing building.

1. COMMAND

U.S. Coast Guard Engineering Logistics Center (ELC)
2401 Hawkins Point Rd
Baltimore, MD 21226-1792

2. MISSION/DESCRIPTION

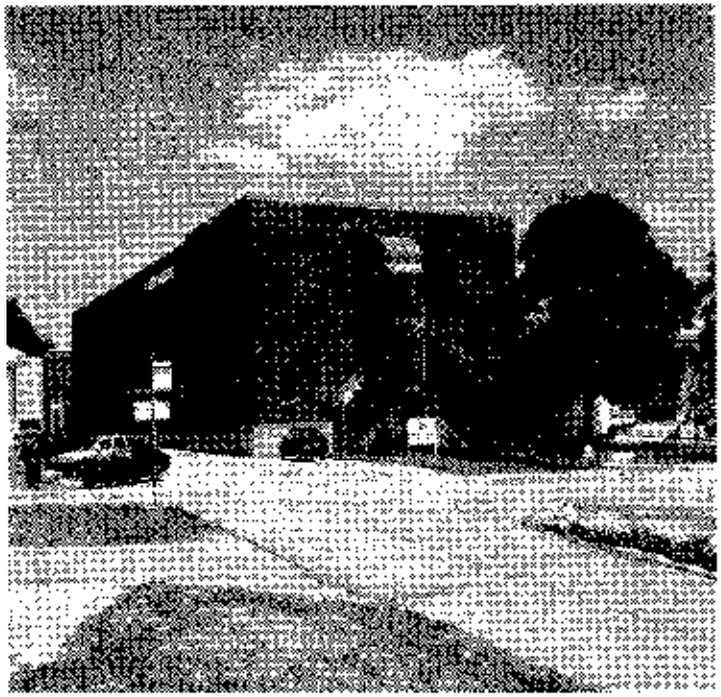
In July 1996, Supply Centers Curtis Bay, and Baltimore as well as G ENE 1,2, and 5, were consolidated into the 600 person Engineering Logistics Center located at the YARD with remote sites in Glen Burnie and Columbia, MD. The ELC's primary mission is to provide exceptional equipment and systems life cycle support to maximize our customer's operational effectiveness. ELC's logistical oversight responsibilities include life cycle cost management, maintaining item visibility to ensure maximum utilization, equipment and system evaluation and parts warehousing.

3. FUNDING HISTORY

	Funding Year		
	94	95	96
OE	$28.9M	$30.6M	$27.4M
AC&I	$9.3M	$10.1M	$10.4M
EC&R			$600K
SUPPLY FUND	$31.0M	$28.8M	$25.4M

4. PHYSICAL PLANT

The ELC offices and warehouses represent 331,509 sq ft or approximately 33.8% of total enclosed space within the YARD. In addition, the ELC utilizes 44,658 sq ft of GSA leased office space in Glen Burnie, MD and 170,492 square feet of GSA leased warehouse space in Columbia, MD.



5. CAPABILITY DISCUSSION

The ELC provides its customers with quality integrated logistics support for Hull, Mechanical, Electrical, Ordnance, and Electronics equipment installed on virtually all worldwide CG platforms less aviation. This includes the acquisition, repair, storage, and management of over 20,000 individual line items with a total inventory value in excess of $163 million dollars. In addition, the ELC: establishes platform logistics support philosophies; implements equipment support plans; manages and promulgates equipment/systems configuration, allowance, and technical information; and provides design engineering support.

6. ONGOING IMPROVEMENT INITIATIVES

Since the standup of the ELC in July 1996, the organization has undertaken many initiatives aimed at improving our business. A corporate strategic plan has been developed that provides continuity of purpose and division/branch business plans are utilized along with an extensive executive information system to keep ELC on track. Re-systemization is being accomplished through the Supply Center Computer Replacement project that will replace multiple software applications currently in use with a standard, totally re-engineered system. The antiquated IRM hardware system is being replaced with state of the art central computing capability. Additionally, the ELC is diligently working towards ISO9001 certification . All of these ambitious projects will help the ELC provide quality engineering and logistics support services.

7. PLANNED CAPITAL IMPROVEMENTS

The capital plant is managed by the host command, the CG YARD. The top priority remains the consolidation of the ELC organization at the YARD through construction of a 91,500 square foot office building. Currently the YARD and ELC are working with FD&CC to develop a planning proposal which will provide co-located admin office space and warehouse facilities at the YARD.

1. COMMANDS

Coast Guard Integrated Support Commands (ISC), Support Center (S/C) Elizabeth City, and Closure Project Resident Office (CPRO) Governors Island

2. MISSION/DESCRIPTION

ISCs provide support services in 29 functional areas to units within their Area Of Responsibility. Examples of services include Shipping/Receiving, Purchasing, Personnel Administration, Medical/ Dental Care, and Industrial Support. Established in 1996, the 12 ISCs are located in Alameda, CA; Boston, MA; Cleveland OH; Honolulu, HI; Ketchikan, AK, Kodiak, AK; Miami, FL; New Orleans, LA; Portsmouth, VA; St. Louis, MO; San Pedro, CA; and Seattle, WA. Support Center Elizabeth City, in Elizabeth City, NC, provides similar support to tenant commands. CPRO Governors Island, in New York City, is executing the Coast Guard's plan for maintenance and disposal of Governors Island Real and Personal Property.

These 14 units employ a workforce of more than 2300 personnel, including 265 commissioned officers, 1273 enlisted, and more than 800 civilian employees.

3. FUNDING HISTORY (All Facilities Combined)

	Fiscal Year 97
OE	$ 69,400K
AC&I	$ 11,800K*
TOTAL	$81,200K

* Does not include Streamlining Specific Projects

4. PHYSICAL PLANT (All Facilities Combined)

ISCs, S/C Elizabeth City, and CPRO Governors Island are responsible for 13M+ SF of CG owned facilities on more than 24,000 acres (95% of acreage is in Kodiak). The Plant Replacement Value of these facilities is estimated at more than $2.3B. Some or all of ISCs Cleveland, Ketchikan, Miami, and St. Louis are located in leased space.

Source: Shore Facility Inventory Reports

5. CAPABILITY DISCUSSION

The mission of an ISC is to provide Coast Guard units and people access to a cost effective support system that satisfies all of their logistics requirements. Although the model for an ISC provides a template for organizational structure, each of the 12 ISCs are unique based upon location and customer mix. The common thread for all ISCs are the Personnel Services and Comptroller Divisions. Other divisions found at ISCs include Health Services, Industrial, and Facilities Engineering.

6. IMPROVEMENT INITIATIVES

Facilities Master Plans for ISCs Ketchikan, Seattle, and Miami are being currently developed.

All other units, where appropriate, have Master Plans in place.

CPRO Governors Island will be decommissioned by 1 OCT 97 although a caretaker detachment will remain until a CG presence is no longer required.

7. PLANNED CAPITAL IMPROVEMENTS
(All Facilities Combined)

Major capital improvement projects with an estimated cost of $79,150K are prioritized through FY2005.

Examples of projects include:

- ISC Ketchikan Breakwater ($1.6M)
- ISC Boston Waterfront Rehab ($4.7M)
- ISC Alameda Replace Causeway ($5.6M)
- ISC Honolulu Tenant Sprt Bldg ($4.2M)
- ISC Seattle Rebuild Pier 36 Ph I ($6.0M)
- ISC Portsmouth Waterfront Improvements ($6.0M)

Minor capital improvement projects with an estimated cost of $9,450K are prioritized through FY2002.

Capital improvement projects for Family Housing with an estimated cost of $43,800K are prioritized through FY2003.

In addition to these projects, the replacement and relocation of ISC New Orleans is expected to be funded by the US Army Corps of Engineers in conjunction with a waterways improvement project.

Source: FY97 Shore Facilities Requirements List

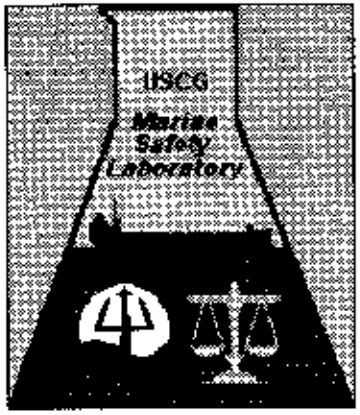
1. ASSET

Marine Safety Laboratory (MSL)

2. WHAT IT DOES

The MSL provides forensic oil analysis and expert testimony in support of the oil pollution law enforcement efforts for field investigators, districts, hearing officers, National Pollution Funds Center, Department of Justice, and other federal agencies. This Coast Guard's sole facility for performing forensic oil analysis. Strategic goals supported are:

- Protection of natural resources



3. ASSET FUNDING HISTORY

Note: The following table summarizes only those facility support costs borne by the Marine Safety and Marine Environmental Protection Programs.

Acquisition Date: TBD
Acquisition Cost: TBD

Approp\Yr	94	95	96
OE	$25K	$30.9K	TBD
AC&I	TBD	TBD	TBD
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

4. INVENTORY / LOCATION

The Marine Safety Laboratory is collocated with the CG Research and Development Center. The physical address of the Lab is:

1082 Shennecossett Road
Groton, CT
06340-6094

5. CAPABILITY DISCUSSION

To be developed

6. CAPABILITY PRESERVATION

There are no service life extension, renovation, maintenance, and/or replacement projects currently planned for the MSL.

7. FUNDING GRAPHS

Projected out year spending for the MSL is shown below. These figures are based on planned projects in the year indicated and the average OE cost plus an annual inflation factor.

Approp\Yr	99	00	01
OE	$28.3K	$28.7	$29.1K
AC&I	$0	$0	$0
EC&R	TBD	TBD	TBD
Total	TBD	TBD	TBD

1. COMMAND

U.S. Coast Guard Operations Systems Center (OSC)
175 Murall Drive
Martinsburg, WV 25401 200

2. MISSION/DESCRIPTION

OSC is one of three CG designated Consolidated Data Centers employing 49 military and civilian government employees. The OSC staff provides oversight, direction and interface between the CG and 134 contract employees. This unique workforce currently supports 31 major and minor information systems, with an additional 26 systems to follow. The OSC develops, maintains, and provides hotline services for enterprise grade information systems that are accessible across the Coast Guard around the clock in support of Coast Guard missions. The OSC also provides data system risk assessment and planning services for the Coast Guard.

3. FUNDING HISTORY

	Fiscal Year		
	94	95	96
OE	$5,980.1K	$6,704.3K	$7,229.0K
AC&I	$1,050.3K	$ 909.3K	$ 110.2K
TOTAL	$7,030.4K	$7613.6K	$7,339.2K

Source: CG Corporate Database/ G-CFM

4. PHYSICAL PLANT

Currently operating out of a 37,000 sf leased facility, the facility provides private and open work space in general access areas for 183 employees. The 13,000 sf data floor is divided into a 10,000 sf Unclas section with the remainder operating at Secret level. The data floor houses 2 mainframes, 28 super-minicomputers, and 39 large communications and data servers. The facility is served with dual diversely routed power and T3 (45mbs) data circuits. Dual 1 MW generators provide redundant backup power in event of loss of commercial power. In addition the data floor is buffered with a dual 384 kva Uninteruptable Power Supply to prevent computer shutdowns.

5. CAPABILITY DISCUSSION

The Operations Systems Center is the Coast Guard's primary computer center and application software maintenance and development center. Nearly all Coast Guard missions and support functions are supported to some degree by OSC. Some of the more visible enterprise systems at OSC include the Automated Assistance Vessel Rescue System (AMVER), Computer Aided Search Planning (CASP), Law Enforcement Information System (LEIS II), Joint Maritime Information Element (JMIU), Marine Safety Information System (MSIS), Merchant Mariner Licensing and Documentation (MMLD), Personnel Decision System (PDS), Automated Requisition Management (ARMS), and the Auxiliary Management Information System (AUXMIS). OSC analyzes program manager requirements and develops long range plans for the replacement or enhancement of ADP hardware and application software. As an active system developer, OSC is an information system technology center of excellence that provides exploration services for next generation system architectures, products, tools, and techniques.

6. ONGOING IMPROVEMENT INITIATIVES

The OSC currently operates in a 37,000 sq ft leased GSA facility. From its start, the OSC was expected to absorb and consolidate other CG IRM functions. In 1993, initial planning began for G-T laboratory consolidation. This planning became part of the CG Streamlining Initiative approved in 1996. Under the plan, OSC would absorb the IRM functions of EECEN. A five year projection for OSC work load & space requirements was approved in December 1995. It is expected that existing and future systems will require facilities for a total of 150 people, mostly contractors who will be supporting systems that are either consolidated from other sites in the CG or new systems which replace functions now carried out elsewhere. In April 1997, G-CCS approved a planning proposal to expand OSC space by 64.5.KSF to accommodate the expanded mission of OSC resulting from Streamlining and Data Center Consolidation.

7. PLANNED CAPITAL IMPROVEMENTS

OSC is housed in a GSA leased facility. The new office annex will also be a leased facility. Recapitalization of computer system hardware and peripherals is planned and programmed by HQ program managers. OSC may act as an agent to carry out these general plans, or they may be carried out through large Coast Guard Headquarters contracts.

1. COMMAND

U.S. Coast Guard Research & Development Center (RDC)
1082 Shennecossett Rd
Groton, CT 06340-6096

2. MISSION/DESCRIPTION

RDC is the Coast Guard's sole facility performing Research, Development, Test and Evaluation (RDT&E) in support of the following Coast Guard missions: Maritime Law Enforcement, Maritime Safety, Marine Environmental Protection and National Security. The facility is staffed with over 100 scientists, engineers, technicians and administrative personnel working together to ensure the Coast Guard maximizes workforce and resource productivity by the systematic application of science and technology. Technical project work is performed in support of the needs of the Coast Guard's operating and support program offices.

3. ASSET FUNDING HISTORY

	Fiscal Year		
	94	95	96
OE	$ 3,863.2K	$ 3,660.1K	$ 3,157.4K
AC&I	$ 230.7K	$ 473.4K	$ 539.9K
RDT&E*	$22,500.0K	$20,169.0K	$18,000.0K
TOTAL	$24,602.0K	$22,777.3K	$21,817.9K

* Budget Authority

4. PHYSICAL PLANT

The RDC occupies approximately 72,000 square feet of office and laboratory space and is host to two separate tenant commands; the Coast Guard International Ice Patrol and the Coast Guard Marine Safety Laboratory. The RDC also operates a remote Fire and Safety Test Detachment located in Mobile, AL; the only facility in the world with real ships which are used for full-scale fire testing and an environmental permit to conduct the tests.

5. CAPABILITY DISCUSSION

RDC plans and conducts research projects which develop, test and evaluate techniques, concepts, systems, equipment and materials for possible use in Coast Guard missions. RDC maintains capabilities necessary to respond to known and anticipated requirements of program/support managers and operational commanders and keeps abreast of research and development outside the Coast Guard of potential benefit to the service. RDC program personnel have both the expertise on, and experience with, the business practices (missions, policies, plans and processes) of the Coast Guard, as well as the knowledge of existing and emerging science and technology. These strengths are used to leverage science and technology within the Coast Guard to solve today's needs and tomorrow's challenges, working towards the ultimate goal of improving performance and saving resources across all Coast Guard missions.

6. ONGOING IMPROVEMENT INITIATIVES

The ultimate goal of the Research and Development Program, and therefore of the RDC, is the continuous improvement of the Coast Guard's ability to fulfill its missions in the most effective and efficient manner possible. During FYs 1996 and 1997, the Center has streamlined and restructured itself to align itself closely with the new Headquarters organizational structure and thereby "mesh" more directly with project sponsors and improve its business practices. The project selection and prioritization process has also undergone significant transmogrification to direct scarce resources to the most promising and highest return on investment efforts. All of these initiatives are included in an ongoing self-assessment, both at the RDC and within the Office of Research and Development at Headquarters.

7. PLANNED CAPITAL IMPROVEMENTS

10-15 year timeframe Replace Fire Test Ship at Fire Safety Test Detachment, Mobile, AL. $1,000K

1. COMMAND

U.S. Coast Guard Telecommunications & Information Systems Command (TISCOM)
723 Telegraph Road Alexandria, VA 22315-3940

2. MISSION/DESCRIPTION

TISCOM provides telecommunications, electronics, and information systems support to the Coast Guard. The Command is the Coast Guard's lead developer of voice and data communications systems. Building modern digital communication networks and integrating computer technology into the Coast Guard's daily routine is the Command's primary responsibility. TISCOM is also the home of the CG Ceremonial Honor Guard which represents the CG at highly visible functions such as full honor ceremonies for visiting heads-of-state and special ceremonies at the Pentagon, Arlington National Cemetery and the White House.

3. FUNDING HISTORY

	Fiscal Year		
	94	95	96
OE	$12,638.2K	$12,218.3K	$13,163.2K
AC&I	$13,600.2K	$ 1,356.9K	$ 4,404.0K
TOTAL	$26,238.4K	$13,575.2K	$17,567.2K

4. PHYSICAL PLANT

TISCOM occupies 200 acres with 35 permanent buildings (127sf - 23,173sf.) for a total of 127,982sf. The replacement cost for the physical facilities is estimated at $12,105.1K. Additionally, there are 26 structures including 6 communication towers (70-100ft) with an estimated replacement cost of $6,892.4K.

5. CAPABILITY DISCUSSION

The technical staffs at TISCOM are responsible for managing, procuring and engineering the Coast Guard's voice, data, standard workstation and message, telecommunication systems and services. Systems include standard workstation III, semi-automatic message preparation system, FTS2000, the Coast Guard Data Network and others. Other responsibilities include serving as the facility manager and maintaining configuration control for Coast Guard communication stations and centers. TISCOM staffs have developed expertise in the areas of Office automation Workstation Radio and Radio Control System, Local Area Networks, Wide Area Networks and Automated Information Security.

6. ONGOING IMPROVEMENT INITIATIVES

The COMSYS2000 initiative is a multiyear strategy to automate and streamline Coast Guard communication systems.

TISCOM is responsible for the actual migration of the Coast Guard to a new standardized computer workstation. This multiyear initiative will upgrade most computer equipment throughout the Coast Guard.

7. PLANNED CAPITAL IMPROVEMENTS

No major capital improvements are currently scheduled for this facility.

1. COMMAND

U.S. Coast Guard YARD
2401 Hawkins Point Rd
Baltimore, MD 21226-1797

2. MISSION/DESCRIPTION

The YARD is the only shipbuilding and repair facility of the USCG and is designated a core logistics facility. Employing a workforce of 607 civilian and 102 military personnel, it is the Coast Guard's largest industrial plant and is responsible for construction, repair, and renovation of vessels and various aids to navigation, for the manufacture of a wide variety of Coast Guard equipment and providing casualty response support to the fleet. In addition, the YARD serves as a host facility for the Engineering Logistics Center (ELC), Activities Baltimore, and home port for Coast Guard Cutters SLEDGE and RED BIRCH.

3. FUNDING HISTORY

The YARD operates under Title 14, U.S.C. 48 through a revolving fund sustained through payments from its customers.

Fiscal Year		
94	95	96
$53.1M	$54.6M	$52.3M

4. PHYSICAL PLANT

The shipyard spans 113 acres. Replacement cost for buildings and structures is estimated to be $191.9M.

5. CAPABILITY DISCUSSION

The YARD is a Core Logistics Facility. Over the years, the YARD has completed a number of new construction projects such as seventeen 82' Patrol Boats, five 157' Coastal Buoy Tenders, five 210' Medium Endurance Cutters, 207 41' Utility Boats, and four 160' Inland Construction Tenders. Recently, the majority of the YARD's work has been in the area of major renovations of cutters such as the 180' Buoy Tender Service Life Extension Program and the 210' Medium Endurance Cutter Major Maintenance Availability. In 1997, the YARD's floating drydocks were replaced by a 3500 long-ton shiplift. The YARD provides significant flexibility for emergency overhauls, commercial contract defaults, prototyping and surge capability. The YARD maintains an engineering staff that is fully capable of completing design and production engineering projects. Along with completing electronic work on cutters during availabilities, the YARD's electronic shop performs electronic equipment overhauls and develops prototypes in support of several Coast Guard mission areas. Current AC&I projects include the Stern Loading Buoy Boats (BUSL) and the 210' MMA work, which will be completed in 1998.

6. ONGOING IMPROVEMENT INITIATIVES

The YARD is a modern , efficient organization that employs state-of-market engineering practices using computer assisted design and manufacturing. It is certified by Naval Sea Systems (NAVSEA) as a Limited Repair Facility (LRF) for Navy owned ordnance and it attained ISO 9001 certification for quality assurance (1995). The YARD has an established record of quality: first repeat winner (1996) of the Commandant's Quality Award and designated a Reinvention Lab under the National Performance Review by Vice President Gore. The YARD is fully compliant with HAZMAT policies and regulations. For example, with the replacement of our aging buoy tenders and 82'patrol boats, these older cutters must be disposed of properly. Some may require PCB and other HAZMAT remediation. The YARD with its HAZMAT management experience and pending ISO 14000 certification will be the shipyard of choice for this task. With experience and performance in cutter renovation projects, the YARD may be leveraged to extend the life of our 270' WMECs. As the Optempo for our 110' WPBs quickens, the YARD will provide maintenance and repair to keep pace with operations.

7. PLANNED CAPITAL IMPROVEMENTS

No information provided.

1. ASSET

U. S. Coast Guard Academy
New London, CT 06320

2. WHAT IT DOES

The Academy's mission is to develop leaders of tomorrow, including cadets, officer candidates, and students (via Leadership Development Center).

3 ASSET FUNDING HISTORY

Capital construction has occurred over several decades, with initial construction in the 1920's, and an additional major surge in the 1960's & 1970's. Since that time little capital improvement has occurred other than the McAllister Hall addition in 1983, and the Child Development Center in 1994. As part of the LDC establishment here at the Academy, AC&I construction has become active once again.

4. INVENTORY / LOCATION

The Academy is comprised of approximately 103 acres of land, and about 1.3 million square feet of building space. Major buildings include:
Chase Hall (cadet barracks)
Hamilton Hall (administration)
Satterlee Hall (academics)
Smith Hall (academics)
McAllister Hall (academics)
Michel Hall (medical clinic)
Leamy Hall (multi-purpose rec. bldg.)
Munro Hall (enlisted barracks)
Waesche Hall (library/museum)
Pine Hall (waterfront)
Roland/Billard Halls (gymnasium)
Yeaton Hall (LDC)
Chapel, Visitor's Center, Rowing Center, Sailing Center

1A. PHOTOGRAPH / ILLUSTRATION

5. CAPABILITY DISCUSSION

Support capabilities are required for 850 cadets, 500 faculty/staff, 90 officer candidates & 160 CPO's (initial LDC estimates) and other transient students. This includes support in many different areas:

Facilities support
Administrative support
Berthing & Food Service support
Waterfront support
Academic support
Military Training support

6. CAPABILITY PRESERVATION

In order to preserve the Academy's unique facilities, preservation of capital assets is governed by adequate resources in facilities maintenance, rebuilding, and new construction. Recent LDC construction efforts are significant, but are not by themselves the only requirement. Sufficient AC&I, AFC-43, and AFC-30 funds are needed, along with staffing levels consistent with requirements. A master Plan was developed in 1993, updated in 1995, and to be updated again in the near future to identify long term capital asset requirements.

7. FUNDING GRAPHS

AC&I:
Yeaton Hall Renovation ($2.5M in FY96)
Chase Galley/Wardroom Renovation ($4M in FY96)
Roland Hall Gym Rehab ($4M in FY96)
Munro Hall Renovation ($5.8M in FY98)
Satterlee Hall Rehab ($3.8M in FY99)

AFC-43:
$2.5M received in FY97, although historically less than in the past.

1. ASSET

Coast Guard Family Housing

2. WHAT IT DOES

Provides adequate cost effective housing for Coast Guard personnel and their dependents in mission areas with a shortage of adequate or affordable housing. Has positive impact on quality of life for all ranks...especially junior personnel.

3 ASSET FUNDING HISTORY

OWNED:
AC&I project cost has averaged $15M/year over last ten years. Some 3,000 of our 5400 units are prior DoD units with some 2,000 units 30+ years old. Average annual O&M costs will approach $50M in FY98. (AFC-30 of $35M and AFC-43 of $14.7M)

LEASED:
Commercial lease costs for approx. 5400 units will approach $60M in FY98. DoD lease costs for approx. 900 units will approach $10M.

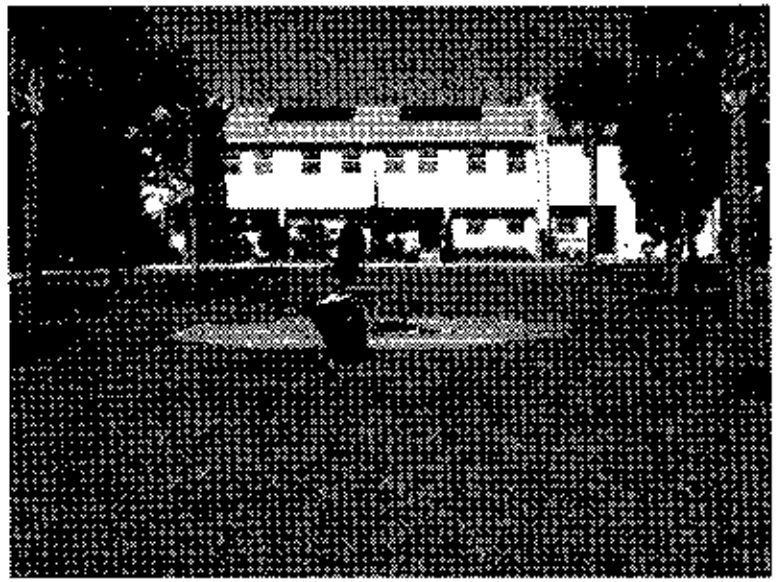
4. INVENTORY / LOCATION

OWNED HOUSING: 5447.
3,323 units not colocated with CG units
(includes 333 on DoD sites)
2,124 housing units colocated with CG units.

LEASED: 6300.
5,400 housing units in local communities.

900 DoD housing units on DoD sites.

Units located in U.S. or U.S. Territories.



5. CAPABILITY DISCUSSION

Provides adequate housing for over 35% of CG personnel in remote or high cost areas. Largest sites are in high cost major metropolitan areas where many personnel, especially junior enlisted, can not afford adequate housing. Our leased housing program originated as a supplement to owned housing and has proven to be a cost-effective alternative to building in locations where adequate housing exists in the community. The housing program provides our military personnel an important buffer against economic cycles affecting the viability of buying or renting housing. Cost effective personnel support and good stewardship require that we use life-cycle cost as the principle factor for housing decisions. Housing allowances make a good measure of effectiveness for comparison to CG housing O&M costs.

6. CAPABILITY PRESERVATION

On-going environmental remediation and maintenance condition assessments will be completed in FY98. Results of these assessments provide cost input to a decision matrix to retain or divest sites according to life-cycle cost. 1996 Housing Authorities allow us to consider public private ventures and off budget conveyance to maintain capability. We expect to reduce asset ownership to improve cost effectiveness of program

7. FUNDING GRAPHS

TO BE DEVELOPED

1. ASSET

USCG Reserve Training Center (RTC), Yorktown, VA

2. WHAT IT DOES

The Training Center provides Class "A" and "C" school training, exportable training, correspondence courses, and service-wide exams for roughly half of the Coast Guard's ratings and a wide variety of occupational specialties. Additionally, the Performance Technology Center, an organizational element within the Training Division, analyzes performance needs and problems and develops interventions other than resident training. Training Center personnel work with Program and Training managers to develop the "right" interventions, at the right cost, and just in time to meet the need. RTC serves as the host unit for USCGC Morro Bay.

3 ASSET FUNDING HISTORY

The Coast Guard acquired the property and structures from the Navy. RTC's basic utility systems - an auditorium, gym/pool, exchange, maintenance shops, and 2000 foot concrete pier - remain from the Navy era. Major development of RTC began in the late 1960's with the construction of two 60K sq. ft. Barracks, a dining facility, and an engine school. In the mid 70's, additional barracks and instructional buildings were constructed. Another major building cycle occurred in the mid 80's, including more barracks and instructional buildings. The late 80's/early 90's a new admin building, clinic, and chapel were constructed. Three of the four barracks have undergone major renovation. Renovation of the pier will begin this year. The total plant replacement value of RTC is $110M.

4. INVENTORY / LOCATION

The Training Center is located on 154 acres of land and has four large barracks buildings for the berthing of students, a wide variety of classroom and lab facilities, an Enlisted Dining Facility, a Senior Student Dining Facility, and Enlisted Club, and Exchange & mini-mart, a gymnasium/pool complex, an auditorium, a medical clinic, a uniform shop, two private residences, a large pier, and many other buildings that house maintenance and support activities. There are 60 buildings with a total of 709K square feet, utilized as follows:

Training 33% Barracks 40% Support 27%

1A. PHOTOGRAPH / ILLUSTRATION

5. CAPABILITY DISCUSSION

The Training Center will be able to analyze the human performance needs of Coast Guard people, and design, develop, and deliver performance improvement interventions well into the 21st century. With the maintenance and renovation efforts noted in "Capability Preservation," the training, barracks, and support facilities will provide an environment that is conducive to work, learning and living. A recent conversion to natural gas for heating and cooling will help to protect the environment and will save money in the long run. The use of an energy management system and a 600kw emergency generator will enable RTC to remain a leader in energy efficiency.

The migration from the Coast Guard's standard workstation to Standard Workstation III pends. This project is crucial to RTC's efforts to leverage technology, to communicate effectively with its customers and clients, and to continue to meet the performance needs of the field. Additionally, oil from the adjacent Nave Fuel Depot has migrated under some buildings and other property, and is moving toward the river. The Navy is responsible for a long-term clean-up of this threat to the environment, but RTC will need to monitor the effort to ensure its completion.

6. CAPABILITY PRESERVATION

RTC has a $13M backlog of maintenance projects competing for approximately $2M in recurring AFC-43 funding. Roof replacement and heating, ventilation, and air conditioning replacements in various facilities are typical major projects on the backlog. A $2.1M renovation of the 168 bathrooms in the petty officer barracks will be funded in FY 1998 and FY 1999. A major $1.6M mid-life renovation of Steuben Hall, the nonrate barracks, pends approval of funding. These projects are vital to maintaining acceptable livings standards for RTC students. Also needed are major renovations of the buildings housing the machinery schools and damage control/weapons schools. A $980K AC&I project to replace the firefighting trainer is scheduled to funding in FY 1998. Improvement of energy efficiency is a continuous maintenance effort. Lighting upgrades and other system improvements facilitate this effort.

7. FUNDING GRAPHS

None provided.

1. COMMAND

USCG Training Center Cape May

2. WHAT IT DOES

TRACEN Cape May provides motivated entry level enlisted personnel to the Coast Guard who are ready and able to serve with a sense of pride and commitment in the nation's finest seagoing service. TRACEN Cape May is also a support center for a medium endurance cutter, two patrol boats an ocean going buoy tender, a group, an air station and the Coast Guard Uniform Distribution Center.

3. FUNDING HISTORY

TRACEN Cape May has 930,000 square feet of building space valued at $107M. The Coast Guard began operations on this property in 1948. The majority of the major buildings are over 25 years old. Examples include:

Building	Purpose	Cost	YrBuilt
Fire House	Fire Station	$846K	1919
Exchange	Retail Store	$3.7M	1948
Munro Hall	Recruit Barracks	$5.0M	1973
Gymnasium	Phys. Ed.	$8.6M	1971
1720 Del Ave.	Family Housing	$371K	1974

Average O&M support includes $2.5M in AFC-43 and $2.3M in AFC-30

1A. PHOTOGRAPH / ILLUSTRATION

4. INVENTORY/LOCATION

TRACEN Cape May is located on a 450 acre peninsula between the Atlantic Ocean and Cape May Harbor. A large portion of the base is preserved in its natural state as environmentally protected wetlands. An extensive facility infrastructure is maintained in support of the recruit training mission and tenant commands. These facilities include recruit barracks, recruit training facilities, support facilities, including an Exchange, Chapel, Fire Department, Gymnasium, Dining Facility, two Clubs, permanent party barracks, a hanger, several warehouses and 174 housing units. Assets include an annual operating budget of over $7 million and an equipment and structures inventory worth more than $42 million.

5. CAPABILITY DISCUSSION

TRACEN Cape May is staffed by 350 members of Team Coast Guard in five divisions in support of training 3500 active duty and 400 reserve recruits annually. These divisions are:

Training - Recruit Training, Recruiter School
Facilities Engineering - physical plant maintenance
Comptroller - unit budget, Exchange, MWR, gym
Health Services - medical and dental services
Admin & Command - personnel & legal support, Chapel

Primary services provided are:

- Performance based Recruit and Recruiter Training
- Facilities and personnel support services for the TRACEN and all tenant commands

6. ONGOING IMPROVEMENT INITIATIVES

TRACEN Cape May uses a comprehensive recruit instructor development training program that combines both classroom and on-the-job training. This approach, in combination with an extensive mentoring program, gives recruit instructors the necessary skills, understanding of the material, and the self assurance necessary to deliver quality training to the recruits. Current AC&I projects include the rehabilitation of the recruit barracks (FY96 project) and building 12 4-BR housing units (FY98 project). Planning proposals include Harbor Shoreline Protection and De centralizing Steam Plant. The AFC-43 project backlog is $13.2M. Additionally, $450K is transferred annually to the Army Corps of Engineers for a beach preservation project. TRACEN Cape May personnel are participating in a current study to assess the Coast Guards needs for the year 2000 and beyond.

7. PLANNED CAPITAL IMPROVEMENTS

None provided.

1. ASSET

United States Coast Guard Training Center Petaluma

2. WHAT IT DOES

Petaluma is structured around providing performance improvement interventions and support services to our many diverse and valued customers. Our goal is to improve how Coast Guard employees perform on the job by the most efficient and effective means. We're dedicated to providing a quality product to the receiving Coast Guard unit to *improve performance on the job, in the field, for the ratings and programs we serve.*

3. ASSET FUNDING HISTORY

Training Center Petaluma has 747,000 square feet of building space valued at approximately $169M and land worth $2.1M. Petaluma was acquired from the Army in 1971. A third of the building space was newly constructed about 10 years ago including:

Building	Purpose	Size	Cost	Yr. Built
Bauer	Training	97,679	$14.3M	88
JNB	Training	60,000	$7.8M	85
Horsley Hall	Berthing	71,000	$9.5M	89
Haley Hall	Galley	19,238	$4.0M	89
Harrison Hall	Berthing	28,000	$3.5M	85
Housing		40,335	$3.3M	87

1A. PHOTOGRAPH / ILLUSTRATION

4. INVENTORY / LOCATION

Located approximately 10 miles west of the city of Petaluma, California, Training Center Petaluma is nestled in the rolling hills between Sonoma Valley and Bodega Bay. The Training Center occupies 831 acres of Northern California's picturesque, pastoral countryside in an area know as Two Rock Valley. To facilitate and sustain these services for our customers and employees, an extensive facility infrastructure is maintained. Housed within the Training Center's fenced real estate are 219 buildings, including 129 family units, and over 200,000 square feet of training facilities. Our assets include an annual operating budget of just under $8million and an equipment inventory worth more than $21million.

5. CAPABILITY DISCUSSION

The Training Center operates 16 schools which offer a total of 44 resident and exportable courses to Coast Guard employees nation-wide. Annually, these schools conduct about 330 course convenings for an annual through put of approximately 4,500 students. In addition to Coast Guard military and civilian employees the Training Center annually provides training to international students from as many as 25 countries. Primary services provided include:

1. Consulting to help clients improve and/or change their business performance;
2. Performance based training in:
   - Apprentice and advanced level skills for 7 of 23 Coast Guard enlisted occupational specialties (Storekeeper, Yoeman, Health Service Technician, Telecommunications Technician, Electronics Technician, Telephone Technician, and Food Service Specialist;
   Leadership and Total Quality Management for all Coast Guard employees;
   - Basic instructor skills, course designing, and performance consulting skills;
   - Emergency medical technician skills; and computer systems operator skills.
3. Developing performance tests for the 7 ratings we serve and the general military requirements for all ratings in support of the enlisted advancement system;
4. Creating non-training solutions to help increase on-the-job performance due to lack of skills and knowledge; and
5. Providing facilities and personnel support services.

6. CAPABILITY PRESERVATION

The Training Center uses a comprehensive instructor development training program that combines both classroom and on the job training. This approach of helping our instructors attend core instructor courses such as Basic Instructor and Course Designer, as well as being mentored on the job, gives the instructors the necessary skills, understanding of the material being delivered, and the self-assurance necessary to be able to deliver quality training to our students. Petaluma has a small AC&I backlog of just over $2M. This consists of a waterline replacement project. If current water conservation remains successful, this project will not be needed. Training Center personnel are participating in a study to assess the Coast Guard's training needs for the year 2000.

7. FUNDING GRAPHS

None provided.

APPENDIX B: PROJECTS APPROVED, FUNDED AND UNDERWAY

Overview

This chapter provides a general overview of the Coast Guard's currently funded acquisitions. The information is presented as a summary spreadsheet listing all of the projects contained in the following pages. This information may be carried forward into Appendix C (projects approved, seeking funding) if the project requires FY2000 funds to continue or complete. The information is also carried forward to the Long Range Resource Allocation Plan (LRRAP), Appendix D if the project extends beyond FY2000.

The information on specific projects contained in this section is presented in either of two ways: a generic project summary sheet (one for each project) that describes the project, it's history, the mission it will support when brought on line, and the funding profile. The funding information is based on project baselines contained in FY 1999 or earlier budgets, although in some cases it may be presented as a component of a larger project (multi-year funding, segments of a larger class of assets, or precursor to a major project) and thus listed as a range (as in Deepwater). These pages are included because they reflect the ongoing nature of many of the major acquisition projects and show the sequencing of key business decisions and funding.

Capital Asset Plan and Justification

Agency: U. S. Coast Guard
Bureau: Acquisition Directorate
Name of project: **Deepwater Capability Replacement Analysis**
New Project _____ Ongoing Project X
Is this project information technology ? Yes____ No X

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
Planning:										
Budget authority		0.2	4.9	28	19					52.1
Outlays		0.2	4.9	28	19					52.1
Full acquisition: (all segments)										
Budget authority						300	300	300	13B	15B
Outlays						300	300	300	13B	
Total, sum of stages.....										
Budget authority		0.2	4.9	28	19	300	300	300	13B	15B
Outlays		0.2	4.9	28	19	300	300	300	13B	15B

PART II: JUSTIFICATION AND OTHER INFORMATION

A. **Justification:**
1. Deepwater Surface, Air, and C4ISR assets are approaching the end of their useful service lives. Deepwater Mission Analysis Report dated 06 Nov 95 identified a capabilities gap and a Mission Need Statement was approved by DOT on 29 AUG 96 allowing analysis to start.

B. Program management:
1. Is there a project manager and contracting officer devoted to the project? Yes.
2. Will an Integrated Product Team be established to assist with the management of the project? Yes. The Coast Guard employs a matrix team approach, which includes representatives from Coast Guard Acquisitions, Operations, Logistics, and other offices and field organizations.

C. **Acquisition strategy**:
1. Award three $7M cost-plus contracts to industry teams to define and provide trade-off, life cycle analysis for integrated Deepwater system. Independent Government analysis contract also to be awarded for baseline analysis. Government to have option to down select for total team to integrate system or choose portions of proposed system. Surface platform to be first system contract awarded in 1st Quarter of FY2001. The total system is to be defined from the contract.

PART III: COST, SCHEDULE AND PERFORMANCE GOALS

A. **Description of performance based system:**
Integrated system of surface, air, C4ISR assets to be developed to meet mission in Deepwater environment.

PART III: COST, SCHEDULE AND PERFORMANCE GOALS (continued)

Capital Asset Plan and Justification

B. Original baseline:
1. Cost: To be developed
2. Schedule: To be developed
3. Performance: To be developed

C. Current Baseline:
1. Cost: N/A
2. Schedule: N/A
3. Performance: N/A

D. Variance from current baseline:
1. Cost: N/A
2. Schedule: N/A
3. Performance: N/A

E. Latest revised estimate:
1. Cost: N/A
2. Schedule: N/A
3. Performance: N/A

F. Corrective Actions
N/A

Capital Asset Plan and Justification

Agency: U. S. Coast Guard
Bureau: Acquisition Directorate
Name of project: **Polar Icebreaker Replacement**
New Project_____ Ongoing Project__X__
Is this project information technology ? Yes____ No__X

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(millions)

	Prior to FY98	98	99	00	01	02	03	04	05 and beyond	Total
Planning:										
Budget authority	0									0
Outlays	0									0
Full acquisition:*										
Budget authority	29.0	3.5	2.1	1.9	1.0					37.5
Outlays	26.0	5.0	3.0	2.5	1.0					37.5
Total, sum of stages[1]:										
Budget authority...	29.0	3.5	2.1	1.9	1.0					37.5
Outlays	26.0	5.0	3.0	2.5	1.0					37.5

* Ship acquisition costs are funded with DOD appropriated funds. Coast Guard AC&I funds cover costs for Inventory Control Point Spares, Administration and Travel, Crew Training, Contract Support Services, and other non-DOD costs.

[1]If outyear budget funding does not match cost requirements indicated in Part III, then the cost and schedule will be delayed by an amount equivalent to the budgeted funds shortfall.

PART II: JUSTIFICATION AND OTHER INFORMATION

A. Justification:

The Coast Guard is the sole United States Government agency which provides icebreaking capabilities in the high latitude areas. The mission of the USCGC Healy is to provide polar icebreaking capabilities, including logistics, ice escort, and scientific strategic and inspection missions in the Arctic and Antarctic regions.

The preliminary design for this new polar icebreaker, designated WAGB 20, was developed as a result of several studies conducted by the Coast Guard in conjunction with the Department of Defense, the Department of Transportation, the Office of Management and Budget, Maritime Administration, the National Science Foundation and the National Oceanic and Atmospheric Administration.

Technical risk for the design and construction work for the USCGC Healy is low. Current technology is being used to design and build the ship. Construction was started in March 1996, Keel Laying completed in September 1996 and launching completed in November 1997.

Schedule risk is medium. Cost risk is medium based upon the uncertainties inherent in future AC&I appropriations. Contract delivery date is 26 February 1999, however the contractor has unofficially announced a mid June 1999 delivery date.

B. Program management

1. Is there a project manager and contracting officer devoted to the project? Yes.

2. Will an Integrated Product Team be established to assist with the management of the project? Yes. A Memorandum of Agreement defining the cooperative relationship between the Department of the Navy and the Coast Guard for the acquisition of the Polar Icebreaker was signed in April 1990. A joint

Capital Asset Plan and Justification

PART II: JUSTIFICATION AND OTHER INFORMATION (continued)

Coast Guard/Navy Ship Acquisition Program Management Office was established the same year. In addition, a Program Management Representative Office (PMRO) was established in 1993 and is located at the contractor site. The PMRO, in conjunction with the Supervisor of Shipbuilding, New Orleans, provides technical, quality assurance, logistics and administrative support.

C. Acquisition strategy:

In March 1992 the U.S. Navy, as contracting agent, canceled the icebreaker solicitation because the bids received exceeded the total funds appropriated. To rectify the situation, the Navy in November 1992 awarded a contract for the icebreaker to two shipbuilders for an Engineering Design Baseline (EDB). Each yard was to independently develop the EDB based on a revised performance based specification, Specification of Requirements (SOR), and price for detailed design and construction. The contract award for the detailed design and construction of the vessel was to be made on the basis of "best value" to the customer and the bid was not to exceed $245M. On 15 July 1993, Avondale Industries was awarded the contract for the detailed design and construction of the WAGB 20. Contract type is Fixed Price Incentive Firm contract with a 60/40 shareline.

PART III: COST, SCHEDULE AND PERFORMANCE GOALS

A. Description of performance based system:

The contractor provides a monthly Cost Performance Report. The report allows the Navy to examine the contractor's cost and schedule variances, variances at completion and latest revised estimates. The program also utilizes the Performance Analyzer system to independently generate Estimates at Completion to compare with the contractor's projections. Finally, the PMRO tracks daily production progress against the shipbuilder's production schedules.

B. Original baseline: Not identified because DOD has lead on the project.

C. Current Baseline: Developed internal to the Coast Guard.

(millions)

	Prior to FY98	98	99	00	01	02	03	04	05 and beyond	Total
1. Cost:	29.0	3.5	2.1	1.9						36.5

*Procurement costs funded in Department of Defense's Shipbuilding and Conversion, Navy (SCN) appropriation. Coast Guard annually funds requirements in the Acquisition, Construction & Improvement account for items for which the SCN appropriation may not fund.

2. Schedule:

Preliminary Delivery: FY97 Q4
Acceptance: FY97 Q4
Final Acceptance: FY98 Q2

3. Performance: SOW is performance based. Key characteristics are as follows:

Draft (full load)	29 feet (maximum)	Icebreaking	4.5 ft at 3 kts
Displacement (full load)	16,385 tons	Crew Size	75 Military; 50 Scientists
Length (overall)	420 feet		
Shaft Horse Power	30,000 SHP		

Capital Asset Plan and Justification

PART III: COST, SCHEDULE AND PERFORMANCE GOALS (continued)

D. Variance from current baseline

1. Cost: Current estimate is within baseline goals.
2. Schedule: Change in contract delivery date is anticipated.
3. Performance. Current estimate is within baseline goals.

E. Latest revised estimate:

Delivery in FY99 Q4 vice FY97 Q4.

F. Corrective action:

DOD will seek increased performance from the contractor to offset the delivery delay.

Capital Asset Plan and Justification

Agency: U. S. Coast Guard
Bureau: Acquisition Directorate
Name of project: **Coastal Patrol Boat Replacement Project**
Check one: New Project_____ Ongoing Project __X___
Check one: Is this project information technology ? Yes____ No_X___

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
Planning:										
Budget authority	1.9									1.9
Outlays	1.3	.2	.0	.2						1.7
Full acquisition										
Budget authority	10.9	33.1	63.0	37.6	80.4	24.4	.6			250.0
Outlays	1.0	3.1	19.1	42.5	55.4	66.4	62.3	.2		250.0
Total, sum of stages[1]:										
Budget authority	12.8	33.1	63.0	37.6	80.4	24.4	.6			251.9
Outlays	2.3	3.3	19.1	42.7	55.4	66.4	62.3	.2		251.7

[1]If outyear budget funding does not match cost requirements indicated in Part III, then the cost and schedule will be delayed by an amount equivalent to the budgeted funds shortfall. In this event, a shortfall will potentially increase the unit cost of production.

PART II: JUSTIFICATION AND OTHER INFORMATION

A. Justification:

The current 82-foot patrol boat fleet entered the service in 1960 and began to reach the end of their economic service life during the 1990 time frame. This patrol boat was designed as a dedicated search and rescue (SAR) resource. With an emphasis placed on enforcement of laws and treaties (ELT) within the last decade, the patrol boat evolved into a multi-mission resource. These cutters currently perform various missions including ELT, SAR, port security, coastal and harbor patrols. Without replacement, the existing fleet of patrol boats will not be capable of meeting mission needs, particularly in the areas of drug interdiction, fisheries enforcement, and search and rescue.

Further life extension of the 82-foot patrol boat fleet was considered and rejected, because of the age of the boats. Structural failure due to material fatigue is the driving concern.

B. Program management:

1. Is there a project manager and contracting officer devoted to the project? Yes
2. Will an Integrated Product Team be established to assist with the management of the project? Yes. The Coast Guard employs a matrix team approach to project management. The matrix team includes representatives from Coast Guard Acquisitions, Naval Engineering, Operations, and other offices and field organizations. In addition a Project Resident Office (PRO) has been established at the contractor site which oversees day to day engineering, logistics and contracting details.

C. **Acquisition strategy:**

The acquisition strategy combines a non-developmental item with a parent craft approach. Salient features include using a performance based Circular of Requirements (COR); an industry design; and Small Business Set Aside (SBSA) determination. The purpose of this acquisition is to procure a cost-effective, low-technical-risk replacement for the entire fleet of 82' WPBs in a timely manner. The boat being acquired takes full advantage of

Capital Asset Plan and Justification

PART II: JUSTIFICATION AND OTHER INFORMATION (continued)

State-of-the-market technology. This acquisition allows for a timely replacement of the Point Class Patrol Boats as they have begun to reach the end of their economical service lives.

The method of contracting used was a competitive, negotiated, Firm Fixed Price with Economic Price Adjustment (FFP w/EPA) contract with award to the best value proposal. The EPA provides for adjustment based on cost indexes of material and labor. Sealed Bids and Two Step Sealed Bids were not considered because the customer identified cost as being less important than technical performance.

D. Financial basis for selecting the project.

A Cost Benefit Analysis (CBA) study (August 1993) was conducted to merge mission analysis and cost analysis to show the cost benefits of each alternative. The major finding of this CBA was that either a 25M (alternative B of the study) or a 27.5M (alternative C of the study) provided the greatest mission effectiveness at the lowest total life cycle cost. A Life Cycle Cost Estimate was done in May 1998 to update the results of previous studies.

The alternatives considered were: (1) Extending the life of the Point Class 82' Patrol Boats; (2) Reconnaissance Systems or Aircraft; (3) Surface Effect Ships or Catamarans; and (4) Monohulls. The first option was rejected because of the age of the 82' Patrol Boats. The second option was rejected because the Mission Needs Statement stated that a surface vessel was needed to carry out the required missions. The third option was rejected because of expected higher life cycle costs and higher technical risk

PART III: COST, SCHEDULE AND PERFORMANCE GOALS

A. Description of performance based system:

The Coastal Patrol Boat Project is a Major, Level I Acquisition in the Coast Guard and as such has an Acquisition Project Baseline (APB) which was approved by the Transportation Acquisition Executive (TAE) (Deputy Secretary of Transportation). Approval of the APB established "top level" objectives and thresholds on cost, schedule, and performance which the Program Manager (PM) must meet or exceed. The purpose of the APB is to provide control to prevent unit cost growth and "requirements creep" due to unnecessary system configuration changes or imposition of new, unapproved operational requirements.

In addition to the APB system above, an Independent Operational Assessment (IOA) and an Independent Operational Test and Evaluation (IOT&E) of the Lead Ship were conducted to compare actual performance against the customer's Critical Operational Issues listed in the Coastal Patrol Boat Operational Requirements Document. The results of the IOA and IOT&E will also be used by the Administration Acquisition Executive (AAE) and the TAE in decisions on procuring additional Coastal Patrol Boats.

B. Original baseline:

(millions)

		Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
1.	Cost[1]	24-34	73-105	95-137	95-137	95-137	0	0	0	0	382-550

[1] Cost based on a range of 43-50 boats.

2. Schedule:

Low Rate of Initial Production (LRIP)	FY97 Q2
IOC	FY98 Q1
Key Decision Point 4 (KDP4)	FY98 Q2

PART III: COST, SCHEDULE AND PERFORMANCE GOALS (continued)

Capital Asset Plan and Justification

3. Performance:

Speed 25 knots	
Range	900 NM
Endurance	72 hours
Draft	6 feet
Design Life	25 years
Sea keeping	Patrol in Sea State 5
Crew Size	10
Towing	200 tons
Underway Operations	1500 hrs/year

C. Current baseline:

Change #1 to the Acquisition Project Baseline (APB) was approved on 1 November 1995. As indicated in the preliminary Mission Analysis, the requirement for Coastal Patrol Boats ranges from 31 to 51 boats. The contract has options to build up to 51 boats. The actual requirement will be determined by the Transportation Systems Acquisition Review Council (TSARC) at Key Decision Point 4 (KDP-4).

1. Cost[2]	12-22	37-67	48-87	48-87	48-87	0	0	0	0	193-350

[2] Based on a range of 31-51 boats.

2. Schedule:

Low Rate of Initial Production (LRIP)	FY98 Q2
IOC	FY99 Q1
Key Decision Point 4 (KDP4)	FY99 Q2

3. Performance: Performance goals remain the same as the original baseline.

D. Variance from current baseline:

1. Cost: The current cost estimate is $98M below the current baseline for 50 boats.
2. Schedule: Current estimate is within baseline goals. Overall project remains ahead of schedule.
3. Performance: The ship meets or exceeds all baseline performance goals.

E. Latest revised estimate:

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
1. Cost[3]	12.8	33.1	63.0	37.3	80.4	24.4	.6	0	0	251.9

[3] Based on 50 boats. This was a funding choice outside project control and was based on affordability and Coast Guard levels of funding.

2. Schedule:

LRIP award	FY97 Q4
Lead Ship Delivery	FY98 Q3
KDP-4	FY98 Q4
Final Ship Delivery	FY02 Q4

3. Performance:

Speed	25+ knots
Range	900+ NM
Endurance	72 hours
Draft	5.67 feet

PART III: COST, SCHEDULE AND PERFORMANCE GOALS (continued)

Design Life	25 years

Capital Asset Plan and Justification

Sea keeping	Patrol in Sea State 5
Crew Size	10
Towing	200 tons
Underway Ops	1800 hrs/year

F. **Corrective Actions:** None

G. Required Actions: Complete documentation at KDP4 to reflect project being ahead of schedule and establish the number of boats.

Capital Asset Plan and Justification

Agency: U. S. Coast Guard
Bureau: Acquisition Directorate
Name of project: **Surface Search Radar Replacement Project**
New Project_____ Ongoing Project X
Is this project information technology ? Yes_____ No X

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
Planning:										
Budget authority	1									1
Outlays	1									1
Full acquisition: (all segments)										
Budget authority	6.9	4	15.4	12.9	4					43.2
Outlays	0.7	6.5	19.1	12.9	4					43.2
Total, sum of stages[1]:										
Budget authority	7.9	4	15.4	12.9	4					44.2
Outlays	1.7	6.5	19.1	12.9	4					44.2

[1]If outyear budget funding does not match cost requirements indicated in Part III, then the cost and schedule will be delayed by an amount equivalent to the budgeted funds shortfall. In this event, a shortfall will potentially increase the unit cost of production.

PART II: JUSTIFICATION AND OTHER INFORMATION

A. Justification:

The Surface Search Radar (SSR) acquisition project will provide for replacement of the aging AN/SPS-64 radar system. These radars are increasingly difficult and expensive to support. The replacement radar will significantly increase performance reliability while minimizing maintenance and training requirements. The project has been designated by the Department of Transportation as a Level III major system acquisition under the general oversight of the Coast Guard Administration Acquisition Executive, and is managed under the general guidance provided in the Office of Management and Budget Circular A-109, Major Acquisition Policies & Procedures, and the Coast Guard Systems Acquisition Manual, COMDTINST M4150.2 (series).

The U.S. Navy has joined the Coast Guard's SSR acquisition effort to replace their navigation radars. The Navy participated in development of the SSR specification and Statement of Work. They provided the government Cost Estimate and had active participation on the Technical Evaluation Board, Cost Evaluation Board and Source Evaluation Board. Joint Coast Guard/Navy adaptation of the SSR will reduce life cycle costs.

B. Program management:

1. Is there a project manager and contracting officer devoted to the project? Yes.
2. Will an Integrated Product Team be established to assist with the management of the project? Yes, the Coast Guard employs a matrix team approach. The personnel assigned to the matrix are from the contracting, logistics, technical, operational and project management disciplines.

C. Acquisition strategy:

On January 26, 1996 a Firm Fixed Price contract was awarded to Hughes Aircraft Company, Fullerton, California, for procurement of the Surface Search Radar. The acquisition was negotiated under Full and

PART II: JUSTIFICATION AND OTHER INFORMATION (continued)

Capital Asset Plan and Justification

Open Competition. The SSR system, which has been officially designated the AN/SPS-73, is currently planned for installation on 9 types of Coast Guard vessels and at existing Vessel Traffic Services (VTS) sites. The AN/SPS-73 SSR system will serve as the Coast Guard standard for currently existing cutters. The Surface Search Radar is a fixed price supply contract with minimum order quantity requirements. Hardware may be purchased only within option year 1 and option year 2. Cost variance of hardware is less than one percent between option year 1 and option year 2. Due to the reduced FY 1997 funding level, the Coast Guard does not have sufficient funds to execute the first option period during fiscal year 1997. A total of 106 vessels will be retrofitted with radar systems under this project.

The following Coast Guard Cutters, by type and quantity, are projected to be retrofitted with the AN/SPS-73 SSR:

TYPE	QTY
WPB-110 Patrol Boat	49
WTGB-140 Ice Breaker Tug	9
WLIC-160 Inland Construction Tender	4
WMEC-210 Medium Endurance Cutter	16
WMEC-270 Medium Endurance Cutter	13
WIX-295 "Eagle" Training Cutter	1
WHEC-378 High Endurance Cutter	12
WAGB-400 Polar Ice Breaker	2

PART III: COST, SCHEDULE AND PERFORMANCE GOALS

A. **Description of performance based system:**
The Surface Search Radar Project is a Major, Level 3 Acquisition in the Coast Guard and as such has an Acquisition Project Baseline (APB) which was approved under the general oversight of the Coast Guard Administration Acquisition Executive, the Vice Commandant. Approval of the APB established "top level" objectives and thresholds on cost, schedule, and performance which the Program Manager (PM) strives to meet or exceed. The purpose of the APB is to provide control to prevent unit cost growth and "requirements creep" due to unnecessary system configuration changes or imposition of new, unapproved operational requirements. Any actual or anticipated changes or "breaches" to a Project's ceilings or thresholds must be reported along with proposed corrective action and a new, proposed APB via a Project Deviation Report (PDR) by the PM to the Administration Acquisition Executive (AAE) for the Coast Guard.

In addition to the APB system above, an Operational Test and Evaluation (OT&E) was conducted to compare actual performance against the customer's Critical Operational Issues listed in the Surface Search Radar Operational Requirements Document. The SSR meets the sponsor and the Navy's requirements.

B. **Original baseline:**

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
1. Cost:	7.9	4.0	15.4	12.9	4.0					44
2. Schedule:										
Test Plan Approved		FY96 Q1								
First Article Testing Completed		FY96 Q4								
Initial Operating Capability		FY96 Q4								

Capital Asset Plan and Justification

CGARC (KDP4)	FY96 Q4
Installations Complete	FY01

3. Performance:

Range	On a WMEC-210: detect a 65' vessel in smooth seas, at 10.5NM
Size/Weight/Moment	= to or < AN/SPS-64
Open Architecture and Modular Design	MIL-STD-2036
Minimum Detection Range	25 Meters
Availability	>99.9%
System Life	>10 Years
Power	= to or <AN/SPS-64
Frequency Bands	X and S bands on WMEC-270 and WHEC-378. X band on all others

C. Current Baseline:

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
1. Cost:										37-44

2. Schedule:

Test Plan Approved	FY97 Q3
First Article Testing Completed	FY98 Q1
Initial Operating Capability	FY97 Q3
CGARC (KDP4)	FY98 Q2
Installations	TBD

D. Variance from baseline goals:

1. Cost: Current estimate is within baseline goals.
2. Schedule: The reduced and/or leveled appropriation in FY99 will extend the fleet installation schedule.
3. Performance: Meeting baseline goals.

E. Latest revised estimate:

1. Cost: No change
2. Schedule: The reduced and/or leveled appropriation in FY99 will extend the fleet installation schedule.
3. Performance: No change

F. Correct actions: Revise schedule to match funding.

Fixed Asset Plan and Justification

Agency: U. S. Coast Guard
Bureau: Acquisition Directorate
Name of project: **Long Range Search (LRS) Capabilities Preservation**
New Project X Ongoing Project
Is this project information technology ? Yes No X

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
Planning:										
Budget authority										
Outlays										
Full acquisition										
Budget authority	0		4.1	1.6	TBD	TBD	TBD	TBD	TBD	TBD
Outlays	0		4.1	1.6	TBD	TBD	TBD	TBD	TBD	TBD
Total, sum of stages[1]:										
Budget authority			4.1	1.6	TBD	TBD	TBD	TBD	TBD	TBD
Outlays			4.1	1.6	TBD	TBD	TBD	TBD	TBD	TBD

[1]If outyear budget funding does not match cost requirements indicated in Part III, then the cost and schedule will be delayed by an amount equivalent to the budgeted funds shortfall. In this event, a shortfall will potentially increase the unit cost of production.

PART II: JUSTIFICATION AND OTHER INFORMATION

A. **Justification:**

1. The Coast Guard's fleet of Long Range Search aircraft range in age from 11 to 26 years, and is composed of three variants of the HC-130 aircraft: five 1500 series, three 1600 series, and twenty-two 1700 series. Coast Guard over water flight regimes and the normal aircraft aging process have combined to produce dramatic increases in unit maintenance and programmed depot maintenance (PDM) repair costs for the C-130. The objective of the LRS project is to preserve the service lives/capabilities of the C-130 and control the escalating repair cost. Loss of any C-130 capabilities would severely impact the prosecution of Coast Guard missions, Coastal Zone as well as Deepwater. Currently the most likely course of action incorporates a fuselage preservation program, electrical system upgrades, avionics system improvements, 1500/1600 series wing re-wiring, and an improved corrosion control program. Of primary importance is the replacement of the current electrical system with an upgraded power generation and distribution system. The currently installed electrical system is prone to voltage surges which causes significant damage to sensitive avionics and flight computers. Unless this system is upgraded, operational capability will continue to degrade and the already high support costs will experience further increases as high value components are replaced due to electrical system malfunctions. Avionics components on all airframes are also aging, driving increased maintenance costs and component "down times" which render the aircraft's navigation, communications, and sensor systems less capable.

B. Program management:

1. Is there a project manager and contracting officer devoted to the project? Yes.
2. Will an Integrated Product Team be established to assist with the management of the project? Yes. The Coast Guard employs a matrix team approach, which includes representatives from Coast Guard Acquisitions, Operations, Logistics, and other offices and field organizations.

C. **Acquisition strategy:**

Fixed Asset Plan and Justification

1. The objective of the LRS Project is to maintain the Coast Guard's C-130 capability by decreasing the rising cost of maintenance, replacing obsolete or unsupportable equipment and preserving the airframes for maximum utilization in carrying out operational requirements. The acquisition effort will be constrained to existing and/or proven technology. Commercial off the shelf hardware and standard interfaces will be used whenever possible.

D. Financial basis for selecting the project

1. The project has just completed the Concept Exploration phase. Cost Benefit Analysis, analysis of alternatives, and analysis of Life Cycle Cost Estimate will be addressed at Key Decision Point 2 which will be scheduled in September/October 1998.

PART III: COST, SCHEDULE AND PERFORMANCE GOALS

A. **Description of performance-based system:**

1. As a Level IIIA major systems acquisition in the Coast Guard, the LRS Project will have an Acquisition Project Baseline (APB). Approval of the APB establishes "top level" objectives and thresholds on cost, schedule, and performance which the Program Manager (PM) must meet or exceed. The purpose of the APB is to provide control to prevent unit cost growth and "requirements creep" due to unnecessary system configuration changes or the imposition of new, unapproved operational requirements. Changes to the APB will only be after executive management review and approval. An APB has not been developed or approved for LRS--- this will occur at Key Decision Point 2.

B. Original baseline:

1. Original cost and schedule goals: To be developed.
2. Original performance goals: To be developed.

C. Current baseline:

1. Cost and schedule goals: N/A
2. Performance goals: N/A

D. Variance from current baseline:

1. Variance in cost: N/A
2. Variance in schedule: N/A
3. Variance in performance: N/A

E. Latest revised estimate:

1. Cost and schedule goals: N/A
2. Performance goals: N/A

F. **Corrective actions:** N/A

Capital Asset Plan and Justification

Agency: U. S. Coast Guard
Bureau: Acquisition Directorate
Name of project: **Seagoing Buoy Tender Replacement Project**
New Project_____ Ongoing Project __X__
Was the project approved by an Executive Review committee? Yes _X_ NO___
Is this project information technology ? Yes____ No_X__

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
Planning:										
Budget authority	6									6
Outlays	6									6
Full acquisition: (all segments)										
Budget authority	182	54	41	105	158	85-131	85-131	14-52	0	724-854.0
Outlays	182	54	41	105	158	85-131	85-131	14-52	0	724-854
*Full Production for up to 11 ships.										
Total, sum of stages.....										
Budget authority	188	54	41	105	158	85-131	85-131	14-52	0	730-860
Outlays	188	54	41	105	158	85-131	85-131	14-52	0	730-860

PART II: JUSTIFICATION AND OTHER INFORMATION

A. Justification:

The Coast Guard maintains a nationwide system of fixed and floating short range aids to navigation (SRA) using a variety of cutters and boats. This system, designed to facilitate safe and expeditious marine traffic, is essential to the national economy, security, and interest, and will remain so beyond the year 2000. Under 14 USC 81 the CG is tasked with establishing, operating and maintaining such a system. No technological advances are forecast that will substantially change the nature of the SRA system. The system's servicing requirements are expected to remain essentially unchanged for the next thirty years. To maintain such a system the CG employs a wide variety of vehicles ranging from 180' seagoing buoy tenders (WLB) to trailerable aids to navigation boats.

All of the current fleet of WLBs are at the end of their planned service lives. Beyond their primary mission, seagoing buoy tenders are multimission resources and are an important part of the CG fleet. The various functions performed by these buoy tenders are consistent with DOT and CG goals and objectives. While the relative proportion of SRA activity to that supporting other programs may vary, replacements for the WLBs will retain the multimission character that is common to most CG platforms. Thus, meeting the need for replacement of the WLB's capabilities will significantly contribute to the CG's ability to effectively carry out several of its missions. Furthermore, loss of the capabilities without acquisition of offsetting resources would adversely affect ability to carry out multimission responsibilities.

The present fleet size, geographic locations, and areas of responsibility of each vessel are based on the SRA system workload. WLB replacements will be built over a 9 to 10 year period. An Aids To Navigation Service Force Mix 2000 Study incorporating a Decision Support System was conducted, which recommended a fleet size of

Capital Asset Plan and Justification

PART II: JUSTIFICATION AND OTHER INFORMATION (continued)

16 WLBs. The fleet size of 16 was formalized at Key Decision Point 4 (full production decision) in August 1997.

Technical studies carried out for the requirements definition phase focused on alternative capabilities to meet mission requirements. The studies showed that using current technology, the emplacement and servicing of aids to navigation is only economically feasible with conventional ships.

Technical risk for the design and construction work for this project is low. Current technology will be used to design and build the WLB. Schedule risk is medium. While technical issues should not impact the schedule, timely funding is very important to the project schedule.

The project schedule and cost risk is medium. This reflects the uncertainties associated with a future production contract, which is presently scheduled to be awarded prior to the end of FY98, as well as uncertainties inherent in future appropriations levels.

The new WLBs will incorporate the use of current technology to improve reliability and maintainability, improve navigation, and improve buoy handling operations, thereby significantly reducing corrective maintenance and increasing operational availability.

The WLB and WLM replacement projects are designed as an integrated system to service SRA. This replacement system uses technology to improve efficiency and reduce manpower needs, and expects to reduce crewing requirements on WLB/WLM by 500 billets by the year 2004.

B. Program management

1. Is there a project manager and contracting officer devoted to the project? Yes.
2. Will an Integrated Product Team be established to assist with the management of the project? Yes. The Coast Guard employs a matrix team approach, which includes representatives from Coast Guard Acquisition, Naval Engineering, Operations, and other offices and field organizations. In addition, a Project Residence Office has been established at the contractor's facility which oversees day to day engineering, logistics, and contracting details.

C. Acquisition strategy:

The WLB acquisition encompasses two separate contracts for ship construction.; the Lead Ship Detail Design and Construction contract, which will provide the first 5 ships in the 16 ship fleet, and the WLB Full Production contract, which will provide the rest of the new fleet.

The Circular of Requirements (COR) was developed by the Coast Guard based on the performance characteristics in the Sponsor's Requirement Document (SRD). A draft of the COR and a Phase I RFP was released for comment by industry in May 1989. Final release of the Phase I RFP to develop a contract design was in May 1990. In response to that RFP, preliminary designs were developed by commercial shipbuilders. Of the six shipbuilders submitting preliminary designs, 3 were awarded a contract to produce a contract design.

In January 1993, the Coast Guard down-selected to one shipbuilder and awarded the WLB Lead Ship Contract. This performance based contract was awarded to Marinette Marine Corporation who is currently producing the first five ships.

Using the design package from the Lead Ship Contract as a guide, the Coast Guard will, after receiving approval for full production, award the WLB Full Production contract. This award will be made based on full and open competition, to a follow-on shipbuilder, who will build the rest of the fleet.

D. Financial basis for selecting the project:

A Life Cycle Cost Estimate (LCCE) was developed for the JUNIPER Class WLB and Keeper Class WLM Projects. Since these new classes of cutters combine to form an integrated system replacing existing WLBs and WLMs, one LCCE to represent the replacement system was developed. Results show an approximate annual savings of $13M in operation and maintenance costs for the replacement system. Additionally, an analysis was conducted to compare the replacement system of new WLBs and a mix of new WLMs and renovated 157 foot WLMs. This analysis showed that there are limited savings by going with the replacement system, but also high technical risk associated with 157 foot renovation.

Capital Asset Plan and Justification

PART III: COST, SCHEDULE AND PERFORMANCE GOALS

A. Description of performance-based system:
The contractor provides Cost Schedule Status Reports based on an Earned Value system. These reports allow the Coast Guard to examine the contractor's cost and schedule estimates, variances and projections for completion. In addition, the project utilizes a system based on the U.S. Air Force's Performance Analyzer to independently generate Earned Value estimates to compare with the contractor's projections.

B. **Original baseline*:**

(millions)

	Prior to FY97	97	98	99	00	01	02	03-04	Total
1. Cost:									920

2. Schedule:

Lead Ship Delivery	FY96 Q1
Final Production Contract Award	FY97 Q2-Q3
Final Production Delivery	FY02

3. Performance: SOW is performance based. Key characteristics are as follows:

Deck Load	75 tons
Deck Area	min. 2500 sq ft
Lifting Capability	max rated lift capacity 20 tons
Speed	15 knots at full load displacement
Endurance Speed	no less than 12 knots
Icebreaking	14 inches @ 3 knots (fresh water) 36" by ramming (packed/refrozen)
Oil Recovery	Onboard system NLT 54,000 gal tank for collection/separation
Range	no less than 6,000 nautical miles at endurance speed

* Original baseline data approved at KDP3, October 1992 as part of the Project Management Plan.

C. **Current baseline**:**

1. Cost:	188	54-165	55-118	138-118	93-118	93-44	93-	16-860	920

The initial baseline cost estimate was $920M. A baseline range of $920-1058M was determined for the new Acquisition Project Baseline (APB) in preparation of Key Decision Point Four.

2. Schedule:

Lead Ship Delivery	FY96 Q1
Final Production Contract Award	FY98 Q2-Q4
Final Production Delivery	FY04-06

3. Performance: Performance goals remain the same as above.

**Current baseline data approved at KDP4, August 1997 at the TSARC brief..

D. Variance from current baseline:
1. Cost: The current price estimate is $60-190M below the original baseline.
2. Schedule: Contract was awarded on time. Last ship delivery could fluctuate depending on approved funding and eleven ship option award schedule.
3. Performance: Current estimate meets or exceeds baseline goals.

E. Latest Revised estimate*:**

(millions)

	Prior to FY97	97	98	99	00	01	02	03-04	Total

Capital Asset Plan and Justification

1. Cost:	188	54	**41**	105	158	85-131	85-131	14-52	730-860

Latest revised cost estimate is still within current baseline.

2. Schedule: (Based on the budget authority as indicated in Part I and within current baseline.)

3. Performance: None. Performance goals remain the same as the current baseline and are expected to be achieved.
***Latest Revised Estimate data from Semiannual brief August 1998.

F. Corrective Actions: None required

Capital Asset Plan and Justification

Agency: U. S. Coast Guard
Bureau: Acquisition Directorate
Name of project: **Coastal Buoy Tender Replacement Project**
Check one: New Project____ Ongoing Project _X_
Was the project approved by an Executive Review Committee? Yes_X_ No____
Check one: Is this project information technology ? Yes____ No_X_

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
Planning:										
Budget authority	3.6									3.6
Outlays	3.6									3.6
Full acquisition: (all segments)										
Budget authority	163.4	75	21	31	12	5-10	4-9	0	0	311-321
Outlays	163.4	75	21	31	12	5-10	4-9	0	0	311-321
Total, sum of stages.....										
Budget authority	167	75	21	31	12	5-10	4-9	0	0	315-325
Outlays	167	75	21	31	12	5-10	4-9	0	0	315-325

PART II: JUSTIFICATION AND OTHER INFORMATION

A. Justification

Under 14 USC 81, the CG operates and maintains a nationwide system of fixed and floating short range aids to navigation (SRA) using a variety of cutters and boats. This system, designed to facilitate safe and expeditious marine traffic, is essential to the national economy, security, and interest, and will remain so well beyond the year 2000. No substantial technological advances are forecast that will impact the nature of the SRA system. The system's servicing requirements are expected to remain essentially unchanged for the next thirty years. To maintain this system, the CG employs a wide variety of resources ranging from 225' seagoing buoy tenders (WLB) to trailerable aids to navigation boats.

Coastal Buoy Tenders (WLMs) are a limited endurance resource with the primary mission of servicing coastal SRA responsibilities. WLMs operate in bays, rivers, channels, estuaries and other semi-exposed environments within 12 miles of the coast. Currently, the CG is operating coastal buoy tenders (WLMs) in two classes, 133' tenders, all over 50 years old, and 157' tenders which are approaching or have already reached the end of their planned 30 year service life. Beyond their primary mission, replacement WLMs will have secondary missions of Search and Rescue (SAR) and Marine Environmental Response (MER).

They are an integral part of the CG's spilled oil recovery system by virtue of their ability to deploy a Vessel of Opportunity Skimming System (VOSS). They are an important part of the CG fleet, performing functions that are consistent with DOT and CG goals and objectives. The loss of coastal SRA capabilities without acquisition of offsetting resources would adversely affect the CG's ability to carry out SRA responsibilities.

The present fleet size, geographic locations, and areas of responsibility of each vessel are based on both the SRA system workload and the Service Force Mix 2000 (SFM 2000) study. In 1992, the Volpe National Transportation Systems Center conducted a fleet mix study to determine what combination of new aids to navigation resources would meet the needs of the SRA system. The results of the Service Force Mix 2000 (SFM 2000) study recommended a fleet size of 14 WLMs combined with 16
WLBs in an integrated system. The fleet size of 14 was formalized at Key Decision Point 4 (full production approval) in February 1997.

Capital Asset Plan and Justification

Technical risk for the design and construction work for this project is low. Current technology was used to design and build the WLM. Four ships have been delivered and are conducting operations. Schedule risk is also low. The contractor has met the contract delivery dates for all completed hulls. The project cost risk is also low, since all options for the contract have been executed. Possible funding delays due to the budget climate may impact project costs since Economic Price Adjustments, standardization and target to ceiling deltas are required at the time of delivery.

The new WLMs will incorporate the use of advanced technology to improve reliability and maintainability, improve navigation, and improve buoy handling operations, thereby significantly reducing corrective maintenance and increasing operational availability.

The WLB and WLM replacement projects are designed as an integrated system to service SRA. This replacement system uses proven technology to improve efficiency and reduce manpower needs, and expects to reduce crewing requirements on WLB/WLM by 500 billets by the year 2004.

B. Program management

1. Is there a project manager and contracting officer devoted to the project? Yes.
2. Will an Integrated Product Team be established to assist with the management of the project? Yes. The Coast Guard employs a matrix team approach, which includes representatives from Coast Guard Acquisitions, Naval Engineering, Operations, and other offices and field organizations. In addition a Project Residence Office has been established at the contractor's facility which oversees day to day engineering, logistics, and contracting details.

C. Acquisition strategy

Contract is performance based. Salient features of the acquisition strategy has been: using a performance based Circular of Requirements (COR), an industry design, and full and open competition. The objective of the acquisition was to replace the *capability* required to maintain the nation's coastal SRA. The primary goals for the WLM acquisition were the award of a design and construction contract for WLM replacements based on existing technology, proven design, and, more importantly, cost containment.

The WLM contract is a single, Fixed Price Incentive (FPI) contract with Economic Price Adjustments (EPA) for the design and construction of the lead ship with options for up to 13 additional cutters. The FPI contract has target and ceiling prices, where ceiling prices represent the government's maximum liability. Several other contracting options were investigated. Sealed bids were not appropriate because selection was based on technical merit and not solely on price or price related factors. Also, due to the technical and cost complexity of the acquisition, the Government conducted discussions with respondents concerning their proposals. A Coast Guard in-house design option was rejected because it conflicted with the basic performance based acquisition strategy outlined above. Finally, the options of converting existing ships, and repeat construction based on existing ships were rejected because no vessels in inventory could achieve the necessary performance requirements.

D. Financial basis for selecting the project

A Life Cycle Cost Estimate (LCCE) was developed for the JUNIPER Class WLB and Keeper Class WLM Projects. Since these new classes of cutters combine to form an integrated system replacing existing WLBs and WLMs, one LCCE to represent the replacement system was developed. Results show an approximate annual savings of $13M in operation and maintenance costs for the replacement system.

Additionally, an analysis was conducted to compare the replacement system of new WLBs and a mix of new WLMs and renovated 157 foot WLMs. This analysis showed that there are limited savings by going with the replacement system, but also high technical risk associated with the 157 foot renovation.

PART III: COST, SCHEDULE AND PERFORMANCE GOALS

A. Description of performance based system:

The contractor provides Cost/Schedule Status Reports based on an Earned Value System. These reports allow the Coast Guard to examine the contractor's cost and schedule estimates, variances and projections for completion. In addition, the project uses a system based on the U. S. Air Force's Performance Analyzer to independently generate Earned Value estimates to compare with the contractor's projections.

Capital Asset Plan and Justification

B. **Original baseline:**

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
1. Cost										350-403

The initial baseline range of $350-$403M was established in the Acquisition Project Baseline (APB), which was signed following Key Decision Point Two in April 1992.

2. Schedule: The original project milestones are:

Lead Ship Delivery	FY96 Q1
Key Decision Point 4 (KDP4)	FY97 Q2
Final Delivery	FY00

3. Performance for 11 cutters:

Draft	8.5 ft
Deck Load	40 Tons
Deck Area	1200 sq ft
Lifting Capacity	10 Tons
Speed	12 knots
Endurance Speed	10 knots
Range	2000 nautical miles
Icebreaking	9 inches continuous @ 3 knots
	18 inches by ramming

C. **Current baseline:**

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
1. Cost	167	75	21	31	12	5-10	4-9	0	0	350-445

This was approved at KDP 4 in February 1997.

2. Schedule:

Lead Ship Delivery	FY96 Q1
Key Decision Point 4 (KDP4)	FY97 Q2
Final Delivery	FY00

3. Performance: Performance goals remain the same as above except the total number of cutters increased to 14.

D. Variance from baseline goals:

1. Cost: The current cost estimate is significantly below the baseline range and is favorable.
2. Schedule: Contract was awarded on time and Final Delivery is on schedule.
3. Performance: Current estimate within baseline goals.

E. Latest revised estimate:

1. Cost, schedule and performance goals remain the same.

F. Corrective actions:

1. No corrective actions required.

Capital Asset Plan and Justification

Agency: U. S. Coast Guard
Bureau: Acquisition Directorate
Name of project: **Stern Loading Buoy Boat Replacement**
New Project_____ Ongoing Project __X
Was this project approved by an Executive Review Committee? Yes _X_ No _____
Is this project information technology ? Yes____ No_X

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
Planning:										
Budget authority	.5									.5
Outlays	.5									.5
Full acquisition: (all segments)										
Budget authority	17.4	7.8	12	11.8	14	1	0	0	0	62 - 64
Outlays	17.4	7.8	12	11.8	14	1	0	0	0	62 - 64
Total, sum of stages.....										
Budget authority	17.9	7.8	12	11.8	14	1	0	0	0	63 - 65
Outlays	17.9	7.8	12	11.8	14	1	0	0	0	63 - 65

PART II: JUSTIFICATION AND OTHER INFORMATION

A. Justification:

Under 14 USC 81, the CG operates and maintains a nationwide system of fixed and floating short range aids to navigation (SRA) using a variety of cutters and boats. This system, designed to facilitate safe and expeditious marine traffic, is essential to the national economy, security, and interest, and will remain so well beyond the year 2000. No substantial technological advances are forecast that will impact the nature of the SRA system. The system's servicing requirements are expected to remain essentially unchanged for the next thirty years. To maintain this system, the CG employs a wide variety of resources ranging from 225' seagoing buoy tenders (WLB) to trailerable aids to navigation boats.

Buoy Boats (BU/BUSL) serve the primary purpose of servicing buoys and fixed structures in harbors and channels which are inaccessible to large buoy tenders, because the channels are either too shallow or too narrow. The buoy boats now in service were constructed from 1954 to 1962. They have passed the end of their service life and require excessive maintenance. Habitability aboard buoy boats is primitive and has a negative impact on personnel performance and retention. In the near future, these boats will not be able to provide the level of support required by the SRA mission, and the Coast Guard's ability to respond to SRA outages will be degraded .

In 1992, the Volpe National Transportation Systems Center conducted a fleet mix study to determine what combination of new aids to navigation resources would meet the needs of the SRA system. The results of the Short Range Aids to Navigation Mission Analysis and the Service Force Mix 2000 (SFM 2000) indicated that it may be possible to replace some of the more expensive SRA platforms, such as Inland Buoy Tenders (WLI) and Inland Construction Tenders (WLIC) with new BUSLs. A fleet size of 36 replacement BUSLs was formalized at Key Decision Point Four as the optimal number of BUSLs to meet the Coast Guard's SRA needs.

Capital Asset Plan and Justification

PART II: JUSTIFICATION AND OTHER INFORMATION (continued)

Technical risk for this project is considered low. This boat is similar to work boats in common use today and two pre-production boats have been successfully operating for over two years. Schedule risk is considered medium. Although the proposed production schedule was validated by industry during the comment period, funding instability during outyears increases schedule risk. Cost risk is also considered medium due to funding instability during outyears.

The new BUSLs will incorporate the use of advanced technology to improve reliability and maintainability, improve navigation, and improve buoy handling operations, thereby significantly reducing corrective maintenance and increasing operational availability.

B. Program management

1. Is there a project manager and contracting officer devoted to the project? Yes.
2. Will an Integrated Product Team be established to assist with the management of the project? Yes. The Coast Guard employs a matrix team approach, which includes representatives from Coast Guard Acquisitions, Naval Engineering, Operations, and other offices and field organizations. This team works in close unison, under a written agreement, with a staff of technical, logistics and contracting disciplines at the Coast Guard Yard, where the BUSLs are under construction.

C. **Acquisition strategy:**

1. In November of 1995, the Coast Guard announced the decision to construct BUSLs at the Coast Guard Yard in lieu of a competitive procurement. This decision was made after completing an analysis of workload requirements to maintain the core logistics capabilities of the CG Yard, a cost comparison of CG Yard versus commercial BUSL construction, and an impact assessment of project schedule and performance risks.

D. Financial basis for selecting the project:

1. The Short Range Aids to Navigation Mission Analysis (SRANMA), part two of the Service Force Mix 2000 study, validated the urgent need to replace all buoy boats currently in service with the 49-foot Stern Loading Buoy Boat. A detailed study of mission requirements concluded that thirty-six boats would be the optimum fleet size for the Coast Guard to complete the aids to navigation mission.

2. The Office of the Secretary of Transportation (OST) concluded that the civilian contracting of aids to navigation maintenance under the A76 program was not financially feasible. The underlying assumption is that the Coast Guard's aids to navigation mission will not be reduced in the future.

PART III: COST, SCHEDULE AND PERFORMANCE GOALS

A. Description of performance-based system:

The Coast Guard Yard was awarded ISO 9001 certification in 1995 and received a subsequent recertification in 1998. The ISO 9001 certification is an indication, verified by an independent source, that the Yard has the process and procedures in place to enable the production of a quality product which meets the established requirements. The Coast Guard Yard provides Cost/Schedule Status Reports based on an Earned Value System. These monthly reports allow the Project Manager at Coast Guard Headquarters to examine the Yard's cost and schedule estimates, variances and projections for completion.

B. Original baseline.

Capital Asset Plan and Justification

Baseline cost established in the Acquisition Project Baseline (APB) was approved between $60-66M following Key Decision Point Four in June 1996:

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
1. Cost	17.9	8.5	21	13.5	0	0	0	0	0	60.9

2. Schedule baseline: Deliver 36 boats before 4th QTR FY-00.

3. Original performance goal:

Number of boats	36
Draft	6 ft
Height	15 feet
Speed (sustained)	10 kts
Lifting Capacity	4,500 lbs.
Deck Load	16,000 lbs
Range	300 nautical miles
Icebreaking	2-4 Inches of Broken Ice

C. **Current baseline:**

1. Cost	17.9	7.8	12	11.8	14	1	0	0	0	63 - 65

2. Schedule: Deliver 36 boats before 4th QTR FY-01.

3. Performance goals same as original.

Number of boats	36
Draft	6 ft
Height	15 feet
Speed (sustained)	10 kts
Lifting Capacity	4,500 lbs.
Deck Load	16,000 lbs
Range	300 nautical miles
Icebreaking	2-4 Inches of Broken Ice

D. Variance from current baseline:

1. Cost: No variance.
2. Schedule: No variance.
3. Performance: No variance.

E. Latest Revised Estimate:

1. Cost, Schedule, and Performance are favorable meeting all baseline requirements.

F. Corrective Actions:

1. No corrective actions required.

Capital Asset Plan and Justification

Agency: U. S. Coast Guard
Bureau: Acquisition Directorate
Name of project: **Motor Lifeboat Replacement Project**
New Project_____ Ongoing Project ___X
Is this project information technology? Yes____ No _X_

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
Planning:										
Budget authority	2									2
Outlays	2									2
Full acquisition: (all segments)										
Budget authority	42	26	31.6	20.8	30	.5	.5	.5		151.9
Outlays	15	34	38	35	27	1.9	.5	.5		151.9
Total, sum of stages[1]:										
Budget Authority	44	26	31.6	20.8	30	.5	.5	.5		153.9
Outlays	17	34	38	35	27	1.9	.5	.5		153.9

[1]If outyear budget funding does not match cost requirements indicated in Part III, then the cost and schedule will be delayed by an amount equivalent to the budgeted funds shortfall. In this event, a shortfall will potentially increase the unit cost of production.

PART II: JUSTIFICATION AND OTHER INFORMATION

A. Justification:

The existing motor lifeboat, the 44-foot MLB, has been in use since 1962. The fleet shows signs of material deterioration expected of vessels nearing the end of their service life. The current fleet of motor lifeboats is also becoming increasingly uneconomical to support logistically. A replacement craft with similar operational capabilities but with increased speed, improved crew habitability, and better handling characteristics is needed to provide heavy weather and surf Search and Rescue (SAR) capabilities. The 47' MLB maintains the Coast Guard's capability to perform SAR in heavy seas and breaking surf conditions. Additionally, the 47' MLB incorporates improvements to minimize crew fatigue and improve at-sea boarding for search and rescue and law enforcement missions. The new MLB also reduces maintenance requirements and improves logistics support by providing a modern resource with an established central supply system .

B. Program management:

1. Is there a project manager and contracting officer devoted to the project? Yes.
2. Will an Integrated Product Team be established to assist with the management of the project? Yes. The Coast Guard employs a matrix team approach to project management which includes representatives from Coast Guard Acquisitions, Naval Engineering, Operations, and other offices and field organizations. In addition a Project Residence Office has been established at the contractor's facility which oversees day to day engineering, logistics, and contracting details.

Capital Asset Plan and Justification

PART II: JUSTIFICATION AND OTHER INFORMATION (continued)

C. Acquisition strategy:
The acquisition strategy employed is a firm fixed price contract. A contract was awarded in November 1988 for the design and construction of a prototype motor lifeboat replacement. Following a successful prototype evaluation, the Coast Guard executed a contract option in November 1991 for the construction of five pre-production boats, incorporating modifications recommended during the prototype evaluation. The five pre-production boats completed formal Operational Testing and Evaluation (OT&E) in April 1995. Design changes recommended during the pre-production evaluation have been incorporated into the full production replacement specification. An Invitation for Bid (IFB) was issued in January 1995. This IFB resulted in a very favorable low bid which was less than the Independent Government Cost Estimate and approximately $25 million lower than the next closest bidder. The full production contract was awarded on 11 September 1995. The contract includes numerous options, which enable the Coast Guard to purchase various quantities up to 140 motor lifeboats. The contract also includes training as well as comprehensive provisions for supply support including spare parts at the Station, Group, and Engineering Logistics Command levels and provision of long lead time items such as shafts and engines. The contract includes warranty provisions, which cover the MLB for one year and the engines for four years or 3,000 hours.

A. Financial basis for selecting the project
Preliminary cost benefit analysis showed the best alternative was to acquire a new class of 47' MLB's instead of extending the life of the existing 44' MLBs. The new MLB also reduces maintenance requirements and improves logistics support by providing a modern resource with an established central supply system.

PART III: COST, SCHEDULE AND PERFORMANCE GOALS

A. Description of performance based system:
The contractor provides cost and schedule status reports on a monthly basis. These reports are used to compare the contractor's performance with cost and schedule baseline information.

B. Original baseline:

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04 and beyond	Total
1. Cost:	44.7	30	30.7	28.8	28.2					162.4

2. Schedule:

Production contract award:	FY95 Q3
Commence production deliveries:	FY97 Q1
Complete production deliveries:	FY02

3. Performance goals:

Draft	4 feet 6 inches
Beam	14 feet
Range	200 nautical miles
Displacement	40,000 lbs maximum
Speed	25 kts
Towing Capacity	150 tons
Max sea state	30 foot seas, 20 foot surf
Crew size	4 crew and 5 survivors

PART III: COST, SCHEDULE AND PERFORMANCE GOALS (continued)

Capital Asset Plan and Justification

C. Current baseline:

1. Cost: Remain the same as original baseline.
2. Schedule: Remain the same as original baseline.
3. Performance: Remain the same as original baseline.

D. Variance from current baseline:

1. Variance in cost:

The current cost estimate for the project is approximately $9 million less than the original baseline. This savings is the result of the Invitation for Bid (IFB) process which resulted in an extremely favorable low bid as well as steadily decreasing per-boat prices throughout the life of the contract.

2. Variance in schedule:

The schedule slipped approximately six months due to a protest of the production contract award.

3. Variance in performance:

Current estimate is within baseline goals.

E. Latest revised estimate:

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04 and beyond	Total
1. Cost:	44	26	31.6	20.8	30	.5	.5	.5		153.9

2. Schedule:

Production contract award: FY95 Q3
Commence production deliveries: FY97 Q3
Complete production deliveries: FY03

3. Performance: The production MLBs meet all required performance criteria from section C above.

F. Corrective actions:

Monitor delivery schedule to see if schedule has to be changed to FY03 for completion of production deliveries.

Capital Asset Plan and Justification

Agency: U. S. Coast Guard
Bureau: Acquisition Directorate
Name of project: **Ports and Waterways Safety System (PAWSS)**
New Project_____ Ongoing Project_____X
Is this project information technology ? Yes_X___ No___

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
Planning:										
Budget authority	.7	1.0								1.5
Outlays		.5	.2	1.0						1.5
Full acquisition:[1]										
Budget authority			5.5	6.6	5.7	TBD	TBD	TBD	TBD	TBD
Outlays			2.6	6.6	5.6	2.8	TBD	TBD	TBD	TBD
Total, sum of stages[2]:										
Budget authority	.5	1	5.5	6.6	5.7	TBD	TBD	TBD	TBD	TBD
Outlays		.5	2.8	7.6	5.6	2.8	TBD	TBD	TBD	TBD

1 Installation of VTS systems in two ports
2 If outyear budget funding does not match cost requirements indicated in Part III, then the cost and schedule will be delayed by an amount equivalent to the budgeted funds shortfall. In this event, a shortfall will potentially increase the unit cost of production.

PART II: JUSTIFICATION AND OTHER INFORMATION

A. **Justification:**

The United States Maritime transportation system is an integral part of the nation's intermodal transportation network. Environmental protection, safety and the efficiency of ports and waterways depend on effective waterways management, adequate electronic communications, navigational aids, hydrographic and meteorological data, etc.

Vessel Traffic Services (VTS) can contribute significantly to enhancing the safety and efficiency of ports and waterways. The Coast Guard intends to develop basic elements of a VTS system based on Coast Guard mission requirements and discussions with local officials, waterway users, and port authorities. State-of-the-market, off-the-shelf, vessel traffic services designed to provide safe passage in high-risk ports and waterways, will be implemented in critical ports.

VTS is internationally accepted by maritime nations as a cost effective and efficient means to enhance the safety and protect the environment of ports and waterways. Vessel Traffic Services facilitate timely, safe transportation of waterborne commerce which has a direct impact on the social and economic viability of the nation. A high percentage of all collisions, rammings and groundings, along with the associated loss of life and damage to the environment, could be prevented with VTS systems.

B. Program management

1. Is there a project manager and contracting officer devoted to the project? Yes
2. Will an Integrated Product Team be established to assist with the management of the project? Yes. The Coast Guard employs a matrix team approach, which includes representatives from Coast Guard Acquisitions, Logistics, Marine Safety, and other offices and field organizations.

C. **Acquisition strategy:**

Capital Asset Plan and Justification

Awarded a multi-year contract in April 1998 to a single System Integration Contractor with individual task orders to be issued for each port as well as incremental development to meet requirements.

D. Financial basis for selecting the project:

1. (Summarize the analysis of full life-cycle costs/total costs of ownership; results of cost/benefit analyses, including return on investment; and any tangible returns that benefit the agency but are difficult to quantify. For information technology, address replaced system savings and savings recovery.)

At least one port involved with the PAWSS project is mandated by public law. Current VTS systems in use are quickly becoming obsolete and costly to maintain. PAWSS will provide a means to update or replace these existing systems with state-of-the-market, off-the-shelf products. The integrated product approach of the new systems will greatly increase waterborne traffic safety, not only for commercial traffic, but for private pleasure crafts. PAWSS will provide the Coast Guard, other federal agencies, State and local governments, as well as the maritime industry, with a means to facilitate safe transportation of waterborne commerce and enhance the safety and protect the environment of ports and waterways.

2. (Describe analysis of alternative options and identify any underlying assumptions. Provide the estimate of risks, such as Y2K.) Development of port and waterways VTS systems will be achieved through open communication among users, stakeholders and industry. VTS systems will only be implemented where other waterway management tools are not appropriate. Project schedule and technical risks are considered medium. Y2K compliance will be certified and confirmed prior to full systems acceptance.

E. Adherence to architecture and infrastructure standards:

1. (Describe how the project is compliant with the agency's IT architecture and technical infrastructure). The VTS system architecture follows open systems standards and uses modular design adopted by the U.S. Coast Guard. Scalability and flexibility are system characteristics that provide for incremental deployment, enhancements, changes, and technology insertion over the life of the system.
2. (Identify standards for info exchange and resource sharing.) Communication capabilities are achieved through Government-provided or vendor-provided communications in accordance with applicable Telecommunications Service Requests. Database data exchange may be provided by external Database System Interfaces.
3. (Demonstrate adherence to government-wide standards, where applicable (such as Y2K). The VTS system must perform fault-free prior to, through, and beyond January 1, 2000 without direct intervention. The system will be Y2K compliant before acceptance.
4. (Identify use of commercial-off-the-shelf software (COTS) versus custom; justify custom components. The VTS system requires the use of Commercial Off-the-Shelf (COTS) and/or Government Off-the-Shelf (GOTS) equipment and software.

PART III: COST, SCHEDULE AND PERFORMANCE GOALS

A. Description of performance based system:

VTS systems will be installed using an incremental development strategy in accordance with discussions with local stakeholders. New ports will not be added until completion of discussions.

B. Original baseline:

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04 and beyond	Total
1. Cost: N/A										
2. Schedule: N/A										
3. Performance: N/A										

C. Current Baseline:

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1. Cost: To Be Developed
2. Schedule: To Be Developed
3. Performance: To Be Developed

D. Variance from current baseline

1. Cost:. N/A
2. Schedule: N/A
3. Performance: N/A

E. Latest revised estimate

1. Cost: To Be Developed
2. Schedule: To Be Developed
3. Performance: To Be Developed

F. Corrective actions:

N/A

Capital Asset Plan and Justification

Agency: U. S. Coast Guard
Bureau: Acquisition Directorate
Name of project: **National Distress System Modernization Project (NDS)**
New Project_____ Ongoing Project X
Is this project information technology? Yes X No___
For

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
Planning:										
Budget authority	0.3	1	5	3	20					0.2
Outlays	0.3	1	3	4	15-20					0.2
Full acquisition										
Budget authority	0					17-25	19-29	22-34	13-23	100-140
Outlays	0					18-23	18-26	20-31	21-32	100-140
Total, sum of stages[1]:										
Budget authority	0.3	1	5	3	20	17-25	19-29	22-34	13-23	100-140
Outlays	0.3	1	3	4	15-20	18-23	18-26	20-31	21-32	100-140

[1]If outyear budget funding does not match cost requirements indicated in Part III, then the cost and schedule will be delayed by an amount equivalent to the budgeted funds shortfall. In this event, a shortfall will potentially increase the unit cost of production.

PART II: JUSTIFICATION AND OTHER INFORMATION

A. Justification

The Coast Guard operates and maintains a National Distress System (NDS) to provide VHF-FM radio coverage in coastal areas out to 20 nautical miles offshore; and for all large bodies of inland waters such as Puget Sound, Chesapeake Bay, and US waters of the Great Lakes; and navigable waterways where commercial or recreational traffic exists. The primary function of the NDS is to support the CG in its Search And Rescue (SAR) responsibility. The secondary function is to provide command and control communications for CG units performing Maritime Safety, Maritime Law Enforcement, National Security and Marine Environmental Protection missions. NDS is an integral part of the CG Telecommunication System (CGTS). Twenty years of expanding mission functional requirements and technology advances have outstripped the NDS's ability to meet the CG's current and future multi-mission communications requirements. The modernized NDS needs to improve or provide the following communications capabilities: (1) meet the coverage requirements for distress alerting and coordination; (2) allow CG forces to respond to crisis operations and provide sufficient surge capacity to support multiple operations; (3) aid in searches for vessels that do not know their position, or report it incorrectly, and assist in the prosecution of hoaxes; (4) meet the international requirement for short range Digital Selective Calling (DSC); (5) be able to withstand most natural disasters; (6) provide multi-channel and instant play back recording capability; (7) allow operational commanders to economically meet expanding command and control (C2) requirements and communicate with deployed units throughout their operating area; (8) allow communications with federal, state and local government agencies; (9) protect the transmission of sensitive information; and (10) allow operational units to collect and

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PART II: JUSTIFICATION AND OTHER INFORMATION (continued)

disseminate marine safety information, intelligence and environmental monitoring/compliance data to/from mariners.

Technologies exist which can meet the expanded National Distress System functional communications requirements and which can be fully integrated into the Coast Guard's next generation telecommunications architecture. The project objective is to develop and deploy a fully integrated communications system to permit distress, safety, law enforcement, marine environmental protection and national security communications between Coast Guard, commercial vessels, and/or recreational boaters. This project will modernize the National Distress System and bring the Coast Guard into compliance with the 1988 amendments to the international Safety of Life at Sea (SOLAS) Convention, of which the United States is a contracting party. The solution to be implemented will be refined from three alternatives which include upgrade, modernization and replacement of the existing system. The equipment necessary for vessels, aircraft, stations, groups, and other users will be identified.

Benefits include more efficient mission response; improved reliability and supportability; expanded capacity; network-wide secure internal communications; full compliance with the international requirement for short range DSC; and improved wide area VHF-FM coverage. Improvements should also be realized in signal quality and data connectivity.

The project's outcomes support the Coast Guard's Strategic Goals of Maritime Safety, Protection of Natural Resources, Mobility, Maritime Security, and National Defense, and are closely aligned with several of the management goals found in the Commandant's Direction.

B. Program management

1. Is there a project manager and contracting officer devoted to the project? Yes.
2. Will an Integrated Product Team be established to assist with the management of the project? Yes. The Coast Guard employs a matrix team approach.

C. Acquisition strategy

A Systems Integration (SI) contractor will be selected through innovative, full and open competition procedures. The SI contractor will be responsible for the detailed design, prototyping, testing, production and deployment of the system. In addition, the SI contractor will be responsible for system support through full operating capability (FOC) and system support after FOC. The SI contract is projected to be awarded in 4th quarter FY 99 for a total of ten years. The scope of the first five years will establish initial operating capability (IOC) and FOC. The remaining option years will be for system support. The SI contract will be Cost-Plus-Award-Fee. Given the nature and scope of the SI contract, appropriate performance measurements necessary to provide incentives for the contractor will be identified in the Award Fee Plan. The contract will likely contain a flexible, responsive ordering capability (e.g. specific task directives/orders issued to the SI contractor).

C. Financial basis for selecting the project

1. The project is still in the Concept Exploration phase. Cost Benefit Analysis, analysis of alternatives, and analysis of Life Cycle Cost Estimate will be addressed at Key Decision Point 2/3 during the first quarter of FY 1999. The project will improve mission performance in support of the Coast Guard's GPRA goals. Specific benefits will be highlighted in the Cost-Benefit Analysis to be submitted at Key Decision Point 2/3.

D. Adherence to architecture and infrastructure standards

1. (Describe how the project is compliant with the agency's IT architecture and technical infrastructure). The NDS Modernization Project seeks to maximize mission performance and flexibility by ensuring consistency with international and national system performance goals and standards, including those of the International Maritime Organization (IMO), the Public Safety Wireless Advisory Committee (PSWAC), Project 25, and other national standards.

2. (Identify standards for info exchange and resource sharing.) These standards will be addressed in the performance-based specification and statement of work.

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3. (Demonstrate adherence to government-wide standards, where applicable (such as Y2K).) Year 2000 capability is not an issue; Initial Operational Capability is forecast for FY01.

4. (Identify use of commercial-off-the-shelf software (COTS) versus custom; justify custom components.) The NDS Modernization Project is designed to maximize off-the-shelf technology and standardize equipment in the field, thus reducing total life-cycle costs. The current National Distress System began with 1970s technology which has undergone several incremental modifications in the past twenty years in order to meet expanding mission needs. The NDS Modernization Project will ensure that this vital communications network will meet the needs of the 21st century maritime community.

PART III: COST, SCHEDULE AND PERFORMANCE GOALS

A. **Description of performance based system:**
As a Level IIIA major systems acquisition in the Coast Guard, the NDS Project will have an Acquisition Project Baseline (APB). Approval of the APB establishes "top level" objectives and thresholds on cost, schedule, and performance which the Program Manager (PM) must meet or exceed. The purpose of the APB is to provide control to prevent unit cost growth and "requirements creep" due to unnecessary system configuration changes or the imposition of new, unapproved operational requirements. Changes to the APB will only be made under extreme circumstances. Since the NDS Project is early in the Concept Exploration, an APB has not been developed or approved --- this will occur at Key Decision Point 2. Once the APB has been approved, any actual or anticipated change or "breach" to a Project's ceilings or thresholds must be reported, along with proposed corrective action and a new, proposed APB, via a Project Deviation Report (PDR), prepared by the PM, to the Administration Acquisition Executive (AAE) for the Coast Guard.

It is envisioned that the awarded contractor will provide Cost and Schedule Status Reports based on an Earned Value System. These reports will allow the Coast Guard to examine the contractor's cost and schedule estimates, variances, and projections for completion.

B. Original baseline:
1. Cost and schedule goals: To be developed.
2. Performance goals: To be developed.

C. Current baseline:
1. Cost and schedule goals: N/A
2. Performance goals: N/A

D. Variance from current baseline:
1. Variance in cost: N/A
2. Variance in schedule: N/A
3. Variance in performance: N/A

E. Latest revised Estimate:
1. Cost and schedule goals: N/A
2. Performance goals: N/A

F. Corrective Actions: N/A

Fixed Asset Plan and Justification

Agency: U. S. Coast Guard
Bureau: Acquisition Directorate
Account title: Asset acquisition
Name of project: **Fleet Logistics System Project**
New Project_____ Ongoing Project __X
Was the project approved by an Executive Review Committee? Yes __X No __.
Is this project information technology ? Yes__X No___.
Is this a financial management system? Yes__X No___.
If so, what percentage of the system is financial? __10%
Was this project approved by an agency Investment Review Board? Yes__X No___.

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(In millions)

	Prior to FY98	98	99	00	01	02	03	04	05 and beyond	Total
Planning: [1]										
Budget authority.....	5.6									5.6
Outlays.....	5.6									5.6
Full acquisition: (all segments)										
Budget authority.....	11.3	8.2	4.7	9.8	3.1					37.2
Outlays.....	10.0	8.1	4.7	9.8	3.1	1.4				37.2
Total, sum of stages.....										
Budget Authority.....	16.9	8.2	4.7	9.8	3.1					42.7
Outlays.....	15.6	8.1	4.7	9.8	3.1	1.4				42.7

PART II: JUSTIFICATION AND OTHER INFORMATION

A. Justification:

The current vessel logistics system is a large, fragmented, manually intensive system that encompasses all aspects of acquisition, supply, accounting, inventory control and maintenance for over 240 Coast Guard ships and over 500 standard boats. Vessel logistics includes maintenance, repair, modernization and equipment replacements (vessel logistics costs total over $500 million annually, including the associated parts inventories, shore-side infrastructure and dedicated personnel costs). Numerous non-integrated systems have been developed over time to provide supply, maintenance functions and accounting information. These fragmented systems prevent the Coast Guard from providing a centrally managed and coordinated supply and maintenance system that sustains all ships in a similar manner that ensures the most effective utilization throughout their service life. There is currently no architecture that links common supply and accounting functions used by Coast Guard ships, standard boats and support units. The lack of cross-program cost accounting data, historical data on which to base maintenance and repair forecasts, and management decision tools severely constrain the Coast Guard's ability to project future inventory and maintenance requirements. The Coast Guard extensively uses the DoD logistics system to satisfy our inventory needs. Failure to maintain compatibility will greatly increase the cost of Coast Guard operations.

The Fleet Logistics System (FLS) project will address long-standing U. S. Coast Guard vessel logistics problems which include: unresponsive supply support; inventory management shortcomings; lack of cost accounting, historical data and management information; lack of vessel configuration management; and lack of integration among USCG logistics organizations. FLS will reuse and update existing systems as much as feasible to manage the cost and risk of the project. Systems being reused include the Supply Center Computer Replacement (SCCR) and Aviation Computerized Maintenance System (ACMS).

FLS will provide the automated data and decision support tools to more efficiently and cost-effectively manage Coast Guard ships and standard boats. Proactive management based on historical usage rates,

Fixed Asset Plan and Justification

maintenance trends and accurate configuration data will reduce operational costs by allowing managers to reduce parts inventories at all levels in the organization. Accurate, timely data will provide the information required to validate maintenance philosophies including time between overhaul and replacement. The quality of contract specifications for repairs and maintenance will be improved with configuration management. This improvement will reduce costly shipyard contract modifications and delays.

B. Program management:

1. Is there a project manager and contracting officer devoted to the project? Yes
2. Will an Integrated Product Team be established to assist with the management of the project? Yes

The Coast Guard employs a matrix team approach, with includes representatives from Coast Guard Acquisitions, Logistics, and other offices and field organizations.

C. Acquisition strategy:

Under the authority of the Economy Act, the Coast Guard proposes to place task orders against existing service contracts available through the General Services Administration's (GSA) Federal Information System Support Program (FISSP). In establishing FISSP contracts, GSA solicited competitive proposals and awarded contracts to those companies offering the best value to the government. By utilizing GSA FISSP, the FLS project reduces procurement lead time, thereby accelerating the FLS schedule and reducing Coast Guard staff support costs. Additionally, the FLS Project Manager negotiated with GSA to reduce the administrative fee charged by GSA for placing orders from 14% to 3%.

System engineering services were acquired through interagency agreements with GSA FISSP using cost plus fixed fee and fixed priced orders. The FLS Requirements Analysis and Alternatives Analysis were developed in accordance with the Federal Information Resource Management Regulations. The requirements were developed to support an open systems architecture that promoted full and open competition for subsequent follow-on acquisitions.

System integration services are being acquired through interagency agreements with GSA FISSP using time and material orders. Task orders are awarded to the system integrator in relatively small incremental tasks. Prior to selection of the system integration contractor, the Coast Guard performed a Software Capability Evaluation (SCE) on the vendor to validate its capabilities.

Independent Verification and Validation (IV&V) services are being acquired through interagency agreement with Naval Surface Warfare Center, Port Hueneme Division, East Coast Operations (NSWC PHD ECO). The final selection of NSWC PHD ECO was based upon their experience gained in performing IV&V services during the FLS Business Area Analysis.

D. Financial basis for selecting the project:

A June 1995 Cost Benefit Analysis (CBA) indicated a discounted life cycle cost of $26.6M with a discounted life cycle benefit of $70.4M. This resulted in a savings to investment ratio of 2.64. The life cycle benefits are the result of inventory related savings, personnel reductions, and efficiency and reliability improvements.

The June 1995 Alternatives Analysis took a detailed look at four alternatives: (1) status quo, (2) an integrated system reusing existing application functionality, (3) non-integrated system, and (4) ground-up development. A detailed description and cost model was prepared for each alternative. The cost models indicated that Alternative 2, building an integrated system reusing existing application functionality, was the most cost beneficial method for developing FLS.

E. Adherence to architecture and infrastructure standards:

FLS development is based on an open system architecture that complies with the Portable Operating Systems Interface for Computer environments (POSIX) standard. The FLS architecture is compliant with the Coast Guard Technical Architecture Standards and is designed to operate within the existing Coast Guard information technology infrastructure. FLS is being developed using Y2K compliant tools and will be Y2K compliant when deployed.

Studies have been conducted to determine the feasibility of using COTS software to provide all or part of the functionality of FLS. To date, no COTS software has been identified that will provide all or part of

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the functionality of FLS in a cost effective manner. COTS software will continue to be evaluated throughout the development of FLS.

FLS is being developed using Oracle Designer/2000 and Developer/2000. The host system will consist of an Oracle relational database running on Hewlett Packard K460 minicomputers. Initially the host system will be accessed through the existing Coast Guard Data Network Plus (CGDN+) using a client server approach. As development proceeds, FLS will be web enabled and access will be through CGDN+ using the Coast Guard standard web browser.

PART III: COST, SCHEDULE AND PERFORMANCE GOALS

A. Description of performance based system:
FLS will be developed incrementally through numerous interagency acquisitions using GSA FISSP. GSA FISSP will issue task orders as either fixed firm price or time and material work requests to execute the project. Depending upon the type of contract, performance goals are deemed to have been met when the Coast Guard, based upon the negotiated schedule for deliverables, accepts the required deliverables from the contractor or certifies that the contractor provided a reasonable level of effort in accordance with the task plan.

The Coast Guard required the contractor to implement an earned value system as one measure of performance. The Coast Guard is working with the Defense Contract Management Command (DCMC) and the contractor to refine the contractor's earned value system for future increments.

B. Original baseline:
Baseline goals for cost reflect the upper end of the cost range in the approved Acquisition Project Baseline (APB). Baseline goals for schedule and performance reflect the "threshold" for the critical events/parameters specified in the Operational Requirements Document (ORD).

(In millions)

	Prior to FY98	98	99	00	01	02	03	04	05 and beyond	Total
1. Cost:	25.9	16.4	0.3	0.1						42.7

2. Schedule:

Initial Operational Capability (IOC):	FY 98 Q4
Key Decision Point (KDP) 4:	FY 98 Q4
Full Operational Capability (FOC):	FY 99 Q4

3. Performance:

System Availability:	
During work hours (e.g., 0800-2000 EST)	96% availability
During off hours (e.g., 2000-0800 EST)	90% availability
On-line System Response Time:	85% of the time 5-10 seconds 10% of the time 10-30 seconds 04% of the time 30-60 seconds 01% of the time > 60 seconds
Security:	Required security controls: Management, Development, Acquisition, Operational, Training, Technical in place prior to FOC.
Supportability:	Required support elements: Maintenance, Training, Equipment, Facilities in place prior to FOC.
System Interoperability:	Capable of exchanging data with CMplus prior to IOC.

C. Current baseline: Same as the original baseline.

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Baseline goals for cost reflect the upper end of the cost range in the approved Acquisition Project Baseline (APB). Baseline goals for schedule and performance reflect the "threshold" for the critical events/parameters specified in the Operational Requirements Document (ORD).

(In millions)

	Prior to FY98	98	99	00	01	02	03	04	05 and beyond	Total
1. Cost:	25.9	16.4	0.3	0.1						42.7

2. Schedule:

Initial Operational Capability (IOC):	FY 98 Q4
Key Decision Point (KDP) 4:	FY 98 Q4
Full Operational Capability (FOC):	FY 99 Q4

3. Performance:

System Availability:	
During work hours (e.g., 0800-2000 EST)	96% availability
During off hours (e.g., 2000-0800 EST)	90% availability
On-line System Response Time:	85% of the time 5-10 seconds 10% of the time 10-30 seconds 04% of the time 30-60 seconds 01% of the time > 60 seconds
Security:	Required security controls: Management, Development, Acquisition, Operational, Training, Technical in place prior to FOC.
Supportability:	Required support elements: Maintenance, Training, Equipment, Facilities in place prior to FOC.
System Interoperability:	Capable of exchanging data with CMplus prior to IOC.

D. Variance from baseline goals:

1. Cost: N/A
2. Schedule: The current schedule estimate is more than 10% behind the baseline schedule. Due to the level of the Coast Guard's AC&I budget, FLS's funding request was only $4.7M for FY99 instead of $16.4M. The reduced level of funding will require the reduction of the contractor's workforce by 50% early in FY99. The combination of the level of FY99 funding and high market demand for software developers and managers has caused the departure of some key contractor personnel. With the reduction of the contractor's workforce by 50%, FLS will lose a substantial amount of business process and model knowledge. Additional time will be needed to have new personnel come to understand the model and to reacquaint returning personnel with the model when funding is restored. The original base line will be revised to reflect the changes.
3. Performance: N/A

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E. Latest revised estimate:

(In millions)

	Prior to FY98	98	99	00	01	02	03	04	05 and beyond	Total
1. Cost:	16.9	8.2	4.7	9.8	3.1					42.7

2. Schedule:

Initial Operational Capability (IOC): FY 98 Q4
Key Decision Point (KDP) 4: FY 98 Q4
Full Operational Capability (FOC): FY 01 Q1

3. Performance: No change from current baseline.

F. Corrective actions:

Contractor will reduce workforce by 50% in early FY99. Contractor will attempt to retain key personnel by offering internal transfers to other contractor projects. Transfer of key personnel back to FLS project will occur when FY00 funding is appropriated.

Capital Asset Plan and Justification

Agency: U. S. Coast Guard
Bureau: Acquisition
Name of project: **Maritime Information for Safety and Law Enforcement Project**
Check one: New Project_____ Ongoing Project X
Check one: Is this project information technology ? Yes X No

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(millions)

	Prior to FY97	97	98	99	00	01	02	03	04and beyond	Total
Planning:										
Budget authority.....										0.0
Outlays.....										0.0
Full acquisition: (all segments)										
Budget authority	19.3	5	4	6.1	10.5	2.2				45
Outlays	3	8	4.5	7.5	8.0	8.0	6.0			45
Total, sum of stages....										
Budget authority	19.3	5	4	6.1	10.5	2.2				45
Outlays	3	8	4.5	7.5	8.0	8.0	6.0			45
Maintenance:										
Budget authority.....										0.0
Outlays.....										0.0

PART II: JUSTIFICATION AND OTHER INFORMATION

A. **Justification:**

The MISLE project satisfies the legislative mandate of Public Law (PL) 100-710 which requires the establishment of a nationwide vessel identification system and the modernization of maritime commercial instruments and liens processing; the Port and Tanker Safety Act, and the Oil Pollution Act of 1990. MISLE provides replacement systems for the Marine Safety Information System (MSIS) and the Law Enforcement Information System (LEIS). MSIS hardware and software are technologically obsolete, difficult to maintain, and increasingly unable to support Coast Guard missions. The Vessel Identification and Documentation System (VIDS) must be developed since there is no existing systems that can satisfy the requirements of PL 100-710. The Law Enforcement Information System II (LEIS II) will be integrated with Marine Safety Network (MSN) and VIDS to provide cross - functional support to the Coast Guard and other State and Federal law enforcement agencies. MSN, VIDS, and LEIS II will be connected with each other and use common data.

MISLE will provide management information systems to support marine safety and law enforcement programs by providing cross - functional information system standardization through a competitive system development contract. Better designed and integrated software applications will improve mission effectiveness and efficiency by increasing reliability, significantly reducing system response time and eliminating redundant data entry. Compliance with standard Coast Guard information systems architecture will decrease costs of long term operation and maintenance. The systems will support more than 5,000 USCG users at over 550 sites, state vessel registration offices, law enforcement agencies, commercial banks and the public (those people that have a bona fide need for the data). The tightly integrated operational information systems will improve marine safety and law enforcement missions and enhance civil penalty processing.

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MISLE's outcomes support the Coast Guard's strategic goals of Maritime Safety, Protection of Natural Resources, Mobility, Maritime Security, and National Defense, and are closely aligned with several of the internal efficiency and continual improvement management goals found in the Commandant's Direction.

B. Program management

1. Is there a project manager and contracting officer devoted to the project? Yes.
2. Will an Integrated Product Team be established to assist with the management of the project? The Coast Guard employs Integrated Product Team concepts to develop the systems.

C. Acquisition strategy: MISLE is using the Mission Oriented Information System Engineering (MOISE) contract to develop software and integrate three systems: Marine Safety Network (MSN), Vessel Identification and Documentation System (VIDS, which is comprised of two subsystems, the Vessel Identification System (VIS) and the Vessel Documentation System (VDS)), and Law Enforcement Information System II (LEIS II). The MOISE contract is Cost-Plus-Award-Fee. Appropriate performance measurements necessary to provide incentives for the contractor are identified in the Award Fee Plan. The MISLE project will use a number of existing contracts to acquire hardware, software, telecommunications, independent validation and verification, and operations and maintenance:

- Hardware for MISLE will be purchased using the Navy's Super Mini Contract.
- Telecommunications for the MISLE project is handled through the Coast Guard Data Network.
- Operations and Maintenance will be contracted through the Coast Guard's Operations and Maintenance Contract at Operations System Center in Martinsburg, WV
- Independent Verification and Validation has been conducted through SETA Corporation, a GSA FEDSIM independent 8A contractor.

The project is using "modular contracting". The MISLE Project uses task orders to acquire the applications within each of five Releases. Each task order is managed individually to produce a software application. Each application is taken through unit and integration testing before system testing is done at the release level. This minimizes the impact of problems found at the application level and allows individual applications to be individually fielded should an entire release experience inordinate delays.

D. Financial basis for selecting the project:

1. (Summarize the analysis of full life-cycle costs/total costs of ownership; results of cost/benefit analyses, including return on investment; and any tangible returns that benefit the agency but are difficult to quantify. For information technology, address replaced system savings and savings recovery.)

As previously noted, some parts of the MISLE project are mandated by public law. Additionally, MISLE provides replacement systems for the Marine Safety Information System (MSIS). Current MSIS hardware and software are technologically obsolete, difficult and costly to maintain, and increasingly unable to support Coast Guard missions; MSIS will be replaced by MSN. MSN will be integrated with LEIS II and VIDS to provide cross - functional support to the Coast Guard and other State and Federal law enforcement agencies, thus greatly increasing operational effectiveness.

2. (Describe analysis of alternative options and identify any underlying assumptions. Provide the estimate of risks, such as Y2K.) Y2K compliance is confirmed prior to system deployment.

E. Adherence to architecture and infrastructure standards:

1. (Describe how the project is compliant with the agency's IT architecture and technical infrastructure). The MISLE technical architecture has been approved by the Coast Guard's CIO. All updates or product evaluations are closely coordinated with the CIO's staff to ensure compatibility with the Coast Guard's architecture.
2. (Identify standards for info exchange and resource sharing.) MISLE complies with the Coast Guard Data Element Naming Standards.

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3. (Demonstrate adherence to government-wide standards, where applicable (such as Y2K). The MISLE Systems will be tested for Y2K compliance prior to deployment.
4. (Identify use of commercial-off-the-shelf software (COTS) versus custom; justify custom components. COTS and GOTS (Government-off-the-Shelf) software solutions are evaluated during the preliminary design of each application. These potential solutions are submitted to the Coast Guard's CIO to ensure they are compliant with the Coast Guard's technical architecture.

PART III: COST, SCHEDULE AND PERFORMANCE GOALS

A. **Description of performance based system:**
The MISLE Project is a major, Level IIIA acquisition in the Coast Guard and as such has an Acquisition Project Baseline (APB). Approval of the APB established "top level" objectives and thresholds on cost, schedule, and performance which the Project Manager (PM) must meet or exceed. The purpose of the APB is to provide control to prevent unit cost growth and "requirements creep" due to unnecessary system configuration changes or the imposition of new, unapproved operational requirements. Changes to the APB will only be made under extreme circumstances. Any actual or anticipated changes or "breaches" to a Project's APB are reported via a Project Deviation Report (PDR) prepared by the PM to the Administration Acquisition Executive (AAE) for the Coast Guard.

The contractor provides Cost and Schedule Status Reports based on an Earned Value System. These reports allow the Coast Guard to examine the contractor's cost and schedule estimates, variances, and projections for completion.

(millions)

	PY-1 and earlier years	PY	CY	BY	BY+1	BY+2	BY+3	BY+4	BY+5 and beyond	Total

B. **Original baseline:**
1. Cost and schedule goals: The APB provides a total project cost range of $35M to $45M.
Cost and Schedule sections of the APB are reproduced below:

Cost:

Critical Parameter	Range
MSN	$20M to $24M
VIDS	$12M to $15M
LEIS II	$03M to $06M
TOTAL COST	$35M to $45M

Schedule:

Critical Events	Range
* Initial System/Module Development Complete and begin OT&E	3rd Qtr FY97 to 2nd Qtr FY98
* KDP 4 Decision	1st Qtr FY98 to 1st Qtr FY99
* Last System/Module Development and OT&E Complete	2nd Qtr FY01 to 3rd Qtr FY02
* Last System Migrated to OSC	3rd Qtr FY01 to 4th Qtr FY02

2. Performance goals: The Performance section of the APB is reproduced below:

Performance:

Critical Parameter	Threshold	Objective

Capital Asset Plan and Justification

* On-line System Response Time, MSN and VIDS	90% within 15 seconds	90% within 05 seconds
	99% within 90 seconds	99% within 30 seconds
	100% within 05 Minutes	100% within 02 Minutes

2. Performance goals: The Performance section of the APB is reproduced below: (cont'd)

* On-line System Response Time, (LEIS II)	Level 1* = 05 minutes	Level 1 < 05 minutes
	Level 2 = 15 minutes	Level 2 < 15 minutes
	Level 3 = 1 hour	Level 3 < 1 hour
	Level 4 = 1 day	Level 4 < 1 day

* Operational state response time levels 1-4 are defined in the LEIS II System Specification.

Critical Parameter	Threshold	Objective
Reliability	User interruptions due to system fault < 2 per week	User Interruptions due to system fault < 1 per week
Security	Required security controls - Management - Development - Acquisition - Operational - Training - Technical are in place prior to full deployment	Required security controls: - Management - Development - Acquisition - Operational -Training - Technical are in place prior to initial operational capability (IOC)
Supportability	Required support elements - Maintenance - Training - Equipment - Facilities are in place prior to full	Required support elements - Maintenance - Training - Equipment - Facilities are in place prior to IOC

Capital Asset Plan and Justification

deployment

Survivability	> 50% of users are able to continue operations with single component failure	> 90% of users are able to continue operations with single component failure

Critical Parameter	Threshold	Objective
System Availability - MSN & VIDS	98% of scheduled availability per month	> 99.5% of scheduled availability per month
System Availability - LEIS II	99.5% of scheduled availability per month	> 99.5% of scheduled availability per month

C. Current baseline:

1. Cost: Current estimate is within the range of the original baseline.
2. Schedule: The Original Schedule for the deployment of the initial system/module was third quarter of FY 1998, and has been updated to first quarter FY 1999.
3. Performance: Performance goals remain the same as the original baseline.

D. Variance from current baseline:

1. Variance in cost: None
2. Variance in schedule: None
3. Variance in performance: None

E. Latest revised estimates: Project meeting all baseline goals.

F. Corrective actions: No corrective action required.

APPENDIX C: CAPITAL ASSET ACQUISITIONS APPROVED, SEEKING FUNDING

Overview

This appendix consists of the FY2000 OMB AC&I budget request as amended by the OMB passback. It represents a requirements-based summary of the Coast Guard's FY2000 AC&I funding needs, based on the portfolio approach that is the underlying theme of the ACP. The layout of this section is based on the format in which we submit our budget to Congress, NOT in the system-of-systems format used elsewhere in the ACP. However, while the format is not identical, there is a direct linkage between the groupings of assets as they are presented in this appendix and the remainder of the ACP.

At some point in the future, we may seek to modify the format in which the annual budget request is presented to Congress to better align with the system-of-systems concept employed throughout the rest of the ACP.

Format

The individual project sheets contained in this appendix are formatted in accordance with OMB and Congressional guidance concerning the submission of AC&I budget requests. Each request contains information describing the need for the project, the solution manifested in the request for funds, the benefit of employing this approach, and information detailing the history and follow on aspects of the project (if an ongoing project) or proposed timeline for new starts.

Linkage to Performance Plan

Additional information that links the investments described in these sheets to the annual performance goals and Coast Guard outcomes they support is available in the Coast Guard FY2000 Annual Performance Plan.

DEPARTMENT OF TRANSPORTATION
U.S. COAST GUARD
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Line Item Summary
(in thousands of dollars)

PROJECT	C-STAGE REQUEST	PAGE #
I. VESSELS:		
A. ACQUIRE VESSELS AND EQUIPMENT:		
1. SURVEY AND DESIGN - CUTTERS AND BOATS	500	13
2. SEAGOING BUOY TENDER (WLB) REPLACEMENT	77,000	14-15
3. STERN LOADING BUOY BOAT (BUSL) REPLACEMENT	5,000	16-17
4. 47-FOOT MOTOR LIFEBOAT (MLB) REPLACEMENT	24,360	18-19
5. POLAR ICEBREAKER REPLACEMENT (PIR) USCGC HEALY	1,900	20-21
6. SURFACE SEARCH RADAR REPLACEMENT	4,000	22-23
7. COASTAL PATROL BOAT (CPB) REPLACEMENT	1,000	24-25
8. DEEPWATER CAPABILITY REPLACEMENT ANALYSIS	44,200	26-27
B. REPAIR, RENOVATE OR IMPROVE EXISTING VESSELS AND SMALL BOATS:		
1. POLAR CLASS ICEBREAKER RELIABILITY IMPROVEMENT PROJECT (RIP)	4,100	28-29
2. CONFIGURATION MANAGEMENT(CM)	3,700	30-31
SUBTOTAL - VESSELS	165,760	
II. AIRCRAFT:		
ACQUIRE NEW AIRCRAFT AND INCREASE AVIATION CAPABILITY:		
1. HH-65 HELICOPTER KAPTON WIRING REPLACEMENT	3,360	32
2. HH-65 HELICOPTER MISSION COMPUTER UNIT REPLACEMENT	3,650	33
3. HC-130 LONG RANGE SEARCH AIRCRAFT CAPABILITY PRESERVATION	5,900	34-35
4. HU-25 AIRCRAFT AVIONICS IMPROVEMENTS	2,900	36
5. HH-60J NAVIGATION SYSTEM UPGRADE	3,800	37-38
6. SIDE LOOKING AIRBORNE RADAR (SLAR) UPGRADE - PHASE II	2,500	39-40
SUBTOTAL - AIRCRAFT	22,110	
III. OTHER EQUIPMENT:		
1. FLEET LOGISTICS SYSTEM (FLS)	6,000	41
2. PORTS AND WATERWAYS SAFETY SYSTEMS (PAWSS)	4,500	42
3. MARINE INFORMATION FOR SAFETY AND LAW ENFORCEMENT (MISLE)	10,500	43-44
4. AVIATION LOGISTICS MANAGEMENT INFORMATION SYSTEM (ALMIS)	2,700	45-46
5. NATIONAL DISTRESS AND RESPONSE SYSTEM MODERNIZATION(NDRSM)	16,000	47-48
6. DEFENSE MESSAGE SYSTEM (DMS) IMPLEMENTATION	3,477	49-50
7. PERSONNEL MANAGEMENT INFORMATION SYSTEM/ JOINT UNIFORM MILITARY PAY SYSTEM II (PMIS/JUMPS II)	4,400	51-52
8. COMMERCIAL SATELLITE COMMUNICATION (SATCOM) UPGRADE	4,049	53-54
9. HUMAN RESOURCES INFORMATION SYSTEM	1,100	55
10. LORAN-C CONTINUATION	1,000	56
SUBTOTAL - OTHER EQUIPMENT	53,726	

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Line Item Summary
(in thousands of dollars)

PROJECT	C-STAGE REQUEST	PAGE #
IV. SHORE FACILITIES AND AIDS TO NAVIGATION:		
A. SHORE - GENERAL		
1. SURVEY AND DESIGN - SHORE PROJECTS	6,000	57
2. MINOR AC&I SHORE CONSTRUCTION PROJECTS	6,000	58
B. SHORE - AIR STATIONS:		
1. RENOVATE AIR STATION HANGAR (PHASE II)-KODIAK, AK	8,300	59
2. AIR STATION RAMP STRUCTURAL IMPROVEMENTS - ELIZABETH CITY, NC	3,800	60
3. RENOVATE AIR STATION MIAMI HANGAR (PHASE II) - OPA LOCKA, FL	3,500	61
C. SUPPLY/SUPPORT/TRAINING CENTERS:		
1. UPGRADE EDUCATIONAL FACILITIES, CG ACADEMY -NEW LONDON, CT	5,000	62
D. COAST GUARD HOUSING - VARIOUS LOCATIONS	7,800	63
E. SHORE - GROUPS/BASES/STATIONS/MSOS:		
1. CONSTRUCT PATROL BOAT MAINTENANCE FACILITY - SAN JUAN, PR	3,100	64
2. MODERNIZE COAST GUARD STATION SHINNECOCK - HAMPTON BAYS, NY	3,500	65
3. RELOCATE COAST GUARD MARINE SAFETY OFFICE AND STATION - (PHASE-I)- CLEVELAND, OH	1,000	66
4. HOMEPORTING OF DRUG INTERDICTION ASSETS	2,800	67
F. AIDS TO NAVIGATION FACILITIES:		
1. WATERWAYS AIDS TO NAVIGATION INFRASTRUCTURE	5,000	68-69
SUBTOTAL - SHORE FACILITIES AND AIDS TO NAVIGATION FACILITIES	55,800	
V. PERSONNEL AND RELATED SUPPORT:		
1. DIRECT PERSONNEL COSTS	51,180	70
2. CORE ACQUISITION COSTS	1,750	71
SUBTOTAL - PERSONNEL AND RELATED SUPPORT	52,930	

	SUMMARY AC&I	
I.	VESSELS	165,763
II.	AIRCRAFT	22,110
III	OTHER EQUIPMENT	53,726
IV.	SHORE FACILITIES AND AIDS TO NAVIGATION	55,800
V.	PERSONNEL AND RELATED COSTS	52,930
	TOTAL REQUEST C-STAGE - FY 2000	**350,326**

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SURVEY AND DESIGN - CUTTERS AND BOATS **$500,000**

PROJECT DESCRIPTION: To provide funding in support of future year cutter and boat renovation and acquisition programs prior to the program receiving dedicated funding in the budget.

CAPABILITY ACQUIRED/MAINTAINED: Early planning, requirements development, and cost estimating efforts in support of future cutter and boat renovations involve significant engineering efforts. The Coast Guard operates over 200 cutters and 900 small boats. Diverse mission requirements call for complex designs and performance capabilities. Maintaining total in-house engineering expertise would require a considerable staff and costly facilities. Therefore, much of the Naval Engineering Survey and Design work is accomplished by using outside expertise. These efforts include developing and refining requirements through feasibility studies to verify the soundness and practicability of various combinations of vessel performance and payload requirements, with the ultimate goal of determining an optimum set of requirements which will lead to a balanced, integrated, and cost effective ship design. Later, a more detailed design with trade-off analysis identifies critical parameters and permits a more accurate look at potential acquisition budget costs.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Survey & Design Projects	Lump Sum		500

FUNDING HISTORY:

HULL #	FY	FY TOTAL ($000)
Survey & Design Projects	89	900
Survey & Design Projects	90	678
Survey & Design Projects	91	1000
Survey & Design Projects	92	1100
Survey & Design Projects	93	1200
Survey & Design Projects	94	500
Survey & Design Projects	95	750
Survey & Design Projects	96-99	(per year) 500

ESTIMATED FUTURE COST REQUIREMENT	($000)(per year)500

PERFORMANCE EFFECT:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary							
Secondary	x	x	x	x	x	x	x

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SEAGOING BUOY TENDER (WLB) REPLACEMENT $77,000,000

PROJECT DESCRIPTION: To continue funding the multiyear program to replace the 26-vessel fleet of 50-year-old Seagoing Buoy Tenders. This request funds two hulls and other project costs.

CAPABILITY ACQUIRED/MAINTAINED: The capability to maintain short-range aids to navigation in an exposed offshore environment will be retained. The combined WLB/WLM fleet will be reduced from 37 vessels to 30, yielding a reduction of 500 billets.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Sailaway (includes award of Hulls 10 & 11)	Each	2	69,317
Logistics/Facilities	Lump Sum	--	3,349
Project Admin	Lump Sum	--	2,265
Spare Parts	Lump Sum	--	2,069
		TOTAL:	77,000

Sailaway costs may include change orders, other deferred items, and economic price adjustments on 9 prior year contracted hulls. Logistics/facilities include non-contract outfitting. Funding for general administration and the Project Resident Office are included in Project Administration.

FUNDING HISTORY:

HULL #	FY	FY TOTAL ($000)
Feasibility/Contract Design	89-91	8,390
Lead Ship	92	47,700
Hull #2	94	16,700
Hull #3	95	33,000
Hulls #4-5	96	61,000
Hull #6 (Funds used in 98; for award with hull 7)	97	54,000
Hull #7	98	41,000
Hulls #8-9	99	72,600

ESTIMATED FUTURE COST REQUIREMENT	($000)282,746 -- 412,746

PERFORMANCE EFFECT: OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary					X		
Secondary	X	X	X	X		X	

SEAGOING BUOY TENDER (WLB) REPLACEMENT(continued) $77,000,000

QUANTITY:

Planning Range	16 cutters
Budgeted Number (thru FY99)	9 hulls
Contracted Number (as of 30 June 98)	5 hulls
Funded through FY99	9 hulls

UNIT COST ($ in millions):

Acquisition Baseline Unit Costs	57.5
Average Unit Cost (to date)	39.5
Projected Future Average Unit Cost	40.9

CONTRACTOR:

Marinette Marine, Marinette, WI (Lead Ship Contract)
Full Production Contract awarded 4QFY98
Contractor Marinette Marine, Marinette, WI, Type of contract: Firm fixed price
Contract options: base year plus 4 option periods
Max: 3 / Min: 2 for first three options; 4th option allows for only one or two ship award

KEY EVENTS:

Deliver Lead WLB	FY96
Award Production Contract	FY98
First Production Delivery	FY00-01
Last Production Delivery	FY04-06

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STERN LOADING BUOY BOAT (BUSL) REPLACEMENT **$5,000,000**

PROJECT DESCRIPTION: To continue funding to replace the capabilities of the existing fleet of buoy boats used by Aids to Navigation Teams to service small buoys and fixed aids to navigation.

CAPABILITY ACQUIRED/MAINTAINED: Replacement of the obsolete boats with new boats having modern systems and better capabilities will reduce maintenance, improve habitability, and increase reliability.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Sailaway	Lump Sum	--	4,643
Logistics/Facilities	Lump Sum	--	121
Project Admin	Lump Sum	--	63
Spare Parts	Lump Sum	--	173
		TOTAL:	5,000

Sailaway costs include change orders and economic price adjustments for previously contracted hulls.

FUNDING HISTORY:

HULL #	FY	FY TOTAL ($000)
Contract Design/Pre-production	91-94	6,150
Hulls 3-7	95	11,700
Hulls 8-12	97	7,800
Hulls 13-20	98	12,000
Hulls 21-28	99	11,773

ESTIMATED FUTURE COST REQUIREMENT	($000) 14,000

PERFORMANCE EFFECT:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary					X		
Secondary	X	X	X	X		X	

STERN LOADING BUOY BOAT (BUSL) REPLACEMENT (continued) $5,000,000

QUANTITY:

Planning Range	36 boats
Budgeted Number (thru FY99)	28
Contracted Number (as of 30 Nov 98)	24
Total Funded through FY99	28

UNIT COST ($ in millions):

Acquisition Baseline Unit Costs	1.8
Actual Average Unit Cost (to date)	2.4
Projected Future Average Unit Cost	1.6

CONTRACTS:

Coast Guard Yard, Baltimore, MD
Type of work order: Time/Material
Production Options: base year plus 4 option periods
Production Rate: approx. 9 per yr. or 1 every six weeks.

KEY EVENTS:

Mission Need Statement	FY86
Analysis Completed	FY92
Initial Operating Capability	FY96
Full Production/Full Operating Capability	Feb97
Last Delivery	FY01

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47-FOOT MOTOR LIFEBOAT (MLB) REPLACEMENT $24,360,000

PROJECT DESCRIPTION: To continue funding the multiyear program to replace the Coast Guard's aging fleet of 44-foot Motor Lifeboats.

CAPABILITY ACQUIRED/MAINTAINED: The 47-foot Motor Lifeboat maintains the Coast Guard's capability to perform Search and Rescue in heavy seas and breaking surf conditions.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Sailaway	Each	24	18,110
Logistics/Facilities	Lump Sum	--	500
Project Admin	Lump Sum	--	900
Spare Parts	Lump Sum	–	4,850
		TOTAL:	**24,360**

Sailaway costs include change orders, other deferred items, and economic price adjustments on prior year contracted hulls as well as award of 24 hulls this year.

FUNDING HISTORY (Amount does not always equal funding requested):

HULL #	FY	FY TOTAL ($000)
Design, Prototype, & Preproduction (6 hulls)	88-94	13,363
Production Hulls 1-93	95-99	109,400

Prototype hulls being replaced with production hulls due to high retrofit cost.

ESTIMATED FUTURE COST REQUIREMENT	($000)0

PERFORMANCE EFFECT:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X					
Secondary			X	X			

QUANTITY:

Planning Range*	86-106 boats
Budgeted number (thru FY99)	93 hulls
Contracted Number (as of 30 Nov 98)	70 hulls
Funded through FY99	93 hulls
*increase to 123 under consideration	

UNIT COST ($ in millions):

Acquisition Baseline Unit Costs	1.6
Average Unit Cost (to date)	1.5
Projected Future Unit Cost	1.3

47-FOOT MOTOR LIFEBOAT (MLB) REPLACEMENT $24,360,000

CONTRACTOR:

Textron Marine Systems, New Orleans, LA
Type of contract: Firm fixed price
Contract options: Base year plus 4 option periods (FY00 is final option year)
Max: 30 (in increments of one above min)
Min: 20

KEY EVENTS:

Pre-production Contract Award	FY88
KDP 3 – Design Selection /Limited Prod	FY91
KDP 4 – Commitment to Full Production	FY95
Production Contract Award	FY95
Full Production Complete	FY03

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POLAR ICEBREAKER REPLACEMENT (PIR) USCGC HEALY $1,900,000

PROJECT DESCRIPTION: To continue funding Coast Guard support for the Navy funded acquisition of the Polar Icebreaker Replacement, Coast Guard Cutter HEALY. Coast Guard costs include those items not covered by DOD's Shipbuilding and Conversion Navy (SCN) account.

CAPABILITY ACQUIRED/MAINTAINED: The Coast Guard will be capable of fully supporting the new Polar Icebreaker when it is delivered.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Project Staff Support & PMRO Administration	Lump Sum	–	300
Technical Support Services	Lump Sum	--	750
NESU/Crew Training	Lump Sum	--	850
		TOTAL:	1,900

FUNDING HISTORY:

HULL #	FY	FY TOTAL ($000)
Design Development, Staff Support, PMRO Admin, and Training	87-98	32,500
Pro Staff Support, PMRO Admin, Technical Support, Inventory Control Point Spares, Training	99	2,100

ESTIMATED FUTURE COST REQUIREMENT	($000)1,000

PERFORMANCE EFFECT:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary						X	
Secondary	X	X	X				X

QUANTITY:

Planning Range	N/A
Budgeted Number	N/A
Contracted Number	N/A
Total Funded Through FY98	N/A

UNIT COST ($ in millions):

Acquisition Baseline Unit Costs	N/A
Actual Average Unit Cost	N/A

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POLAR ICEBREAKER REPLACEMENT (PIR) USCGC HEALY $1,900,000

CONTRACTOR (THIS IS A NAVY FUNDED CONTRACT):

Avondale Industries, Inc., New Orleans, LA
Type of contract: Navy Fixed Price Incentive Fee (FPIF)
Contract options: None
Max: 1
Min: 1

KEY EVENTS:

Mission Need Statement	FY85
MOA w/ Navy Signed	FY90
Vessel Launching	FY96
Preliminary Acceptance/Delivery	FY98
Final Acceptance	FY99
Ready for Unrestricted Operations	FY01

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SURFACE SEARCH RADAR REPLACEMENT **$4,000,000**

PROJECT DESCRIPTION: Funding for a multiyear project to purchase, install and support replacement surface search radar on eleven classes of Coast Guard cutters.

CAPABILITY ACQUIRED/MAINTAINED: Coast Guard cutters will improve operational performance in all missions, particularly harbor steaming and law enforcement, as well as enhance vessel safety due to improved target detection and acquisition capabilities.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Install radar systems	Each	53	4,000

FUNDING HISTORY

	FY	FY TOTAL ($000)
Purchase, Removal and Installation of Radar Systems; Spares and Interim Support	94-98	27,300
Purchase, Removal and Installation of Radar Systems; Spares and Interim Support	99	8,450

ESTIMATED FUTURE COST REQUIREMENT	($000)4,450

PERFORMANCE EFFECT:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X					
Secondary			X	X	X		X

QUANTITY:

Planning Range	106
Budgeted Number (thru FY99)	106
Contracted Number	106
Total Funded Through FY99	106

UNIT COST ($ in millions):

Acquisition Baseline Unit Costs	0.423
Actual Average Unit Cost (to date)	0.5552

SURFACE SEARCH RADAR REPLACEMENT (continued) **$4,000,000**

CONTRACTOR:

Raytheon Co., Fullerton, CA
Type of contract: Firm Fixed Price
Contract options: 4
Max: various
Min: various

KEY EVENTS:

Mission Need Statement	FY92
Acquisition Plan Approval	FY93
Initial Operating Capability	FY97
Full Production/Full Operating Capability	FY98
Project Completion	FY01

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COASTAL PATROL BOAT (CPB) REPLACEMENT $1,000,000

PROJECT DESCRIPTION: Multiyear program to replace the 82-foot Point Class Patrol Boat capability.

CAPABILITY ACQUIRED/MAINTAINED: The Maritime Law Enforcement and Search and Rescue requirements in the coastal zone will be accomplished with a more capable patrol resource than the existing 82' patrol boat.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Sailaway (for prior year hulls)	Lump Sum	--	0
Logistics/Facilities	Lump Sum	--	0
Project Admin	Lump Sum	--	1,000
Spare Parts	Lump Sum	--	0
		TOTAL:	1,000

Funding for general administration and the Project Resident Office are included in Project Administration.

FUNDING HISTORY:

HULL #	FY	FY TOTAL ($000)
Feasibility/Req. Analysis	92-93	1,900
Lead Boat	95	10,351
Project Admin	96	500
Hulls #2-7 (Low Rate Initial Production)	97	33,100
Hulls # 8-22 (Full Production)	98	63,000
Hulls #23-42 (Full Production)	99	103,700

ESTIMATED FUTURE COST REQUIREMENT	($000)38,300

PERFORMANCE EFFECT:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary		X		X			
Secondary	X		X		X		X

COASTAL PATROL BOAT (CPB) REPLACEMENT (continued) $1,000,000

QUANTITY:

Planning Range	31-50 boats
Budgeted Number –thru FY99	42
Contracted Number (as of 31 Dec 98)	24
Total Funded through FY99	42

UNIT COST ($ in millions):

Acquisition Baseline Unit Costs	6.2
Actual Ave Unit Cost (to date)	6.0
Projected Future Unit Costs	5.1

CONTRACTOR:

Bollinger Shipyards, Inc., Lockport, LA
Type of contract: Firm Fixed Price with EPA
Contract options: base year plus 4 option periods
Max: 15/ Min: 8 (full production options)

KEY EVENTS:

Mission Need Statement Update	FY94
Contract Award	FY96
Initial Operating Capability	FY98
Full Production	FY99
Production Complete	TBD

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DEEPWATER CAPABILITY REPLACEMENT ANALYSIS **$44,200,000**

PROJECT DESCRIPTION: To fund development of an integrated system of assets to execute the Coast Guard's missions in the offshore area of operations. This funding request is for the analysis phase of the project.

CAPABILITY ACQUIRED/MAINTAINED: The Deepwater project when completed, should minimize the lifecycle costs of the operating assets by leveraging current and future technologies to achieve requisite functional capabilities.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Trade-off Analysis, Technology Assessments, Technology Demonstrations, Modeling and Simulation, System Supportability Analyses, Proposal Evaluation, Contract QA, IV&V, RFP Preparation, MPT Studies	Lump Sum	--	16,000
Industry Team Development of Functional Design	Lump Sum	--	25,200
Project Administration			3,000
		TOTAL:	44,200

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Project Contract/admin prep/initial contract. Awards	98	4,900
Phase 1 Contracts for Industry teams and Independent Analysis Govt. Contractor, Tradeoff Analysis and Simulations	99	*23,000

* Includes $3M internal reprogramming, additional reprogramming pending.

ESTIMATED FUTURE COST REQUIREMENT: TBD

PERFORMANCE EFFECT:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X	X	X		X	X
Secondary					X		

DEEPWATER CAPABILITY REPLACEMENT ANALYSIS(continued) $44,200,000

QUANTITY:

Planning Range*	TBD
Budgeted Number*	TBD
Contracted Number	TBD
Total Funded Through FY99	$32,900

UNIT COST ($ in millions):

*Planning range budget and baseline costs for Deepwater assets will be determined at the end of the analysis phase

PRIME CONTRACTORS:

Avondale Industries, Inc.
Lockheed Martin Government Electronic Systems
Science Applications International Corporation
Type of contract: Firm Fixed Price
Contract options: $1M in FY98 (base year); $6M in FY99

KEY EVENTS:

Mission Need Statement	FY96
Concept Alternative Proposal Evaluation	FY00
Contract Award for lead asset	FY02

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POLAR CLASS ICEBREAKER RELIABILITY IMPROVEMENT PROJECT (RIP) $4,100,000

PROJECT DESCRIPTION: This project restores and improves the operational reliability of the two Polar Class icebreakers, CGCs POLAR STAR and POLAR SEA to ensure they remain serviceable and operational for the remainder of their design service lives and to halt escalating maintenance and reliability problems.

CAPABILITY ACQUIRED/MAINTAINED: This request will fund the design, long lead time material procurement and options for installation of Phase II items including the distiller (water maker), upgraded ship service generator and sea water cooling systems. A number of shipboard systems are reaching the end of their service lives, require extensive maintenance and are experiencing escalating support costs. This project allows the Coast Guard to continue to support U.S.national security, economic, and scientific interests in the polar regions.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Sailaway	Each	Partial on 2	3,650
Logistics/Facilities	Lump Sum	--	0
Project Admin	Lump Sum	--	0
Spare Parts	Lump Sum	--	450
		TOTAL:	**4,100**

Sailaway costs include costs for the accomplishment of Design for Phase II, and Option for Installation on the Lead Cutter (the Follow-on Cutter will be an additional Option item)

FUNDING HISTORY:

HULL #	FY	FY TOTAL ($000)
Design research & Long Lead Time Material (LLTM)	90	1,296
Continue above	91	2,700
Continue above	92	3,250
Continue above	93	1,750
Funds pull back	94	(4,700)*
Continue design work & LLTM purchase	95	4,400**
Phase I Install on POLAR STAR	96	0
Claim on POLAR STAR and Redesign	97	5,000
Phase I Install on POLAR SEA	98	5,300
Delay on Phase II Design Phase II Design & installation on 1 WAGB (zeroed)	99	0

*FY94 Appropriations directed $4.7 million reprogramming to Seagoing Buoy Tender Project
**FY95 Appropriations directed $4.4 million reprogramming of FY93 funds from Yocona Reengineering project

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POLAR CLASS ICEBREAKER RELIABILITY IMPROVEMENT PROJECT (RIP) $4,100,000

ESTIMATED FUTURE COST REQUIREMENT	($000)27,000

PERFORMANCE EFFECT:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary						X	
Secondary							

QUANTITY:

Planning Range	Renovation – 2 vessels
Budgeted Number	Renovation – 2 vessels

CONTRACTOR:

Multiple/Various Contractors
Type of contract: Firm Fixed Price
Contracted Number- Partial on 2
Total Funded Through FY98- Partial on 2

KEY EVENTS:

Project Design & LLTM	FY90-95
Begin Installations	FY96
Installations Complete	FY07

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CONFIGURATION MANAGEMENT(CM) $3,700,000

PROJECT DESCRIPTION: Continue the Configuration Management Project, which establishes a configuration-based shipboard information system that links configuration information to related technical, maintenance, and supply information. Data collection efforts include collection and verification of existing configuration baselines and inventories. The project provides integrated information for six major cutter classes and three classes of boats.

CAPABILITY ACQUIRED/MAINTAINED: Integrated configuration, maintenance and supply data will greatly facilitate logistics planning, budgeting, inventory management and execution of maintenance and supply actions. CM data will reflect actual conditions, which will improve maintenance and logistics decision-making capabilities. Historical data will allow the logistics system to refine provisioning and maintenance plans as activity demand indicates. Interfaces with Coast Guard and U.S. Navy logistic systems will be automated and more accurate, and the resulting information will improve contract specifications. Manual tasks of day-to-day forms/report generation will be more accurate and less labor intensive.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Configuration Reviews	EA	6	3,700
1 399' vessel/boat/4 110' WPBs/1 Std boat class		--	

FUNDING HISTORY:

	FY	FY TOTAL ($000)
CM Phase I/II/III	91-93	13,700
CM Phase IV	94-98	14,255
Configuration Reviews	99	3,800

ESTIMATED FUTURE COST REQUIREMENT: None

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary							
Secondary	X	X	X	X	X	X	X

CONFIGURATION MANAGEMENT(CM) (continued) **$3,700,000**

KEY EVENTS:

Commence implementation/Requirements Analysis	FY 1987-1989
Implemented 210' WMEC prototype	FY 1989
Implemented 110' WPB prototype	FY 1990
Pilot Config Review (CR)/deployed on140'WTGB	FY 1992
Software Independent Validation and Verification	FY 1993
Lead ships of 5 classes completed	FY 1995
Complete install on 378' WHEC and 270' WMEC	FY 1996
Begin analyzing CMplus installation on standard boats	FY 1998
Deployment to remaining targeted cutters and boats	FY 2000

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HH-65 HELICOPTER KAPTON WIRING REPLACEMENT $3,360,000

PROJECT DESCRIPTION: This project replaces Kapton-insulated wiring in the Coast Guard's HH-65A Short Range Recovery (SRR) helicopter fleet. This will correct a serious flight safety hazard posed by the existing Kapton wiring.

CAPABILITY ACQUIRED/MAINTAINED: This project will remove the Kapton wiring from the Coast Guard's fleet of 93 HH-65As and replace it with an approved military specification wiring. In 1986 the U. S. Navy conclusively determined that Kapton wire insulation decomposes rapidly in warm and humid environments, posed a fire threat to aircraft, and would no longer be authorized for use in naval aircraft. The Navy is currently removing Kapton wiring from a number of their aircraft, including the F-18, F-14, AV-8B and P-3. As the HH-65A's primary missions are in the maritime environment, its Kapton wiring harnesses are particularly vulnerable to decomposition. The HH-65A fleet has seen a significant number of wiring problems in the past four years, including 13 in-flight fires. On five occasions, wiring problems have resulted in a total loss of AC electrical power, which power all flight instruments.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Aircraft wiring replacement	Each	19	3,360

FUNDING HISTORY:

	FY	FY TOTAL ($000)
HH-65A Helicopter Kapton Wiring	97-98	4,840
HH-65A Helicopter Kapton Wiring	99	4,500

ESTIMATED FUTURE COST REQUIREMENT: None

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X			X			
Secondary		X	X		X	X	X

KEY EVENTS:

Nonrecurring Engineering	FY97
Wire Procurement	FY97-99
Harness Assembly	FY97-99
Wire Installation	FY97-00
Project Completion	FY00

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HH-65 HELICOPTER MISSION COMPUTER UNIT REPLACEMENT $3,650,000

PROJECT DESCRIPTION: Replace obsolete and unsupportable Mission Computers in the Coast Guard's fleet of HH-65A Short Range Recovery (SRR) helicopters.

CAPABILITY ACQUIRED/MAINTAINED : The original 1970's Mission Computer Unit (MCU) is now obsolete and is becoming increasingly expensive to support. Several system components are no longer in production and, in the case of the power modulation integrated circuit, the Original Equipment Manufacturer (OEM) has used the last spare. As additional failures occur, there will be a significant detrimental effect on HH-65A fleet availability. The MCU is central to the HH-65A's highly integrated avionics system and must be replaced to keep the aircraft operational. This program will replace the obsolete MCU's and other system components with smaller, lighter, more reliable and supportable equipment.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Procure Hardware	Lump Sum	---	3,350
Aircraft upgrade installations	12,500	24	300
		TOTAL:	**3,650**

FUNDING HISTORY:

	FY	FY TOTAL ($000)
MCU Hardware Purchase and Install	97-98	6,400
MCU Hardware Purchase and Install	99	3,000

ESTIMATED FUTURE COST REQUIREMENT	($000)11,400

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X					
Secondary			X	X	X	X	X

KEY EVENTS

Nonrecurring Software Engineering	FY97
Software Prototype/Test, build Hot Bench	FY98
Prototype Installation/Begin Production	FY99
Procure Hardware / Installation	FY00
Procure Hardware / Installation	FY01
Procure Hardware / Installation	FY02

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HC-130 LONG RANGE SEARCH AIRCRAFT CAPABILITY PRESERVATION $5,900,000

PROJECT DESCRIPTION: Provide funding to preserve the capability of the Coast Guard's fleet of thirty HC-130 aircraft. The project includes only repairs necessary to keep the HC-130 in service until more long-term decisions about assets can be made under the Deepwater systems approach. The analysis of alternatives conducted during the Concept Exploration Phase identified three items which are in the Coast Guard's best interest to pursue: 1) an electrical service upgrade on thirty aircraft, 2) wing re-wire of eight older 1500/1600 series aircraft and 3) corrosion nonrecurring engineering study. The project objectives are consistent with the Aviation Near-Term Support Strategy.

CAPABILITY ACQUIRED/MAINTAINED: A longrange Search Capability program will preserve the capability of thirty HC-130 aircraft. When coupled with the concurrent HC-130 Engine Conversion project, this program will continue these valuable assets in service beyond their original projected service life.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL($000)
Electrical Service Upgrade	Lump Sum	20	5,600
Corrosion Study	Lump Sum		250
Administration	Lump Sum	--	50
		TOTAL:	5,900

FUNDING HISTORY:

	FY	FY TOTAL ($000)
HC-130 Long Range Search Aircraft	99	4,100

ESTIMATED FUTURE COST REQUIREMENT: None

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X					
Secondary			X	X	X	X	

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HC-130 LONG RANGE SEARCH AIRCRAFT CAPABILITY PRESERVATION $5,900,000

KEY EVENTS:

Mission Need Statement	FY96
Designated Level IIIA Acquisition	FY97
Concept Exploration Phase Complete	FY98
Reduced in scope to Non-Major Acquisition	FY99
Kit Trial Installations	FY99
Installations and Sparing	FY99-FY02
Project Complete	FY02

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HU-25 AIRCRAFT AVIONICS IMPROVEMENTS **$2,900,000**

PROJECT DESCRIPTION: Replace unsupportable and obsolete avionics in the Coast Guard's fleet of thirty-one HU-25 Medium Range Search (MRS) aircraft.

CAPABILITY ACQUIRED/MAINTAINED: Without replacement, avionics obsolescence will severely impact aircraft availability and the HU-25's ability to perform critical Coast Guard missions. Upgrade of the avionics system is required to ensure this aircraft remains a viable operational asset until at least 2010. In addition, the HU-25's current Global Positioning System (GPS) does not comply with FAA requirements to operate under instrument flight rules with GPS as the sole means of navigation. This capability will become increasingly important as the FAA phases out aging navigation aids (TACAN, VOR, etc.) and GPS becomes the primary aviation navigation source to operate in the National Airspace System.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Prototype Install/Flight Testing/Kit Proofing	Lump Sum	--	800
Installations and Sparing	Lump Sum	–	2,100
		TOTAL:	2,900

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Nonrecurring Engineering	FY99	3,500

ESTIMATED FUTURE COST REQUIREMENT	($000)8,200

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X	X				
Secondary				X		X	X

KEY EVENTS:

Systems performance requirements	FY99
Start/complete market research	FY99
Aircraft Installation Design	FY99
Flight Testing	FY00
Kit Development	FY00
Installations and Sparing	FY00-FY03
Project Completion	FY03

HH-60J NAVIGATION SYSTEM UPGRADE **$3,800,000**

PROJECT DESCRIPTION: Install with Embedded Global Positioning/ Inertial Navigation System capability (EGI) units in all HH-60J aircraft to provide a suitable navigation suite that affords dual independent offshore navigation necessary for the HH-60J's offshore and remote environment mission requirements.

CAPABILITY ACQUIRED/MAINTAINED: The existing navigation system in the HH-60J helicopter consists of the GPS 3A receiver which lacks the reliability, as a stand alone unit, for safe and successful single aircraft operation in offshore and remote environments. This project will provide increased reliability, improved search/LE prosecution capability, compatibility with other aircraft types, and an increase in safety of flight for HH-60J aircrews. The Coast Guard's Medium Range Recovery (MRR) helicopter requires all-weather independent operations out to 300 miles offshore. The HH-60J is a DOD anti-submarine warfare helicopter without independent offshore navigation capability.

The currently installed GPS 3A receiver has suffered accuracy problems during the past several years due to run-off anomalies resulting from terrain masking, satellite coverage, and corrupted data. The HH-60J has no secondary navigation system to cross-check its GPS position in the offshore environment, nor does it have any internal mechanism to continuously check itself. Lack of independent navigation has created a serious hazard to flight safety, especially in the Alaskan area of operations.

The EGI unit is comprised of a ring-laser gyro inertial navigation system coupled with an embedded receiver. This arrangement provides a position cross-check/update capability that will alert pilots to a position run-off anomaly, and increased position accuracy with or without loaded keying material. This is critical to flight safety and resolves the deficiency with the currently installed system.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Embedded GPS/INS Units	Each	33	2,700
Installation Kit	Each	41	700
Contractor Field Teams	Job	01	400
		TOTAL:	**3,800**

FUNDING HISTORY:

	FY	FY TOTAL ($000)
EGI Nav Systems (2), Installation Kits,	99	1,100
Non-recurring Engineering, Administration		

HH-60J NAVIGATION SYSTEM UPGRADE (continued) **$3,800,000**

ESTIMATED FUTURE COST REQUIREMENT	($000)2,220

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X	X				
Secondary				X	X	X	X

KEY EVENTS:

Initial Operational Capability	FY 2001
Project Complete	FY 2002

SIDE LOOKING AIRBORNE RADAR (SLAR) UPGRADE - PHASE II $2,500,000

PROJECT DESCRIPTION: This project will replace outdated and obsolete sensor system components on HC-130H Long Range Search (LRS) aircraft.

CAPABILITY ACQUIRED/MAINTAINED: SLAR is an all weather, aerial surveillance system installed in HU-25B and HC-130 aircraft and is capable of detecting, mapping, and tracking a variety of surface targets including oil spills, icebergs, ice flows, ships, etc. This project will standardize Coast Guard SLAR equipped aircraft by upgrading system components and replacing outdated and obsolete sensor systems on the HC-130H airframes (the HU-25B system was upgraded as Phase I of this project). The project includes replacement of the current SLAR film reader/printer with an upgraded image processor, display, and storage unit. Imagery and data downlink capability will be added for real time dissemination to operational commanders. The upgraded system will import proven technology utilizing open-system architecture for hardware and software design. This will minimize costs and contain future maintenance and upgrade expenses.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
HC-130 SLAR Hardware and Installation	Each	4	1,500
HC-130 Integration	Lump Sum	--	500
HC-130 Ground and Flight Testing	Each	4	500
		TOTAL:	2,500

FUNDING HISTORY:

	FY	FY TOTAL ($000)
HU25B Aireye Upgrade	93,95	6,000
HU-130 SLAR Upgrade	96	*2,100
HU-130 SLAR Upgrade	99	2,500

*In FY98, $2.1 unob balance reprogrammed
Leaving total prior yr allocation of $8.5

ESTIMATED FUTURE COST REQUIREMENT: None

SIDE LOOKING AIRBORNE RADAR (SLAR) UPGRADE - PHASE II (continued) $2,500,000

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X	X	X		X	
Secondary							X

KEY EVENTS:

HU-25B AIREYE Upgrade (Phase I)	FY93
HU-25B AIREYE Upgrade (Phase II)	FY95
Side Looking Airborne Radar (Phase I)	FY99
Project Completion	FY00

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FLEET LOGISTICS SYSTEM (FLS) **$6,000,000**

PROJECT DESCRIPTION: To continue funding for the Fleet Logistics System Project. This funding request completes increment 2 (configuration management) and begins increment 3 (procurement).

CAPABILITY ACQUIRED/MAINTAINED: The Fleet Logistics project will address long-standing Coast Guard vessel support problems by capturing and linking ship and boat configuration information with data captured through related processes within maintenance, supply, procurement, and finance functional areas.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Completion of Increment 2	Lump Sum	--	1,150
Design, code, and test increment 3	Lump Sum	--	3,150
Independent Verification & Validation	Lump Sum	--	500
Federal Information Processing Equipment	Lump Sum	--	500
Project Admin/Technical Support	Lump Sum	--	700
		TOTAL:	6,000

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Requirements, Alternatives and Business Analysis	93-94	*5,560
System Design, Validation and Verification	96-98	**19,500
System Integration, Product Fielding and Deployment	99	4,669

*Does not include funding for SAIL.
**$1M reprogrammed to Supply Center Computer Replacement Project

ESTIMATED FUTURE COST REQUIREMENT	($000)6,971

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary							
Secondary	X	X	X	X	X	X	X

KEY EVENTS:

Mission Analysis Report	FY94
Mission Needs Statement	FY94
System Integration Contract Award	FY96
Full Operating Capability	FY03

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PORTS AND WATERWAYS SAFETY SYSTEMS (PAWSS) $4,500,000

PROJECT DESCRIPTION: To complete the replacement of the existing Vessel Traffic Service System in the port of Valdez, AK and to perform surveys and communications analysis in three additional ports.

CAPABILITY ACQUIRED/MAINTAINED: Vessel Traffic Services facilitate timely, safe transportation of waterborne commerce which has a direct impact on the social and economic viability of the nation. The likelihood of collisions, rammings and groundings, along with the associated loss of life and damage to the environment, could be reduced with vessel traffic systems. In particular, it is highly desirable to prevent the low frequency, high impact events such as a major oil spill.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
VTS System Implementation	Lump Sum	--	1,050
Remote Site Prep/Installation	Lump Sum	--	950
Port Survey & Comms. Analysis	Lump Sum	--	1,500
System Engineering Support	Lump Sum	--	400
Administrative Support & Testing	Lump Sum	--	600
		TOTAL:	4,500

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Identification of Requirements	97	1,700
VTS System Acquisition and Installation/Sys Eng	98	5,500
VTS New Orleans Completion, 2nd Port Survey	99	6,600

ESTIMATED FUTURE COST REQUIREMENT: TBD

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary			X	X			
Secondary	X	X			X	X	X

KEY EVENTS:

Identification of System Requirements	FY97
Selection of Design/Limited Production	FY97
Initiate VTS Implementation, New Orleans	FY98
Commitment to Full Production	FY00
Complete VTS Replacement, Valdez	FY00

MARINE INFORMATION FOR SAFETY AND LAW ENFORCEMENT (MISLE) $10,500,000

PROJECT DESCRIPTION: The Marine Information for Safety and Law Enforcement (MISLE) project was established to develop and field the Marine Safety Network (MSN) and the Vessel Identification and Documentation System (VIDS), replacing the obsolete and unsupportable Marine Safety Information System (MSIS), while integrating these systems with an already developed Law Enforcement Information System II (LEIS II). MISLE satisfies the Port and Tanker Safety Act, the Oil Pollution Act of 1990, and the legislative mandate of Public Law 100-710 which requires the establishment of a nationwide vessel identification system and the modernization of maritime commercial instruments and liens processing. The systems are necessary to meet the information needs and legal mandates of the Offices of Marine Safety, Security, and Environmental Protection and of Law Enforcement and Defense Operations.

CAPABILITY ACQUIRED/MAINTAINED: LEIS II will be integrated with MSN and VIDS to provide cross-functional support to the USCG and other State and Federal law enforcement agencies. MISLE provides cross-functional information system standardization through a competitive system development contract. Better designed and integrated software applications will improve mission effectiveness and efficiency, increase reliability, significantly reduce system response time and eliminate redundant data entry. Compliance with standard USCG Information Systems architecture will decrease costs of long term operation and maintenance. MISLE will support more than 5,000 USCG users at over 550 sites as well as state vessel registration and law enforcement agencies, commercial banks and the public. MISLE will improve marine safety and law enforcement missions and enhance civil penalty processing.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Software Development	Lump Sum	--	9,100
Hardware and Systems Software Acquisition	Lump Sum	--	1,400
		TOTAL:	10,500

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Requirements Analysis and Design. & Validation	91-93	6,500
Software Development, Hardware and Software Acquisition . Verification and Validation	94-98	21,650
Software Development, Hardware and Software Acquisition , Verification and Validation	99	*6,400

* Includes $800K internal reprogramming and $1.5M from FY99 Emergency Drug Supplemental

ESTIMATED FUTURE COST REQUIREMENT: TBD

MARINE INFORMATION FOR SAFETY AND LAW ENFORCEMENT (MISLE) continued)
$10,500,000

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary		X	X	X			X
Secondary	X				X	X	

KEY EVENTS:

Mission Needs Approval	FY95
Design Selection/Limited Prod	FY96
Commitment to Full Production	FY99
Last System migrated	FY02

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AVIATION LOGISTICS MANAGEMENT INFORMATION SYSTEM (ALMIS) . . . $2,700,000

PROJECT DESCRIPTION: ALMIS will integrate all aspects of aviation logistics by merging two existing information systems, reducing required data entries, and providing links with a future Coast Guard enterprise logistics system.

CAPABILITY ACQUIRED/MAINTAINED: This phase will build upon prior ALMIS integration success and the first phases of Source of Data entry development by leveraging current technology to allow end users on-line data entry and access. Users will enter information directly using a combination of Coast Guard standard workstations and deployable laptop workstations. Direct data entry of operational, training, and maintenance records will use a Graphical User Interface (GUI) and "pop-up" menus that will eliminate transcription errors, improve data integrity, and enable users to query status of supply and maintenance tasks directly at the point of operations. Managers at both headquarters and field sites will have immediate, simplified access to decision critical operational and logistics information. Standardized reports, using pull-down menus, will eliminate need for programmers to generate special queries. The inefficiencies of a central data input/output station will be mitigated by the capability to access the data at any location at an operational unit. ALMIS will create accessibility for critical logistics and operational data at the point where it is most effective and useful.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL $000)
Software Development	Lump Sum	--	1,700
Software Installation/Integration	Lump Sum	--	1,000
		TOTAL:	**2,700**

FUNDING HISTORY:

	FY	FY TOTAL ($000)
ALMIS Integration	97	4,800
ALMIS Source Data Entry	98	2,700
Software Development	99	1,000

ESTIMATED FUTURE COST REQUIREMENT	($000)1,100

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X	X	X	X	X	X
Secondary							

AVIATION LOGISTICS MANAGEMENT INFORMATION SYSTEM (ALMIS) $2,700,000

KEY EVENTS:

ACMS Relocation to ARSC	FY96
ALMIS contract award	FY97
Business Area Analysis complete	FY98
ALMIS logistics prototype	FY98

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NATIONAL DISTRESS AND RESPONSE SYSTEM MODERNIZATION(NDRSM) $16,000,000

PROJECT DESCRIPTION: To fund demonstration and validation of the selected alternative solution for the Coast Guard's National Distress And Response System Modernization (NDRSM) project.

CAPABILITY ACQUIRED/MAINTAINED: The VHF-FM National Distress System is the Coast Guard's primary asset to perform the functional tasks of detection, classification, and Command and Control in the Inland and Coastal zones for the Search and Rescue and Marine Safety operating programs. Expanding operating areas and growing boating populations have taxed the limits of the current VHF-FM NDS. Furthermore, it is not capable of meeting the requirements of the International Convention for the Safety of Life at Sea (SOLAS) treaty. This upgrade would restore all lost capability, expand existing capability through greater area coverage, eliminating channel blocking, and comply with the federal mandate for narrowbanding.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL($000)
System Preliminary Design	Lump Sum	--	6,000
Prototype Development	Lump Sum		5,200
Training Development	Lump Sum	--	1,200
Environmental Impact Analysis	Lump Sum	--	1,600
Technical Direction Agent Support	Lump Sum	--	1,200
Project Support/Admin	Lump Sum	--	800
		TOTAL	**16,000**

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Requirements Development, Concept Exploration	96-98	6,330
Contract Preparation and Evaluation, Acquisition Support	99	3,000

ESTIMATED FUTURE COST REQUIREMENT: TBD

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X	X			X	
Secondary				X	X		X

NATIONAL DISTRESS AND RESPONSE SYSTEM MODERNIZATION(NDRSM) $16,000,000

KEY EVENTS:

Mission Needs Statement	FY95
Phase 1 Proposal	FY96
Preliminary Operational Requirements	FY97
Concept Alternatives Evaluation	FY99
Initial Operating Capability	FY01/02
Full Operating Capability	FY04/05

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DEFENSE MESSAGE SYSTEM (DMS) IMPLEMENTATION $3,477,000

PROJECT DESCRIPTION: Replace current military (record) messaging system, the Automated Digital Network (AUTODIN), with the Department of Defense's (DoD's) mandated replacement for military messaging systems, the Defense Message System, to continue military messaging in the U.S. Coast Guard.

CAPABILITY ACQUIRED/MAINTAINED: As a U.S. armed service, 14 USC specifies that the USCG is required to have a messaging system that is fully interoperable with DoD and its counterparts. AUTODIN is the Coast Guard's primary means to obtain and transfer military messages with DOD forces. The Coast Guard's internal message system and interface to AUTODIN is the Standard Semi-Automated Message Processing System (SSAMPS), which is designed to process AUTODIN formatted messages. Thus, the Coast Guard must replace AUTODIN with DMS as mandated by DoD. DMS is the only post-AUTODIN military system validated by the Joint Chiefs of Staff. DoD is transitioning its AUTODIN record message system and its many commercial electronic mail packages to DMS, and plans to terminate all but three AUTODIN hubs by the end of CY99 (these hubs are intended for only Emergency Action Messages, etc.), with complete DMS implementation by 2008-2010. USCG must meet all DoD requirements and overall program milestones in its USCG solutions. In order to fulfill its missions, the Coast Guard must maintain military messaging and interoperability with DoD, and therefore, must implement DMS to ensure continued global connectivity, secure messaging capability and interoperability with U.S. and allied military forces, as well as other government agencies. The USCG is responsible for funding, staffing and implementing DMS beyond the DoD/USCG gateway connectivity and DoD Enabling Capability (EC) for organizational users (shore-based and tactical). This capability supports all Coast Guard missions

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Hardware/Software Acquisition	LUMP SUM	–	2,645
Hardware/Software Configuration & Installation	LUMP SUM	--	494
Project Technical Support/Training	LUMP SUM	--	338
		TOTAL:	3,477

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Transition, Migration and Architecture Plans	97-98	1,750
Hardware Acquisition, Installation	99	800

DEFENSE MESSAGE SYSTEM (DMS) IMPLEMENTATION(continued) $3,477,000

ESTIMATED FUTURE COST REQUIREMENT	($000)9,259

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X	X	X	X	X	X
Secondary							

KEY EVENTS:

DMS Transition Plan	FY96
DMS Migration & Architecture Plan	FY97
DMS Test Bed System	FY98
DMS Master/Project/Implementation Plans	FY98
DMS LCC Establishment	FY99/00
AUTODIN Phaseout	FY99/00
DMS to Shore-based Organizational Users	FY00/01
DMS to Tactical Users	FY03/04
Complete DMS Implementation	FY08/10

PERSONNEL MANAGEMENT INFORMATION SYSTEM/JOINT UNIFORM MILITARY PAY SYSTEM II (PMIS/JUMPS II) $4,400,000

PROJECT DESCRIPTION: The Personnel Management Information System / Joint Uniform Military Pay System II (PMIS/JUMPS II) project will provide a fully integrated pay & personnel information system for active duty, reserve & retired military personnel as well as annuitants of deceased Coast Guard members. PMIS/JUMPS II uses People Soft, a commercial-off-the-shelf personnel tracking & payroll software program, as the core application.

CAPABILITY ACQUIRED/MAINTAINED: Current PMIS/JUMPS software, initially developed in 1970, has reached its technical saturation point. Repeated modifications are required to accommodate both entitlement and personnel policy changes. The incorporation of all pay & personnel tracking of Coast Guard military personnel into PMIS/JUMPS II remains a strategic goal that will reduce multiple system maintenance structures, enhance mobilization posture and significantly reduce life cycle & processing costs. Additionally, PMIS/JUMPS II will provide greater responsiveness to pay & personnel data requests from Congress and automate manual, labor intensive functions.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Software Devel & H/W upgrades	LS	1	**4,400**

FUNDING HISTORY

	FY	FY TOTAL ($000)
Analysis/Design	92-98	8,700
Software Development	99	1,900

ESTIMATED FUTURE COST REQUIREMENT	($000)2,000

PERFORMANCE EFFECTS:

OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X	X	X	X	X	X
Secondary							

PERSONNEL MANAGEMENT INFORMATION SYSTEM/JOINT UNIFORM MILITARY PAY SYSTEM II (PMIS/JUMPS II) $4,400,000

KEY EVENTS:

Analysis of Alternatives Completed	FY95 (Mar 95)
Best Practices & Cost BenchmarkingCompleted	FY95 (May 95)
Business Plan & Alternatives Completed	FY95 (Jul 95)
Benefit / Cost Completed	FY96 (May 96)
Preliminary Design Completed	FY96 (Jul 96)
Critical Design Completed	FY97 (Oct 96)
Update Benefit / Cost	FY97 (Jul 97)
Initial Partial Prototype	FY98 (Oct 98)
Present Capabilities Replacement	FY02 (Apr 02)
Complete Installation	FY03 (Nov 02)
Unit Direct Administration	FY04 (Nov 03)

COMMERCIAL SATELLITE COMMUNICATION (SATCOM) UPGRADE $4,049,000

PROJECT DESCRIPTION: Install SATCOM equipment on operational platforms that currently depend on outdated high frequency data link (HFDL) communications, and upgrade existing SATCOM equipment with current technology.

CAPABILITY ACQUIRED/MAINTAINED: The existing High Frequency (HF) radio communications infrastructure is an inadequate communications path for support of large bandwidth data exchanges due to limited throughput. Utilization of new technology will allow the Coast Guard to take advantage of the cost savings resulting from competition in the commercial satellite communications market. Competition among the satellite service providers will continue to cause a decrease in the cost of service. In 1998, the costs dropped for low speed data from $5.90/minute to $5.15/minute, and for high speed data from $11.00/minute to $9.00/minute. This will allow the mobile platforms to utilize the commercial satellite communications path to its fullest potential at less cost per platform.

The new commercial satellite communications path will make it cost effective to provide record message traffic, electronic mail, and other mission essential applications to all aircraft platforms and cutters 87' and above. Most importantly, this capability will afford presently unrealized efficiencies in process automation and data fusion. In addition to Search and Rescue, Law Enforcement, and Defense Operations, commercial SATCOM capability can provide the conduit for other program mission essential applications such as Configuration Management Plus (CMPlus), Standard Automated Requisitioning System (STARs), and Fleet Logistics System (FLS) to name a few. Other benefits include:

- Greater flexibility to accommodate logistics/administrative communications needs
- Greater coordination between Coast Guard surface and air units
- Greater efficiency in Law Enforcement (LE) effort
- Fast response to LE queries
- Better LE information for boating teams/Commanding Officers to base decisions on
- Direct access to LE information for aircraft
- Real-time data entry capability for aircraft
- Greater safety of flight due to dependent tracking of aircraft

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Commercial SATCOM Terminals	Each	51	1,526
Installations	Lump Sum		1,757
Spares	Lump Sum		352
Documentation and Manuals	Lump Sum		254
Other	Lump Sum		160
		TOTAL:	4,049

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Nonrecurring Engineering and Commercial SATCOM	99	4,000
Terminals (25)		

COMMERCIAL SATELLITE COMMUNICATION (SATCOM) UPGRADE $4,049,000

ESTIMATED FUTURE COST REQUIREMENT	($000)13,849

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X					X
Secondary							

KEY EVENTS:

Initial Operational Capability	FY 2000
Project Complete	FY 2004

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HUMAN RESOURCES INFORMATION SYSTEM **$1,100,000**

PROJECT DESCRIPTION: To fund the Coast Guard's costs to support the Human Resources Information System (HRIS) project. HRIS is a Department of Transportation (DOT) major acquisition designed to support the personnel, benefits, and payroll data processing and management information reporting requirements for civilian employees of DOT . Each mode in the Department is assessed a portion of the system costs.

CAPABILITY ACQUIRED/MAINTAINED: The planned capability will provide the full current capabilities plus will ensure one-time entry of data by a user, with no further manual intervention; little or no duplication of data between databases to support different functions; and minimum opportunity for data inconsistencies between data in different systems

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL($000)
Contract Costs	Lump Sum	--	1,100

FUNDING HISTORY: None

ESTIMATED FUTURE COST REQUIREMENT: TBD

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary							
Secondary	x	x	x	x	x	x	x

KEY EVENTS:

Project Chartered	FY97
Design Selection/Limited Prod	FY00
Initial Operating Capability	FY01

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LORAN-C CONTINUATION **$1,000,000**

PROJECT DESCRIPTION: This project will ensure continued operation of LORAN-C in 2000. Department of Transportation is currently reviewing the future need for LORAN-C.

CAPABILITY ACQUIRED/MAINTAINED: The recapitalization of LORAN-C equipment and infrastructure will minimize system performance degradation.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL($000)
Begins process of acquiring personnel and equipment for the modernization of LORAN-C	Lump Sum		1,000
		TOTAL:	**1,000**

FUNDING HISTORY: None

ESTIMATED FUTURE COST REQUIREMENT: None

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary					X		
Secondary	X			X			

KEY EVENTS: TBD

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SURVEY AND DESIGN – SHORE PROJECTS **$6,000,000**

PROJECT DESCRIPTION: Funds for this request are required to complete engineering design work prior to project appropriation and for travel and administrative expenses related to contract administration and project management. This request will also provide funds for planning, design, and administrative expenses required to ensure efficient management and execution of the shore capitalization and investment program. The future projects supported are part of the long range plans to support operational units, in addition to when construction funding has been appropriated and construction is underway.

CAPABILITY ACQUIRED/MAINTAINED: Provide funds for advance requirements, planning and engineering studies, project design, master plans, and other architectural/engineering efforts to supplement in-house capability. Additionally, funds will be used for preliminary site surveys, property acquisition expenses, options, and real property purchases for future construction. Funding for construction inspection and contract management ensures high quality construction, compliance with accepted building standards and codes, and quick resolution of construction problems.
This year's request will also provide planning and design of shore facilities to support siting requirements of new acquisitions including motor lifeboats, buoy tenders, and platforms to increase surface and aviation capability for other transnational threats such as arms trafficking, organized crime, migrant smuggling, weapon of mass destruction and terrorism.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Survey and Design	Lump Sum	--	4,700
Master/Special Plans	Lump Sum	--	500
Inspection/Support	Lump Sum	--	800
		TOTAL:	6,000

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Survey and Design	96	6,000
Survey and Design	97	6,000
Survey and Design	98	5,000
Survey and Design	99	5,000

ESTIMATED FUTURE COST REQUIREMENT	($000)28,000

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY:

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary							
Secondary	X	X	X	X	X	X	X

KEY EVENTS:

Construction Contract Award	Various
Construction Contract Completed	Various

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MINOR AC&I SHORE CONSTRUCTION PROJECTS $6,000,000

PROJECT DESCRIPTION: To provide continuing funds for small, but necessary shore facility construction projects. These projects are less complex and require less advance planning than their major counterparts. The overall cost for any minor shore facility project falls between $200,000 and $1,000,000. Various locations and capital plant actions are involved. Typical problems include substandard, deteriorating, overcrowded or functionally inadequate facilities. This level, an increase over last year's request, is necessary because facility changes will be made at various homeports, to accommodate new operational cutters and boats delivered to the field. Some of these new acquisitions include motor life boats, buoy tenders, coastal patrol boats and platforms to increase surface/aviation capability for other threats such as arms trafficking, drug trade, organized crime, migrant smuggling, and terrorism.

CAPABILITY ACQUIRED/MAINTAINED: These are the types of projects planned:

a. Upgrade facilities to achieve more energy efficient facilities.
b. Renovate existing facilities to comply with habitability, fire, life safety and occupational standards.
c. Modify existing facilities to meet mission/staff requirements and to comply with regulations.
d. Replace deteriorating facilities which are beyond the intended service life.
e. Construct new facilities to provide for changing mission requirements or new acquisitions.
f. Modify existing mooring facilities for new cutters and boats.

The Coast Guard encourages its units to scale back projects and pursue least costly alternatives. In return, projects are accomplished more quickly, before additional deterioration or facility requirements involve a more costly and extensive design and construction effort.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Minor AC&I Projects	Lump Sum	--	**6,000**

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Minor AC&I Shore Construction	96	4,000
Minor AC&I Shore construction	97	*2,400
Minor AC&I Shore Construction	98	7,000
Minor AC&I Shore Construction	99	6,000

Plus $1,400k in Congressionally reprogrammed funds

ESTIMATED FUTURE COST REQUIREMENT	($000)28,000

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY:

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X	X	X	X	X	X
Secondary	X	X	X	X	X	X	X

KEY EVENTS:

Construction Contract Award	Various
Construction Contract Completed	Various

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RENOVATE AIR STATION HANGAR (PHASE II)-KODIAK, AK $8,300,000

PROJECT DESCRIPTION: Hangar 3 at Air Station Kodiak is an operational aircraft hangar that is badly deteriorated. By fully renovating this facility, the Coast Guard can demolish Hangar 2 thus fully meet operational requirements at substantially reduced costs for recapitalization and facility maintenance. Hangar 3 will require both exterior and interior renovations to meet appropriate standards for proper aircraft maintenance. This hangar was constructed in the 1940's without any substantial renovation since. Also, it was severely damaged in an earthquake in the 1960's but has never been repaired. Excessive repair costs have limited hangar use to only aircraft and equipment storage. Renovations conducted in phase II phase include exterior work, roofing replacement, exterior siding, door renewal and upgrades. This renovation permanently relocates the Public Works functions out of one half of the hangar to provide hangar deck, office, and shop spaces for five HH-65s and two HC-130s. Later plans include demolishing Hangar 2 which will substantially reduce costs without impacting operations.

CAPABILITY ACQUIRED/MAINTAINED: This funding is the second in a four phase proposal which will upgrade the capacity of Hangar 3 to a hangar fully capable of maintenance functions while meeting State Historic Preservation requirements, as the original hangar is a World War II structure. FY 2000 phase calls for the entire exterior, including the roof, to be renovated. This will protect the interior which will be upgraded in a follow-on phase. This project is critical to continued air station operations at Kodiak. Substantial savings will be generated by demolishing Hangar 2 and through greater energy efficiency in a building of this size.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Exterior Renovation	Lump Sum	--	7,100
Hangar Door Renovation	Lump Sum	--	1,200
		TOTAL:	8,300

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Renovate Hangar 3 Phase I	98	4,000

ESTIMATED FUTURE COST REQUIREMENT	($000)13,100

PERFORMANCE EFFECTS:

OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY:

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X					
Secondary							

KEY EVENTS:

Construction Contract Award	Oct 99
Construction Contract Completed	Oct 00

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AIR STATION RAMP STRUCTURAL IMPROVEMENTS-ELIZABETH CITY, NC $3,800,000

PROJECT DESCRIPTION: This project will replace a deteriorated 12,800 square yards of pavement, provide a helicopter wash facility outside of the aviation object free zone and expand the existing parking apron. A noise and debris deflection wall between the parking ramp and the barracks will also be constructed. Currently, congested parking necessitates frequent aircraft relocations to gain access to the runway and hangars, the pavement is badly worn, and aircraft are parked and washed within the runway safety zone. This project would enhance operational capabilities, increase safety, and improve living conditions for the enlisted men and women who live in the barracks building adjacent to the air station.

CAPABILITY ACQUIRED/MAINTAINED: The current aircraft ramp was originally built in 1942, with un-reinforced concrete and an asphalt layer over the top. An extraordinary amount of money has been spent to repair the apron; $45k in recent months to patch holes and cracks, yet these are already cracking and sinking. C-130 wheel trucks have fallen through the concrete and there are flying object debris (safety) hazards due to deteriorated asphalt and concrete. There are also significant safety hazards due to insufficient drainage and standing water. The C-130 parking area is only 200 feet from the barracks; noise levels during engine start up and maintenance exceed standard level for residential areas. Aircraft engine exhaust infiltrates the barracks ventilation system and debris is often blown onto vehicle parking area. Due to the lack of sufficient parking space, 12 man-hours daily are typically expended moving aircraft due to traffic patterns which increases concurrent workload for maintenance personnel.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Demolition	Lump Sum	--	390
Sitework	Lump Sum	--	2,720
Exterior Utilities	Lump Sum	--	610
Outfitting	Lump Sum	--	80
		TOTAL:	3,800

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Runway Improvements	95	2,500

ESTIMATED FUTURE COST REQUIREMENT	($000)6,800

PERFORMANCE EFFECTS:

OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY:

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X						
Secondary		X	X				

KEY EVENTS:

Construction Contract Award	Jan 00
Construction Contract Completed	Feb 01

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RENOVATE AIR STATION MIAMI HANGAR (PHASE II)-OPA LOCKA, FL $3,500,000

PROJECT DESCRIPTION: The existing Air Station Miami fixed wing hangar is over forty-five years old and has never had a major renovation. Consequently, roof, windows, heating, plumbing and electrical systems are in need of replacement due to their deteriorated condition. In FY 1999, partial funding was provided for the proposed renovations. As such, it was directed by Conference Committee that "given budget constraints and the need to fund higher priority counterdrug initiatives, this project can be phased over two years at approximately the same level each year…This results in a reduction of $3,500,000 from the budget request, which is without prejudice to the overall program." This funding request represents the second phase of the renovation project.

CAPABILITY ACQUIRED/MAINTAINED: Renovations will extend the usable life of the hangar. Air Station Miami is the focal point for major alien migrant and maritime drug interdiction operations in the Gulf of Mexico, Caribbean and waters off the southeastern shores of the United States. Air Station Miami also provides significant search and rescue, marine environmental protection and law enforcement services in the Gulf of Mexico, Caribbean and off the southeastern shores of the United States. Air Station Miami is a highly critical maintenance facility for aircraft deploying to and returning from these operational areas. More efficient operation and maintenance of assigned aircraft will result from the proposed renovations.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Hangar Renovations	Lump Sum	--	3,500
		TOTAL:	3,500

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Renovate Hangar Phase I	99	3,600

ESTIMATED FUTURE COST REQUIREMENT: None

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY:

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X					
Secondary			X	X			X

KEY EVENTS:

Construction Contract Award	Oct 99
Construction Contract Completed	Feb 01

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UPGRADE EDUCATIONAL FACILITIES, CG ACADEMY- NEW LONDON, CT $5,000,000

PROJECT DESCRIPTION: To renovate Satterlee Hall classroom building at the Coast Guard Academy, to provide a more modern and usable multifunction classroom facility. The renovation will provide an appropriate mix of various sized classrooms to meet the Humanities, Math, and Management department classroom needs, administrative offices, and support spaces.

CAPABILITY ACQUIRED/MAINTAINED: Satterlee Hall was built in 1931 and is the only academic building in its original configuration with 68 years of use and deteriorated conditions. Functional use of this building has been severely hampered by the central corridor, resulting in extremely long and narrow classrooms and in significant wasted space. There are fire and life safety code violations which require correction. Renovation is necessary to provide suitable spaces for Humanities, Government, Math and Management departments that were disrupted by establishment of the Leadership Development Center. Utilities, particularly the plumbing, heating and mechanical systems are deteriorated and require renewal. A major assumption to establish the Leadership Development Center at the Coast Guard Academy was to reduce square footage and to improve utilization. An accelerated Master Plan evaluated existing academic classroom usage and identified needed facility improvements and made recommendations to recapitalize aging Academy facilities to leverage them and to improve utilization. This is a follow-on phase of multiple functional consolidations and improvements envisioned in the Master Plan. The renovation will provide a new functional, energy efficient building to educate future leaders, maintain high standards of excellence, improve classroom utilization, and revitalize and improve a 68 year old academic building.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Demolition	Lump Sum	--	100
Sitework/Utilities/Lead Paint/Asbestos Removal	Lump Sum	--	635
Building Renovation	Square Feet	44,000	4,265
		TOTAL:	**5,000**

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Leadership Development Center	96	2,500
Renovate Chase Hall Galley	96	5,000
Renovate Roland Hall	96	5,100
Renovate Munro Hall	98	*4,300

* Plus $1,600K in Congressionally mandated reprogrammed funds

ESTIMATED FUTURE COST REQUIREMENT	($000)10,000

KEY EVENTS:

Construction Contract Award	Dec 99
Construction Contract Completed	Jun 01

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COAST GUARD HOUSING – VARIOUS LOCATIONS **$7,800,000**

PROJECT DESCRIPTION: The projects listed below are the planned projects for this year's housing needs. This will provide 62 unaccompanied personnel modules and related support facilities through construction in San Juan, Puerto Rico and the renovation of recruit barracks in Cape May, New Jersey. Housing needs substantiate requirements to construct housing in Puerto Rico..

CAPABILITY ACQUIRED/MAINTAINED: Certain areas lack sufficient adequate community housing for personnel to rent or buy, or for the Coast Guard to lease. Many existing units require extensive renovations to meet adequacy and safety criteria. Adequacy criteria include cost, environmental safety, suitability elements (size, number of bedrooms, condition), and commuting factors (time, distance, and cost). Coast Guard owned housing is acquired where other alternatives are inadequate, not available, or not cost effective. Constructing new and improvements to existing barracks will reduce the number of Coast Guard personnel inadequately housed and improve the quality of life for members.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Base San Juan, PR Unaccompanied Personnel Hsg Ph 2	Each	62	5,600
TRACEN Cape May, NJ Renovate Recruit Barracks Ph 2	Lump Sum	--	2,200
		TOTAL:	7,800

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Construct approx 78 units	96	*9,175
Construct/purchase approx 46 units	97	12,000
Construct/purchase approx 75 units	98	14,900
Construct approx 6 family & 38 UPH units	99	9,000

* Plus $11,100k congressionally reprogrammed into Public Family Quarters.

ESTIMATED FUTURE COST REQUIREMENT	($000)12,000

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY:

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary							
Secondary	X	X	X	X			

KEY EVENTS:

Construction Contract Award	Varies
Construction Contract Completed	Varies

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CONSTRUCT PATROL BOAT MAINTENANCE FACILITY—SAN JUAN, PR $3,100,000

PROJECT DESCRIPTION: This project will construct a new building to accommodate the maintenance assist team, electronic support facility and storage for six patrol boats which moved their homeports to San Juan in the summer of 1998. Currently, temporary facilities are inadequate and inefficient. Spread out over four buildings and 25% deficient in size, the current locations require either demolition or major renovation. These makeshift facilities have also displaced half of the necessary aids to navigation support facilities in order to accommodate the relocation of the cutters.
Base San Juan was established in 1912 on property from the Naval Lighthouse Reservations. The base was expanded in 1940 and 1941. The average age of the existing buildings is 57 years. Base San Juan is currently assigned one 110' patrol boat. However they will receive another 110' patrol boat, relocated from Cape May, NJ and four more, to be relocated from Roosevelt Roads, PR to support ongoing drug interdiction and alien migrant operations.

CAPABILITY ACQUIRED/MAINTAINED: The facility will provide the necessary facilities to properly maintain these operational cutters that will be assigned to Base San Juan. By colocating or "clustering" the patrol boats together, the size of the facilities required to support them is smaller than if provided separately at various locations due to economies of scale in shops and storage areas. More efficient maintenance and support practices are expected and faster response time to casualties will improve operational effectiveness accordingly.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Demolition	Lump Sum	--	20
Site work/Utilities	Lump Sum	--	156
Building Construction	Square Feet	15,931	2,537
Outfitting/Electronics	Lump Sum	--	387
		TOTAL:	**3,100**

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Waterfront/Utilities Upgrade	97	7,000
UPH Phase I	99	6,650

ESTIMATED FUTURE COST REQUIREMENT: None

PERFORMANCE EFFECTS:

OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY:

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary							
Secondary	X	X					X

KEY EVENTS:

Construction Contract Award	Feb 00
Construction Contract Completed	Feb 01

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MODERNIZE COAST GUARD STATION SHINNECOCK-HAMPTON BAYS, NY $3,500,000

PROJECT DESCRIPTION: This request will provide modern, safe, properly sized shore facilities for Station Shinnecock, New York. This operational station, whose primary mission is search and rescue, is a parent station for two other stations and has its own immediate response requirement. Station Shinnecock is currently housed in a 1940 concrete structure that requires a complete rehabilitation. The advanced age of the facility and minimal upgrades over the years has degraded the unit's capability to maintain the structure and utilities. The station complement has increased and additional space is required to accommodate these personnel. The berthing facilities do not meet current standards nor does the station meet current fire, life safety or occupational health standards.

CAPABILITY ACQUIRED/MAINTAINED: This project will renovate and expand the current 1940s era station building, providing safety and environmental upgrades, reducing maintenance and creating a better work environment for station personnel. Project details include demolition of the interior of the existing station building and two small wings. The interior will then be completely reconstructed and fire exits added to the upper floors. The project will correct all existing code deficiencies, meet Coast Guard space standards, and replace the existing electrical service to the station building.

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Demolition	Lump Sum	--	44
Sitework/Utilities	Lump Sum	--	524
Building Construction	Square Feet	14,138	2,689
Outfitting/Electronics/Other	Lump Sum	--	243
		TOTAL	3,500

FUNDING HISTORY: None

ESTIMATED FUTURE COST REQUIREMENT: None

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY:

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X					
Secondary							

KEY EVENTS:

Construction Contract Award	Dec 99
Construction Contract Completed	Dec 00

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RELOCATE COAST GUARD MARINE SAFETY OFFICE AND & STATION (PH I)– CLEVELAND, OH $1,000,000

PROJECT DESCRIPTION: This project will provide funding for the first phase of relocated offices for Marine Safety Office (MSO) Cleveland, Station Cleveland Harbor, Electronics Support Detachment, and CGC NEAH BAY (100 yards from the current location). The City of Cleveland is expected to provide the waterfront infrastructure. In exchange, the Coast Guard will transfer or lease the city the current location for continued waterfront development adjacent to the "Rock and Roll Hall of Fame". Currently, MSO Cleveland is located in an antiquated 1930s wood frame structure that is severely undersized and poorly configured for the MSO. The structure is poorly configured to support the missions of the MSO and provides no storage for spill response equipment. The station is operated out of a 20-year-old pre-fabricated steel building which is likewise undersized. There are no berthing rooms for non-rate personnel and duty watchstander rooms do not meet current standards. Neither building has adequate wetroom/locker room facilities nor meets current fire/life safety or occupational health standards. Facility physical security and access requirements are being impacted by expansion of the surrounding Cleveland waterfront.

CAPABILITY ACQUIRED/MAINTAINED: This project will provide MSO Cleveland and Station Cleveland Harbor with facilities which are safe, properly-sized, and meet current codes and standards. Additionally, it will provide the Electronics Shop and CGC NEAH BAY with replacement facilities that meet operational and logistical requirements. Overall, this will improve the facility's capacity to meet public service requirements and enhances professional appearance in a high visibility area.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Sitework	Lump Sum	--	1,000

FUNDING HISTORY: None	

ESTIMATED FUTURE COST REQUIREMENT	($000)4,300

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY:

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary	X	X		X			
Secondary							

KEY EVENTS:

Construction Contract Award	TBD
Construction Contract Completed	TBD

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HOMEPORTING OF DRUG INTERDICTION ASSETS **$2,800,000**

PROJECT DESCRIPTION: Funding will address siting requirements for various aviation, operational cutters, boats, and personnel provided as a result of the FY 1999 supplemental funding for drug interdiction assets. FY 1999 supplemental funding provided for reactivation of HU-25's to the Coast Guard aviation inventory, airborne use-of-force aircraft, operation of deployable pursuit boats, relocation of patrol boats and additional patrol boat acquisitions. Various locations and capital plant actions are involved. Typical problems include inadequate moorings, shoreties, insufficient or inadequate hangar deck and ramp space, and deteriorated, substandard, functionally inadequate or nonexistent facilities.

CAPABILITY ACQUIRED/MAINTAINED: These are the type of projects planned:

a. Provide adequate operational siting, maintenance facilities and storage for deployable pursuit boats

b. Modify infrastructure to accommodate unique aircraft and crew requirements for the airborne use-of-force initiative.

c. Provide homeport logistics support (pier, power, water, office space, storage) for new or relocated cutters.

d. Make necessary renovations to support aircraft and crew of additional maritime patrol aircraft.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	QUANTITY	FY TOTAL ($000)
Various Projects and Locations	--	2,800

FUNDING HISTORY: None

ESTIMATED FUTURE COST REQUIREMENT: None

PERFORMANCE EFFECTS:

OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY:

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary		X					
Secondary	X		X	X	X		X

KEY EVENTS:

Construction Contract Award	Various
Construction Contract Completed	Various

WATERWAYS AIDS TO NAVIGATION INFRASTRUCTURE **$5,000,000**

PROJECT DESCRIPTION: To request established, maintain and improve transportation on U. S. waterways through construction and improvements to fixed structures which assist in navigation.

CAPABILITY ACQUIRED/MAINTAINED: Waterways infrastructure projects require an annual base funding level to respond to requirements from expanded U. S. Army Corps of Engineers (ACOE) activity and aging or damaged aids to navigation infrastructure. Major ACOE projects in San Juan, Puerto Rico, Houston, TX, and other locations cannot be made fully operational without the addition of navigational aids and an upgraded entrance range. A new range is needed in Port Everglades, Florida, damaged structures require replacement in the Delaware River and a deteriorating light needs to be replaced in Burns Harbor, IN.

Marine transportation is an integral component of our nation's transportation system and is essential to the economy. Navigational markers are critical to safe and efficient marine transportation and support Coast Guard and Departmental Mobility and Safety goals and the Department's goal of Economic Growth and Trade. Well managed ports and waterways benefit America by keeping waterborne commerce flowing and keeping the U. S. economically competitive. The demand for waterborne cargo initiates a chain of economic activity, which contributes to the overall national economy. This activity generates 15.9 million jobs throughout the country and contributes $78.6 billion to Gross Domestic Product.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	FY TOTAL ($000)
San Juan, PR – relocate, upgrade entrance range (ACOE)	LS	750
Port Everglades, FL – new range	LS	350
Burns Harbor, IN – replace deteriorating light	LS	350
Houston, TX – relocate, upgrade entrance range (ACOE)	LS	1,000
Delaware River – Replace ice-damaged ranges	LS	1,010
Charleston, SC relocate, upgrade entrance range (ACOE)	LS	790
Port Canaveral, FL – relocate, upgrade entrance range (ACOE)	LS	750
		5,000

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Waterways Aids to Navigation Projects	95	6,500
Waterways Aids to Navigation Projects	96	4,500
Waterways Aids to Navigation Projects	97-98	5,000
Waterways Aids to Navigation Projects	FY99	4,070

WATERWAYS AIDS TO NAVIGATION INFRASTRUCTURE (continued) $5,000,000

ESTIMATED FUTURE COST REQUIREMENT	($000)28,000

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary				X	X		
Secondary	X		X				X

DEPARTMENT OF TRANSPORTATION
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DIRECT PERSONNEL COSTS . . . **$51,180,000**

PROJECT DESCRIPTION: To provide funding for salaries (including annual pay raise/COLA), and compensation to support 709 personnel who manage, execute and administer the Acquisition, Construction & Improvements (AC&I) Program.

CAPABILITY ACQUIRED/MAINTAINED: This line item provides the required human resources for AC&I planning, design, engineering, contracting, project management, quality assurance and logistics support to ensure the products and services of the AC&I program are completed on time, on budget, and in compliance with performance requirements.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Personnel salaries, compensation, and support (including annual payraise/COLA)	Lump Sum	--	**51,180**

FUNDING HISTORY:

	FY	FY TOTAL ($000)
Direct Personnel Costs	93	33,800
Direct Personnel Costs	94	39,615
Direct Personnel Costs	95	43,200
Direct Personnel Costs	96	44,300
Direct Personnel Costs	97	45,400
Direct Personnel Costs	98	46,500
Direct Personnel Costs	99	47,700

ESTIMATED FUTURE COST REQUIREMENT: TBD

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary							
Secondary	X	X	X	X	X	X	X

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CORE ACQUISITION COSTS 1,750,000

PROJECT DESCRIPTION: To provide information resource management, major product quality assurance, and human resource management, and other management funding in support of the Acquisition Directorate Business Plan that cannot be tied to a specific project.

CAPABILITY ACQUIRED/MAINTAINED: Allows the Coast Guard to fully comply with appropriations law and maintain an effective acquisition process by providing AC&I resources that no individual project is able to justify nor be the primary beneficiary of. Provides the Coast Guard with the ability to maintain core competencies and capabilities of their acquisition workforce.

COST ESTIMATE OF WORK TO BE FUNDED THIS YEAR:

ITEM NO.	MEASURE	QUANTITY	FY TOTAL ($000)
Management Travel & Supplies	Lump Sum	--	135
Information Resource Management	Lump Sum	--	800
Human Resource Requirements	Lump Sum	--	115
Commandant's Direction/Business Plan Action Items	Lump Sum	--	700
		TOTAL:	1,750

FUNDING HISTORY

	FY	FY TOTAL ($000)
Administrative Support	93	2,200
Administrative Support	94	2,000
Administrative Support	95	1,000
Core Acquisition Costs	96	500
Core Acquisition Costs	97	850
Core Acquisition Costs	98	500
Core Acquisition Costs	99	750

ESTIMATED FUTURE COST REQUIREMENT: TBD

PERFORMANCE EFFECTS:
OPERATING PROGRAMS SUPPORTED BY THIS ASSET/FACILITY

	SAR	ELT	MEP	MS	ATON	IO	DR
Primary							
Secondary	x	x	x	x	x	x	x