
SECTION I

INTRODUCTION

GENERAL

The Port of Hampton Roads is one of the busiest ports in the United States, serving as the center of substantial industrial, commercial, and military activity for the region. Indeed, it is a large and complex development with a multitude of supporting interests and activities. The port is also the largest exporter of coal in the world and contains one of the largest concentrations of naval installations in the world. In 1997, over 67 million tons of commerce, including over 45 million tons of coal, moved through its facilities. It has been estimated that over 100,000 jobs within the Commonwealth are directly related to port activity. The Commonwealth of Virginia, acting through the VPA, owns and manages three marine terminals located within the port that trade with over 100 nations worldwide. Vessels of every size and type transit the port waters, ranging from the largest bulk coal carriers and aircraft carriers to small commercial fishing boats and pleasure craft.

There are a number of Federally-maintained deep-draft navigation channels serving the port with maximum depths up to 50 feet (all depths in the Plan refer to mean lower low water [m.l.l.w.], except where otherwise indicated). In addition, several channel deepening and anchorage projects with depths up to 55 feet have been authorized but have not yet been constructed. Long-term planning for future navigation and related needs of the port is essential to provide for the future development, growth, viability, and competitiveness of the port. Planning for the port's future can best be pursued through a comprehensive Navigation Management Plan.

The first section of the Plan discusses the purposes and goals that the Plan is designed to achieve and describes the port complex, including its location, economic and military importance, and key future non-Corps of Engineers activities. It also contains a discussion regarding existing requirements and procedures for navigation-related projects. Pertinent background information concerning prior studies and reports, existing data and information records, and histories of navigation projects and other port-related activities is also included in Section I. In addition, this section identifies the key stakeholders involved in the use, operation, maintenance, and development of the port navigation features and explains their roles and responsibilities. The coordination process to involve all concerned stakeholders is discussed, including a description of the process necessary to prioritize the constraints, problems, needs, concerns, and opportunities for improvements identified in Section IV. Finally, a procedure for periodic updating is included to ensure that the Plan will remain current and viable for future use. Appendix A, a glossary, and Appendix B, a listing of published charts and maps of the area, are provided for your general information.

PURPOSE

The general purposes of the Plan are to provide a long-range strategy for improvements to the port's navigation features and to ensure that these navigation features effectively accommodate future development and growth. To accomplish this, the Plan stresses three specific purposes: (1) to provide a comprehensive, integrated, fully coordinated, flexible plan for the port; (2) to provide a vehicle for spanning jurisdictions and disciplines to identify and resolve existing and potential issues; and (3) to provide documentation of existing corporate knowledge.

Obviously, plans currently exist in this District, the VPA, and other key organizations in the port area that chart a future course for some functional elements; however, there is no comprehensive plan that addresses the integration of these separate plans and interests with the betterment of the port as the common goal. This plan will

help facilitate the efficient use of future resources so that optimum results will be more easily obtainable.

In addition, the Plan provides a mechanism to coordinate comprehensive short- and long-range planning for early recognition of potential issues and problems. Early identification will greatly assist in obtaining quick resolution, thereby, preventing more serious problems from developing later.

There is also a need to ensure the maintenance of existing corporate knowledge to prevent the loss of valuable information over time as key personnel change. The Plan will be a repository for relevant information, serving as a centralized single source of data readily available to port interests. The periodic updating of information will ensure the continuous availability of past and current data, regardless of personnel changes in key port agencies and interests.

AREA DESCRIPTION

GENERAL SETTING

The Port of Hampton Roads is located in the southeastern part of the Commonwealth of Virginia at the southern end of Chesapeake Bay, midway on the Atlantic Seaboard (approximately 170 miles south of Baltimore, Maryland and 220 miles north of Wilmington, North Carolina). The harbor is a natural roadstead of 25 square miles formed by the confluence of the James, Nansemond, and Elizabeth Rivers. It is recognized as one of the largest and finest natural harbors in the world and is a primary stimulus to the economic well-being of the region, the Commonwealth, and the nation. The land area surrounding the harbor encompasses about 1,500 square miles and includes the Cities of Chesapeake, Norfolk, Portsmouth, Suffolk, and Virginia Beach and Isle of Wight County on the southside and Hampton and Newport News on the northside, as shown on Plate 1. The population of this area is over 1.3 million people. Details on shoreline use for this area are discussed in Appendix C.

Vessels entering the harbor from the ocean follow a course through the Virginia Capes near Cape Henry, pass through Thimble Shoal Channel, which crosses the lower end of the Chesapeake Bay, and enter Hampton Roads between Old Point Comfort on the north and Willoughby Spit on the south. Two deep-water channels extend through Hampton Roads; one channel extends southward along the eastern side through the Elizabeth River and its Southern Branch, and the other channel extends westward to Hampton and Newport News. Principal waterways on the southside include the Lynnhaven River; Little Creek; the Elizabeth River and its Eastern, Southern, and Western Branches; the Lafayette River; Scotts Creek; the Nansemond River; and Chuckatuck Creek. Also, the route of the Atlantic Intracoastal Waterway traverses the Southern Branch of the Elizabeth River en route from Maine to Florida. On the northside, principal waterways include the James River, Newport News Creek, and Hampton Creek. Please see Plates 2, 3, 4, 5, and 6.

IMPORTANCE OF THE HARBOR

The Port of Hampton Roads is one of the largest and most active ports in the United States. Foreign, national, regional, and local markets are conveniently accessible to the port through the numerous steamship services to worldwide ports and the strategic position that the port occupies with respect to the national and regional transportation patterns. The geographic location of the port and an excellent rail and highway network make it economically and efficiently available to a significant portion of the nation's population and manufacturing centers. The following paragraphs of this section discuss the principal activities associated with the port, including waterborne commerce, vessel traffic, shipbuilding and repair, military activities, port service industries, government agencies, and other port-related businesses. The port is most strategically located with respect to the vast coal fields of Virginia, West Virginia, and Kentucky and extensive amounts of steam and metallurgical coal resources are transported by rail from these areas to Norfolk and Newport News for both overseas shipment and domestic use. Other bulk commodities and breakbulk commodities also comprise a significant and important part of the waterborne shipments through the port. Container shipments have grown significantly in recent years and are projected to show substantial increases in the future.

The port generates significant local, regional, and national economic impacts, providing employment, payroll, and tax revenues in Hampton Roads, the Commonwealth, and the nation.

Commerce

Terminal facilities located within the port accommodate movements of coal and petroleum products; grain; forest, lumber, and wood products; farm and food products; non-metallic minerals; stone, clay, glass, and concrete products; chemicals and allied products; metallic and primary metal products; manufactured goods and products; machinery and transportation equipment; beverages; and tobacco. The following table shows the principal exports, imports, coastwise, and internal shipments moving through the port during 1997, the latest year for which complete records are available.

Table I-1. EXPORTS, IMPORTS, AND COASTWISE RECEIPTS AND SHIPMENTS
MOVING THROUGH THE PORT OF HAMPTON ROADS IN 1997
(Thousands of short tons)

<u>Commodity</u>	<u>Exports</u>	<u>Imports</u>	<u>Coastwise</u>	<u>Internal</u>	<u>Total</u>
Coal	36,572	0	4,282	4,410	45,264
Crude materials	1,215	1,250	17	3,202	5,684
Manufactured goods	847	1,695	189	174	2,905
Food and farm products	1,779	1,041	11	310	3,141
Machinery and transporta- tion equipment	1,083	1,331	12	1,776	4,202
Chemicals	1,156	780	140	407	2,483
Petroleum	84	1,194	559	1,872	3,709
Waste and scrap	<u>0</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>2</u>
Total	42,736	7,291	5,212	12,151	67,390

Source: Waterborne Commerce of the United States (Army Corps of Engineers).

By far, the export of coal comprises the largest part of commerce moving through the port, accounting for over 45 million tons or 67 percent of total commerce and 86 percent of export tonnage in 1997. Coal also accounts for the largest part of coastwise and internal shipments, accounting for almost 9 million tons or 50 percent of the total in 1997. As the previous table indicates, exports, imports, coastwise, and internal shipments accounted for 63, 11, 8, and 18 percent, respectively, of total tonnage moving through the port in 1997.

Over the past 30 years, commerce through the port has fluctuated somewhat due to domestic and world-wide economic factors such as mine and rail strikes. In terms of

tonnage, obviously, any change in coal exports has a great impact on overall port commerce movements since, historically, coal shipments dominate cargo tonnage. During the 30-year period, however, there has been a general and consistent increase in foreign commerce tonnage moving through the port. The following table shows the total commerce tonnage moving through Hampton Roads at 10-year intervals over the past 30 years of record and for the year 1997, the most recent year for which complete records are available.

Table I-2. COMMERCE THROUGH THE PORT OF HAMPTON ROADS,
1965 TO 1997
(Millions of short tons)

<u>Category</u>	<u>1965</u>	<u>1975</u>	<u>1985</u>	<u>1995</u>	<u>1997</u>
Exports	35.1	43.3	48.8	49.7	42.7
Imports	4.3	7.6	5.4	9.9	7.3
Coastwise	7.4	2.7	3.3	4.7	5.2
Internal and local	<u>7.3</u>	<u>13.3</u>	<u>9.1</u>	<u>11.1</u>	<u>12.2</u>
Total	54.1	66.9	66.6	75.4	67.4

Sources: Waterborne Commerce of the United States (Army Corps of Engineers) and the Hampton Roads Maritime Association.

In recent years, the port has experienced substantial growth in containerized and breakbulk cargo. A report entitled "Virginia Port Authority 2010 Plan," dated August 1995 prepared by Vickerman, Zachary, and Miller for the VPA, indicates a potential for the year 2010 of a 250 percent increase in containerized cargo and a 200 percent increase in breakbulk cargo over 1994 levels.

Vessel Traffic

Vessels of all types and sizes from ports all over the world call at Hampton Roads. They include large bulk coal carriers in the 170,000 Dead Weight Ton class with loaded drafts up to 59 feet, Navy ships such as aircraft carriers with drafts up to 40 feet, and small seafood work boats and pleasure craft. Traffic consists of vessels involved in foreign trade, coastwise movements, and local activities. Included are vessels from the many United States Government installations located adjacent to the harbor, particularly the Norfolk Naval Shipyard and the Norfolk Naval Base; the shipbuilding and repair activities at Newport News Shipbuilding and Drydock Company and other companies in the harbor engaged in ship maintenance work; the coal loading facilities at Norfolk and Newport News; and the VPA marine terminals located in Newport News, Norfolk, and Portsmouth. Nearly all the world's major shipping lines call at Hampton Roads. The following table shows total vessel trips, by draft, moving to and from the Port of Hampton Roads over the past 30 years by decade. The general decrease in total vessel trips as shown in the table is due in part to the increase in use of larger vessels, which permits more cargo to be transported with fewer vessel trips.

Table I-3. TRIPS AND DRAFTS OF VESSELS CALLING AT THE PORT OF
HAMPTON ROADS, 1965 TO 1997

Draft (feet)	Years				
	1965	1975	1985	1995	1997
50 to 46	0	25	192	300	275
45 to 41	13	182	248	216	170
40 to 36	210	798	379	294	297
35 to 31	952	918	986	1,652	1,710
30 to 26	1,447	2,296	1,765	1,764	1,537
25 to 21	2,504	2,389	1,590	1,292	1,409
20 and less	<u>86,943</u>	<u>75,250</u>	<u>40,951</u>	<u>30,502</u>	<u>33,705</u>
Total	92,069	81,858	46,111	36,020	39,103

Sources: Waterborne Commerce of the United States (Army Corps of Engineers).

As the previous table indicates, the draft of vessels calling at the port has increased significantly since 1965 due to the economics of transporting commodities, particularly coal, in large vessels and the availability of deeper channels. More recent trends indicate larger ships becoming more prevalent in the containerized and general cargo trade in response to significant growth in world trade. Already on the containerized shipping scene are the so-called "mega ships," a term used generally for container ships with a capacity greater than 4,500 TEU's. (TEU is an abbreviation for twenty-foot equivalent unit, which is based on how many 20-foot-long containers a ship can carry.) In 1990, less than 6 percent of United States containerized cargo was shipped on vessels with greater than 4,000-TEU or more capacity; however, recent industry estimates project that by the year 2010, almost 40 percent of containerized cargo will move in vessels of this size or greater. These vessels will require adequate dockside facilities including special cranes sufficient to reach across the width of the vessels' decks. Also, the Port of

Hampton Roads has been able to attract larger shares of the East Coast markets due to its deep protected natural harbor, its excellent rail connections to the Midwest, good labor and management relations, and its ability to effectively accommodate growth. In 1996, Hampton Roads became the second largest general cargo port on the East Coast, trailing only New York. As an indication of the port's increased growth, it was only the fifth largest among East Coast ports in the mid-1980's.

Port Industry

The tremendous amount of bulk and general cargo moving through the harbor as shown in Table I-1 is the basis for a wide range of port-related activity required to accommodate the movement and transfer of commerce, as well as provide services for the vessels engaged in foreign and domestic trade. Industrial activities that are directly port-dependent include railroads, trucking firms, ship chandlers, marine and industrial suppliers, stevedoring and charter firms, marine terminals, ship repair firms, towing and tug services, and broker and warehousing services. A number of manufacturing firms in the Hampton Roads area either import a substantial portion of their raw materials through the port and/or export commodities to foreign and domestic markets. Agricultural and mining activities are also dependent on the port for shipment and receipt of commodities such as grain, ores, and coal. A November 1997 report entitled, "The Economic Impact and Rate of Return of Virginia's Ports on the Commonwealth, 1995" (by Gilbert R. Yochum, Ph.D., and Vinod B. Agarwal, Ph.D., both of Old Dominion University in Norfolk, Virginia) indicates that employment in industry directly and indirectly associated with the port was over 128,000.

In addition to the outstanding harbor, the area provides a number of industrial advantages including excellent rail, air, and highway transportation systems; enterprise and foreign trade zones; a mild climate; an efficient labor force; ample electric power and other utility services; educational and research institutions; and recreation and cultural opportunities. The cities and counties of Hampton Roads have aggressive and informed planning and industrial development organizations that provide material assistance to new and expanding companies.

Military Activities

Hampton Roads is the home of the nation's largest concentration of military installations, and their activities provide a major economic impact to the area. Overall, the area is home base for about 116,000 active duty military personnel and over 37,000 civilian employees. The largest facilities are the naval installations on the southside, where over 20 percent of the Navy's active duty personnel worldwide are assigned. Other facilities include the Army and Air Force bases on the northside in Newport News and Hampton. However, the Army, Navy, Air Force, Marines, and Coast Guard all have a significant presence in the region extending from northside and southside Hampton Roads to the North Carolina border. Many of the headquarters of major military commands are also located in the area. The headquarters of the Atlantic Fleet is situated in Norfolk. The Coast Guard's Atlantic Area Command and Maritime Defense Zone Atlantic is located in Portsmouth, making it the largest concentration of Coast Guard manpower in the country with about 2,500 personnel. Langley Air Force Base in Hampton is home to the Air Force's Air Combat Command. The Army has its Transportation Center located at Fort Eustis in Newport News and its Training and Doctrine Command located at Fort Monroe in Hampton. Furthermore, the Marine Corps is planning to move its Marine Forces Atlantic Command back to Norfolk from Camp Lejeune, North Carolina. A vital link to all of the commands mentioned is the United States Atlantic Command located in Norfolk, a joint service headquarters that is responsible for training most of the military's fighting units.

The military continues to be a strong presence in the area, although economic and other factors frequently impact its level of activity. However, not even the large budget cuts of recent years have substantially reduced the military's importance in the region. In many cases, base closings and consolidations of commands elsewhere have actually benefited the Hampton Roads area. The military will continue to be a major economic force in the area, and the harbor will continue to play a major role in accommodating and enhancing many aspects of military activities.

Economic Impacts

The port generates substantial economic activity in the Hampton Roads area, the Commonwealth, and the nation. Vessels entering the harbor to load or discharge cargo require a wide range of services that provide employment, revenue, and payroll. Studies conducted at Old Dominion University, referenced previously, indicate that each ton of bulk cargo, container cargo, and breakbulk cargo passing through the port generates \$18.85, \$66.82, and \$110.64, respectively, within the Commonwealth's economy. Employment, wages, and tax revenues are generated by mining, manufacturing, and agricultural interests that depend on the harbor for delivery or shipment of commodities. These include interests such as coal mines in West Virginia, textile and furniture firms in North Carolina, and tobacco and grain producers in the hinterlands.

Several categories of industry are supported by the port. First, there are those companies required by the port to provide essential services such as terminal operations, ship repair, stevedoring, and vessel supply. The second type of industry includes those companies that are attracted to the port, because they need to either export commodities and/or import products for assembly in this country. Lastly, there are the interests that have expanded their markets due to reduced transportation costs, as represented by mining, manufacturing, and agricultural activities.

Several Commonwealth and Federal Government agencies also provide necessary port services, including the Virginia Department of Agriculture and Consumer Services, VPA, National Oceanic and Atmospheric Administration, U.S. Department of Agriculture, Army Corps of Engineers, Coast Guard, U.S. Customs Service, U.S. Immigration and Naturalization Service, U.S. Maritime Administration, and the U.S. Public Health Service. About 40 percent of the more than 128,000 people having port-related jobs were employed in basic or primary activities such as transportation, cargo handling, ship repair, mining, manufacturing, and agriculture. Companies engaged in basic activities either directly participate in the movement of waterborne commerce or extract or grow the materials that move through the port, as in the case of mining,

manufacturing, and agriculture. The remaining jobs are involved in secondary or supporting activities that provide services to people engaged in the basic activities.

In addition to providing jobs and wages, port activity also generates substantial tax revenues. In 1995, taxes paid to the Commonwealth and local governments by port industries and their employees were estimated at over \$122 million. A significant amount of Federal taxes are also generated by port activity.

A detailed and comprehensive explanation of the economic impact of port activities can be found in several reports prepared for the VPA by Gilbert R. Yochum and Vinod B. Agarwal of Old Dominion University. As discussed previously, their latest studies are presented a report dated November 1997, which is available from the VPA.

Other Port-Related Activities

The importance of the harbor is also illustrated by several additional activities that have not been previously discussed. These activities include seafood harvesting and processing; pleasure boating and sport fishing; and visitation to several port-related recreational and historical points of interest located adjacent to the harbor.

Historically, commercial seafood operations have been an important economic activity in the Hampton Roads area. The fishery resources of the Chesapeake Bay were noted in the earliest historical accounts dating from the Colonial period. Today, this industry continues to be highly productive, and it supports a very significant commercial and sport-fishing harvest. Both the harvesting of finfish and shellfish in the adjacent waters of the Chesapeake Bay and the Atlantic Ocean and the processing of seafood products in adjacent cities surrounding the harbor have been and continue to be substantial operations within the area. The following table shows the amount and value of shellfish and finfish landings within the localities comprising the port in the last 5 years.

Insert Table I-4. SHELLFISH AND FINFISH LANDINGS, 1992 TO 1998

The area is extremely rich in outdoor recreational resources due to the numerous estuaries, rivers, and bays in the vicinity. Boating, water sports, and sport fishing are frequent recreational activities enjoyed by residents and visitors. Numerous marinas provide access, harborage, and storage for thousands of recreational craft. The Southern Branch of the Elizabeth River is a portion of the Atlantic Intracoastal Waterway which connects Chesapeake Bay to the north with the sounds of North Carolina. Numerous pleasure craft use this waterway enroute between Maine and Florida. Several sightseeing tour boats are operated daily out of adjacent cities. The importance of recreational boating in the Hampton Roads area is clearly demonstrated by the increasing number of registrations over the past 17 years, as shown in the following table.

Table I-5. PLEASURE BOAT REGISTRATIONS

<u>Locality</u>	<u>Years</u>						
	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>
Chesapeake	3,680	3,803	4,646	5,600	5,698	6,005	6,133
Hampton	3,090	3,203	3,985	4,188	4,198	4,286	4,360
Isle of Wight	1,014	1,230	1,580	1,929	1,905	2,070	2,061
Newport News	2,574	2,825	3,644	3,935	3,835	3,214	3,871
Norfolk	4,726	4,753	5,243	4,881	5,085	4,886	4,773
Portsmouth	1,965	2,325	2,893	3,267	3,193	3,344	3,318
Suffolk	2,118	2,347	3,083	3,215	3,872	3,214	3,237
Virginia Beach	<u>8,830</u>	<u>9,450</u>	<u>11,533</u>	<u>12,328</u>	<u>13,011</u>	<u>12,538</u>	<u>12,581</u>
Total	27,997	29,936	36,607	40,343	40,797	41,554	42,332

Source: Virginia Department of Game and Inland Fisheries.

In the vicinity of the harbor, there are numerous points of historical and recreational interest. The more notable of these include the site of the Civil War battle between the "Monitor" and "Merrimac," Fort Monroe, Fort Norfolk, Norfolk Naval Base, Norfolk Naval Shipyard, Waterside Festival Market Place, Mariners Museum, and Nauticus--The National Maritime Center. Nearby are the Virginia Beach Resort, Colonial Williamsburg, Jamestown, and Yorktown.

KEY FUTURE NON-CORPS OF ENGINEERS ACTIVITIES

Discussed in this section are several of the key activities scheduled for the future that, when completed, will have significant favorable effects on port use and operations. These include a new bridge-tunnel between southside and northside Hampton Roads, a second tunnel adjacent to the existing Midtown Tunnel connecting the Cities of Norfolk and Portsmouth, and the "Virginia Port Authority 2010 Plan," which provides for the expansion and increased operational efficiencies for the Commonwealth-owned marine terminals.

Hampton Roads Crossing Study

Congestion at the Hampton Roads Bridge-Tunnel along Interstate 64 has been a concern for several years. In 1992, the Virginia General Assembly passed Joint Resolution 132, which directed the Virginia Department of Transportation (VDOT) to conduct a study on the Hampton Roads Bridge-Tunnel. The VDOT study stated that short-term measures would not solve congestion at the Hampton Roads Bridge-Tunnel, and that a long-term, large-scale solution would be required.

As a result of the VDOT study, the Hampton Roads Crossing study was initiated in late 1993 as a demonstration project based on authority contained in the Intermodal Surface Transportation Efficiency Act of 1991. A Coordinating Committee for the project was formed by the VDOT, and it includes the Federal Highway Administration, Federal Transit Authority, Virginia Department of Rail and Public Transportation, VDOT, Hampton Roads Metropolitan Planning Organization, local public officials, and regulatory and environmental agency representatives, including the Norfolk District,

Army Corps of Engineers. It also includes representatives from transit commissions, rail providers, port operators, and military bases.

The study has considered various solutions, including options to construct new transportation facilities, upgrade existing roadways, and implement congestion management strategies. Initially, 45 potential solutions were considered, and this was further narrowed down to 11 transportation corridors. The Commonwealth Transportation Board, giving consideration to all aspects of the study, selected Corridor 9 as the “Locally Preferred Corridor” (see Plate 7). It is important to note that Corridor 9 provides direct access from I-664 to the Norfolk International Terminals. The actual alignment within the Locally Preferred Corridor will be determined based on additional detailed environmental and engineering analyses. In this connection, the Environmental Impact Statement (EIS) process for this project began in March 1998. The EIS addresses the environmental impacts associated with the Locally Preferred Corridor, Corridor 9. In addition, Corridor 1 and Corridor 2 are also investigated in the EIS. These two are the only corridors in the EIS that provide new crossings parallel to the existing Hampton Roads Bridge-Tunnel.

Midtown Tunnel and Pinnars Point Interchange

The VDOT is planning a second tube to be located in the Elizabeth River immediately adjacent to the existing Midtown Tunnel, which connects the Cities of Portsmouth and Norfolk. The tunnel is being considered for possible public-private partnership. A Final EIS for the project was completed by the Federal Highway Administration in 1996. Currently, the Midtown Tunnel project is not on the VDOT's schedule.

An associated construction project is the Pinnars Point Interchange, which connects the east end of the West Norfolk Bridge (Route 164) in Portsmouth to the existing tunnel. The connector to the West Norfolk Bridge is proposed as a six-lane elevated roadway, built along the waterfront adjacent to the Port Norfolk Historic District. It will be constructed as a high level structure (bridge) located offshore from

Bayview Boulevard, and it will tie into an interchange located landward of the Portsmouth Marine Terminal. The Pinners Point Interchange and Connector are scheduled for advertisement for construction bids in spring 2000.

Marine Terminal Expansions

The "Virginia Port Authority 2010 Plan," details the marketing, operations, and development plans for an integrated port-wide plan for three VPA marine terminals located in Newport News, Norfolk, and Portsmouth. The consultants, working closely with the VPA and Virginia International Terminals, assessed market opportunities and port-wide cargo handling capabilities. Each of the three marine terminals was studied, including the Virginia Inland Port in Northern Virginia. The following general findings were included in the report:

- The port has experienced substantial growth in cargo, which has been accommodated to the mid-1990's by continually increasing efficiency of operations;
- The market assessment indicates significant potential for continued growth. By 2010, should the high-end market forecast be realized, containerized cargo will increase by 250 percent (of which the intermodal volume will increase by 300 percent), and breakbulk cargo will increase by 200 percent;
- Significant improvements to existing facilities and construction of new facilities will be necessary to accommodate the potential growth in cargo. Expansion of on-terminal intermodal rail will be essential; and
- The study includes recommendations for all three terminals; however, the substantial focus of the 2010 Plan is on Norfolk International Terminals (the primary opportunity site for expansion) and the need for good intermodal rail access.

To ensure that the port is ready for the projected growth, the VPA is moving forward with its Plan 2010, which will effectively double the container-handling capacity of the Commonwealth-owned general cargo terminals at an estimated capital investment of over \$400 million. Current plans provide for the expansion of Norfolk International Terminals on an undeveloped 300-acre site located north of the existing facility. However, projected growth in general cargo is expected to quickly use up this increased capacity requiring the provision of a fourth marine cargo terminal within the port. A study is currently underway by the Corps of Engineers and the VPA assessing the potential for locating such a facility on an expanded Craney Island Dredged Material Area. This study is discussed in detail in Section III. These and other future improvements will permit the port to accommodate the 16-million-ton volume of general cargo anticipated by the year 2010. They will also place the port in a position to take advantage of new marketing opportunities in an increasingly competitive international shipping environment.

Virginia Intermodal Partnership Project

The Virginia Intermodal Partnership Project addresses the need to ensure that the Port of Hampton Roads will be able to meet the demands of the projected increase in container cargo within the next decade by creating a partnered state-of-the-art intermodal transportation center for Hampton Roads. The project proposes a long-term partnership between the Department of Defense and the commercial intermodal industry. The Department of Defense would contribute the land, facilities, equipment, and partial funding, while other agencies and commercial interests would contribute other assets to create a shared resource pool. The facility would join Norfolk International Terminal, Airport Operations at the Oceana Naval Air Station, rail access through Norfolk Southern, and access to I-64, all linked within a four square mile area. The project is divided into the following three categories: (1) roads and improvements, (2) rail and improvements, and (3) port and improvements. Although there has been no comprehensive implementation plan developed to date, the project remains an important economic initiative for the region which is being developed by the Navy in cooperation with the port, the City of Norfolk, and Norfolk Southern Corporation.

EXISTING REQUIREMENTS AND PROCEDURES

The following paragraphs discuss regulatory and environmental requirements and procedures, Project Cooperation Agreements, and other agencies and their involvement. Appendix D contains additional information on this subject.

REGULATORY

All work in waters of the United States and wetlands require a permit from the Army Corps of Engineers. The proponent is required to submit a joint permit application form to the Virginia Marine Resources Commission. This application is assigned a number and forwarded to the Corps of Engineers and the Virginia Department of Environmental Quality (DEQ) for review. The reviews are done concurrently but are independent of one another. The Virginia Marine Resources Commission issues authorization for work channelward of mean low water (m.l.w.) in tidal systems and ordinary high water in non-tidal systems. As part of the Corps review process, the Virginia DEQ issues Virginia Water Protection Permits for the water quality impacts associated with dredging projects in Section 404 waterways. This permit serves as the Section 401 Water Quality Certificate required under the Federal Water Pollution Control Act Amendments of 1972, as amended (commonly referred to as the Clean Water Act), and it is incorporated into the Corps permit when issued.

The Corps of Engineers has authority to review proposals for work in waters of the United States and wetlands. Section 10 of the Rivers and Harbors Act of 1899 requires approval for work in, over, and under navigable waters of the United States. Activities for which a permit is needed include dredging, piers, wharves, bulkheads, dolphins, marinas, ramps, intakes, and pipeline and utility line crossings. Section 404 of the Clean Water Act requires authorization for the placement of dredged and fill material into waters of the United States and wetlands. Activities for which authorization is needed include deposition of fill material for residential, commercial, and recreational activities; construction of revetments, groins, breakwaters, levees, dikes, and weirs; and backfill for bulkhead construction.

The Virginia Marine Resources Commission is responsible for authorization of work in subaqueous areas, tidal wetlands, and coastal primary sand dunes under Subtitle III of Title 28.2 of the Code of Virginia. The joint permit application form, developed in 1978, is submitted to the Virginia Marine Resources Commission for recording and distribution to the appropriate Federal, state, and local agencies for review and authorization.

The Tidewater Regional Office of the Virginia DEQ is responsible for implementation of the Virginia Water Protection Permit (VWPP) Program under Section 62.1-44.15:5. A VWPP is required for any project where water quality certification is necessary under Section 401 of the Clean Water Act. The VWPP ensures that the proposed activity is consistent with the protection of in-stream beneficial uses, including the protection of navigation; maintenance of waste assimilation capacity; protection of fish and wildlife resources and habitat; and protection of recreational, cultural, and aesthetic values. Any conditions that are made a part of the VWPP are also required conditions of any Corps permit authorization.

All Tidewater Virginia localities have established a local wetlands board that is responsible for the authorization of any work proposed for non vegetated shorelines between mean low and mean high water, as well as areas to one and one-half times the tidal range along shorelines with wetland vegetation present. Each locality also has specific regulations for the implementation of the Chesapeake Bay Preservation Act.

The provisions of the Rivers and Harbors Act of 1888, as amended, authorizes the Secretary of the Army to designate the Norfolk District Engineer as Supervisor of the Harbor of Hampton Roads. The Supervisor, in coordination with the Coast Guard, U.S. Department of Justice, and other Federal and state agencies, conducts a program for the prevention, detection, and prosecution of the deposits of waste, refuse, and other injurious materials into navigable waters. The jurisdiction of the Supervisor of the Harbor includes Hampton Roads, the reaches of the Chesapeake Bay and the Atlantic Ocean located in Virginia, and the tidal portion of numerous tributaries. An ancillary

authority was established by the Rivers and Harbors Act of 1899, as amended, which prohibits obstructions to navigable water such as unauthorized structures, unauthorized fill, deposit of refuse, and sinking of vessels. The direct supervision of the waters under the jurisdiction of the Norfolk District is accomplished by means of two patrol vessels, a derrickboat, and a crane barge. They perform inspections and investigate and remove sunken or abandoned vessels and navigational hazards.

ENVIRONMENTAL

Among the various environmental laws and regulations that are applicable to proposed Federal actions in the harbor, the National Environmental Policy Act (NEPA) (42 United States Code 4321 et seq.) and its regulations (40 Code of Federal Regulations 1500 to 1508) are among the most important. The intent of this law is to involve and inform public officials and citizens of the environmental consequences of an action and to help public officials take actions that protect, restore, and enhance the environment. Implementation of the NEPA begins with “scoping,” a process of soliciting public and agency concerns regarding the proposed action. The next steps include developing alternatives, assessing resources in the study area, and determining the effects with project implementation. This analysis usually culminates with the preparation of either an EIS or an environmental assessment (EA). An EIS is prepared when there are significant environmental effects expected, while an EA is normally written when the impacts are not anticipated to be significant. These documents are coordinated with various agencies and individuals, and any necessary revisions made. The EIS culminates with the signing of a Record of Decision (ROD) and the EA with the Finding of No Significant Impact (FONSI) or a decision to prepare an EIS. The FONSI is a document prepared by a Federal agency briefly presenting the reasons why an action, not otherwise excluded (40 Code of Federal Regulations 1508.4), will not have a significant effect on the human environment and for which an EIS, therefore, will not be prepared.

In addition to the NEPA, there are numerous other environmental laws and regulations that require consideration. Compliance with these is often combined with the NEPA process, and the results are presented in the NEPA documents. Some of these

laws include the Clean Air Act; Clean Water Act; Coastal Zone Management Act; Endangered Species Act; and Comprehensive Environmental Response, Compensation, and Liability Act.

Compliance with environmental laws and regulations also involves compliance with various laws concerning historical resources, most notably the National Historic Preservation Act of 1966, as amended. Section 106 of this act authorizes the Advisory Council on Historic Preservation to review Federal actions to ensure that historic properties are considered during the planning and execution of such actions. This review process consists of the following steps: (1) identifying of any historic resources in the area of potential effect; (2) determining what effect the proposed action could have on the historic properties; (3) consulting with the state historic preservation officer (among others) to find ways to make the action less harmful if an adverse effect is anticipated; (4) preparing of a Memorandum of Agreement outlining the measures to be taken to mitigate the adverse effects; and (5) obtaining the comments of the Advisory Council on the agreement and the project as a whole.

PROJECT COOPERATION AGREEMENTS

A Project Cooperation Agreement (PCA), formerly called a Local Cooperation Agreement, is a legally binding agreement between the Federal Government and a non-Federal entity that lists the items of local cooperation and the cost-sharing requirements necessary for the Federal Government to undertake water resources projects. PCAs are generally derived from Section 221 of the Flood Control Act of 1970, and they are sometimes referred to as "221 Agreements." Other related agreements are also utilized before or in conjunction with a PCA, such as a Feasibility Cost-Sharing Agreement or an Escrow Agreement. PCAs are also utilized in the Continuing Authorities Program, under which the Secretary of the Army, acting through the Chief of Engineers, is authorized to plan, design, and construct certain types of small water resources improvements without specific Congressional authorization of individual projects.

Over the years, several approved model PCAs and related agreements have been developed for specific types of Corps projects. These models are approved by the Headquarters, Army Corps of Engineers and the Assistant Secretary of the Army (Civil Works). Local cooperation requirements for authorized Corps projects within the Hampton Roads area are generally described in Section II. PCA-related requirements for potential projects that are currently under study and for proposed studies are shown in Section III.

OTHER

In addition to requirements and procedures discussed previously, other general procedures within the harbor are required by the U.S. Department of Agriculture, Coast Guard, U.S. Customs Service, U.S. Immigration and Naturalization Service, and Virginia Department of Agriculture and Consumer Affairs.

The U.S. Department of Agriculture ensures that the quality of produce and meat entering the port meets appropriate standards. Ships are boarded at dockside on arrival, and all produce and meats in sea stores are inspected. The Department must make sure that all meats entering the United States are only from countries and establishments given prior approval for sending such meat products into this country. In cooperation with the Virginia Department of Agriculture's Grain Inspection Service, the U.S. Department of Agriculture must ensure that vessels transporting grain meet certain cleanliness standards and supervise the loading of grain for both weight and quality.

The Coast Guard generally ensures the safety, security, and environmental protection of the Port of Hampton Roads through enforcement of marine safety standards and response to environmental and military threats. The commanding officer of the Marine Safety Office serves as Captain of the Port. Major responsibilities include the following:

- Control anchorages in the harbor, except those assigned to the Navy;
- Coordinate use of naval anchorages by commercial vessels;
- Control the movement of vessel traffic in emergency situations;
- Enforce dangerous cargo, tank vessel, and load line regulations;
- Enforce regulated navigation areas throughout the port;
- Inspect and certify vessels under United States law;
- Conduct foreign vessel examinations for navigation safety, pollution prevention, marine sanitation devices, and compliance with United States and international law; and
- Examine commercial fishing vessels for compliance with Federal regulations.

The U.S. Customs Service ensures that vessels arriving from a foreign port follow appropriate procedures for entry into the country, prior to transacting business. The U.S. Immigration Service makes sure that proper procedures are followed on all vessels arriving in the port from foreign countries.

HISTORICAL RECORDS AND DATA SOURCES

PURPOSE

This section provides the identification and location of relevant port-related resource material that is currently on file at a number of agencies involved in port operations. This resource material includes reports, publications, studies, authorizations, programs, services, surveys, data records, photographs, etc., that may be useful to port interests. Since most of this material is much too voluminous to be included in the Plan,

just a short description of the material has been provided. Should the reader desire more detailed information, a point of contact has also been provided. This inventory is presented as a centralized, one-stop reference for finding various data sources to assist in research, analysis, and decision making.

METHODOLOGY

All port interests associated with the use and development of Hampton Roads harbor were contacted to determine if they maintained any port-related resource material that may be of potential interest to port users. A comprehensive survey was conducted through correspondence, telephone interviews, and personal contact. For each data source identified, respondents provided a brief description of the information, where and how it is currently maintained, and a point of contact for obtaining further details. As part of the comprehensive Plan, the data listings will be periodically updated to include pertinent future information and to ensure that it does not become obsolete.

SUMMARY

The following table summarizes the data sources identified from the survey, and it includes the name of the responding agency, a descriptive title of the data/information, and a point of contact for further details. A more comprehensive description of the data is contained in Appendix E.

Insert Table I-6. HISTORICAL RECORDS AND DATA SOURCES--page 1

Insert Table I-6. HISTORICAL RECORDS AND DATA SOURCES--page 2

Insert Table I-6. HISTORICAL RECORDS AND DATA SOURCES--page 3

Insert Table I-6. HISTORICAL RECORDS AND DATA SOURCES--page 4

Insert Table I-6. HISTORICAL RECORDS AND DATA SOURCES--page 5

COORDINATION PROCESS

This section discusses the manner in which coordination is conducted with the many and varied stakeholders involved in the development of the Plan. In order to develop an integrated and comprehensive plan, it is important to obtain the input and perspective of a wide variety of port interests. Over 400 stakeholders were involved in preparing the Plan, including Federal, state, regional, and local government agencies; large and small port-related businesses; professional groups; environmental organizations; and local universities. A topical, alphabetical list of stakeholders is included in Appendix F, and it contains a point of contact and address.

CIRCLES OF INFLUENCE

The importance of the stakeholder's participation in developing and maintaining this Plan cannot be overemphasized. It is essential for a successful effort. Because there are so many port users, the coordination process is based on "circles of influence," which is a tiered approach that divides stakeholders into specific groups based on their degree of responsibility with respect to their participation in the development and review of the Plan. Picture the rings formed when a rock is thrown into a pond. The innermost circle is Circle "A," the next ring is Circle "B," and so on. Each successive circle contains all the interior circles. The Circle "A" stakeholders listed in the following table were the principal advisors during the 3-year period the Plan was being formulated. They also reviewed and approved the Plan. In addition, these stakeholders have the responsibility of updating the Plan periodically--every 3 to 5 years--to ensure that the information contained therein remains viable and useful. Circle "B" stakeholders are substantially involved but to a lesser degree than Circle "A." They provide crucial information concerning the navigation needs of the port. These stakeholders, who were consulted through correspondence, personal interviews, and meetings, are listed in a subsequent section of this segment. Circle "C" stakeholders include all of the others who have some connection and interest in the Plan. These stakeholders were consulted primarily via correspondence during the 3-year period of development, and this is the group that is listed in Appendix F.

Insert Table I-7. CIRCLE "A" STAKEHOLDERS--page 1

Insert Table I-7. CIRCLE "A" STAKEHOLDERS--page 2

Insert Table I-7. CIRCLE "A" STAKEHOLDERS--page 3

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WORKSHOPS AND MEETINGS

Three formal workshops were held at key points during the development of the Plan to facilitate effective input and reviews. The first workshop was conducted in October 1997. Its primary purpose was to obtain input from attendees regarding problems, needs, concerns, and opportunities related to the use and development of the port. The second workshop was conducted in June 1998 to obtain comments on the preliminary work completed to this point--primarily the review by attendees of the identified problems, needs, concerns, and opportunities and the prioritization criteria. The workshop also provided a forum for completing the selection of Circle "A" members. On November 17, 1999, a third and final workshop meeting was conducted to present the final Plan as reviewed and approved by the Circle "A" members. An extensive period between the last two workshops was devoted to preparing and reviewing the draft Plan. In addition to the workshop meetings, numerous informal discussions were conducted throughout the study with Circle "A" stakeholders to ensure that the development of the Plan was accurately reflecting the desires and objectives of key port interests within the Hampton Roads area. The notes of these three workshops are included in Appendix G.

RECOGNITION

While all 400 plus stakeholders were periodically advised of the Plan's status over the 3-year period of development, not all were active participants. However, about 70 stakeholders were directly involved in identifying and prioritizing the problems, needs, concerns, and opportunities associated with the use and development of the port through personal interviews, meetings, and/or correspondence. The following is a listing of stakeholders who provided pertinent information during the development of the Plan:

- Atlantic Wood/Metrocast
- Atlantic Yacht Basin
- Bay Diesel Corporation
- Capes Shipping Agencies, Incorporated
- Cargill, Incorporated
- CASRM

- City of Chesapeake
- City of Hampton
- City of Newport News
- City of Norfolk
- City of Portsmouth
- City of Suffolk
- City of Virginia Beach
- Colonna's Shipyard, Incorporated
- Craney Island Study Commission
- CSX Transportation
- Davis Grain Corporation
- Dominion Terminal Associates
- Dreadnought Marine, Incorporated
- Elizabeth River Terminals, Incorporated
- Federal Marine Terminals (Richmond), Incorporated
- Hampton Roads Maritime Association
- Hampton Roads Planning District Commission
- Hampton Roads Recreational Safe Boating Coalition
- Hapag-Lloyd (America), Incorporated
- Harbor Tours, Incorporated
- T. Parker Host, Incorporated
- Huntsman Corporation
- Isle of Wight County
- Frank L. Jordan Corporation
- Kanak, Limited
- Lyon Shipyard, Incorporated
- Marine Engineers Benefits Association
- Marine Freight Company, Incorporated
- McAllister Towing Company of Virginia, Incorporated
- Moran Towing of Virginia, Incorporated

- National Oceanic and Atmospheric Administration
- Norfolk Boat, Incorporated
- Norfolk Dredging Company
- Norfolk Southern Corporation
- Norfolk State University
- Norfolk Warehouse Distribution Centers, Incorporated
- Old Dominion University
- Southgate Corporation
- W. M. Stone and Company, Incorporated
- Tarmac America, Incorporated
- Tidewater Construction Corporation
- Tidewater Yacht Marina
- United Services Automobile Association
- United States Gypsum Company
- U.S. Coast Guard
- U.S. Fish and Wildlife Service
- U.S. Maritime Administration
- U.S. Military Sealift Command
- U.S. Navy
- Virginia B.A.S.S. Chapter Federation
- Virginia Chamber of Commerce
- Virginia Department of Business Assistance
- Virginia Department of Environmental Quality
- Virginia Department of Game and Inland Fisheries
- Virginia Department of Historical Resources
- Virginia Institute of Marine Science
- Virginia Marine Resources Commission
- Virginia Pilot Association
- Virginia Port Authority
- Virginia Power Company

- Wilhelmsen Lines (USA), Incorporated
- Wright Dredging Company

PERIODIC UPDATING PROCEDURE

The purpose of this section is to discuss the procedure for accomplishing the periodic updating of the Plan, including the methodology for adding current pertinent data to ensure information in the Plan remains viable and useful in the future. It is important for the viability of the Plan that none of its elements or concepts are overcome by time and events and, therefore, rendered obsolete. Obviously, some aspects of the Plan are more conducive to changes and will require more frequent and extensive revisions and additions. The historical records and data sources section, for example, will need regular updating as new sources of information become available and points of contact continually change over time. Also, new and/or modified projects and other developments, as they occur in the port, will require the consistent and timely review and update of the Plan to reflect the most recent conditions.

Subject to the availability of funds, it is proposed that the Plan be completely reviewed and updated, as appropriate, every 5 to 6 years and that an abbreviated review be conducted every 2 to 3 years, primarily to ensure that the listed points of contact and other rapidly changing information are as accurate as possible. This will also maintain the integrity of the Plan by providing relatively current data and information with an acceptable investment of time and resources. Through this procedure, the Plan will retain its applicability to the port and will remain a valuable and useful tool for both port users and agencies with port-related duties and responsibilities.