REPORT OF THE
VIRGINIA PORT AUTHORITY, IN CONSULTATION WITH THE HAMPTON ROADS MARITIME ASSOCIATION AND OTHER PORT INTERESTS

ALTERNATIVE METHODS OF FUNDING THE DEEP DRAFT ANCHORAGE PROJECT, PORT OF HAMPTON ROADS

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

SENATE DOCUMENT NO. 10

COMMONWEALTH OF VIRGINIA
RICHMOND
1998

Report

"In consultation with the Hampton Roads Maritime Association and in consultation with such other parties as the Association and the Virginia Port Authority may wish to include, the Virginia Port Authority shall study alternative methods of funding, on a cost-sharing basis, the deep draft anchorage project of the Port of Hampton Roads. A report with recommendations shall be submitted to the Governor and the General Assembly by November 15, 1997."

Chapter 924, at p. 347, Item No. 526 (E), 1997 Virginia Acts of Assembly

Preface

Authority Directing the Study

The 1997 Virginia Acts of Assembly, Chapter 924 at page 347, Item No. 526(E), provides:

In consultation with the Hampton Roads Maritime Association and in consultation with such other parties as the Association and the Virginia Port Authority may wish to include, the Virginia Port Authority shall study alternative methods of funding, on a cost-sharing basis, the deep draft anchorage project of the Port of Hampton Roads. A report with recommendations shall be submitted to the Governor and the General Assembly by November 15, 1997.

Appointments to the Committee:

The Deep Draft Anchorage Study Committee consisted of the following members:

Captain L. D. Amory, III
President
Virginia Pilot Association

Charles E. Brinley
President
Dominion Terminal Associates

Roland W. Culpeper
Deputy District Engineer for Project Management
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Acknowledgments

We acknowledge contributions to this publication by Carl E. Zipper, Associate Director of the Virginia Center for Coal and Energy Research, Virginia Polytechnic Institute and State University.

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Executive Summary

The Port of Hampton Roads requires a 50-foot deep draft anchorage in order to properly anchor vessels loaded to a draft of 50 feet. Most vessels loaded to 50 feet sail directly from the loading facilities to the open sea without the need to anchor. However, there are circumstances that may require vessels to remain in port.

The need for such an anchorage is justified in terms of vessel layovers when utilizing more than one loading terminal, the volume of vessel traffic, vessel repair requirements, and the possibility that a fully loaded vessel could break down and block the channel. A 50-foot anchorage would ensure the safety of the vessel, crew and cargo, as well as maintain accessibility to the ports. The presently available natural deep anchorage can accommodate a vessel of 800 feet in length, with a 46-foot draft, within the Port of Hampton Roads. However, with the advent of the "mega-ship" and the heightened use of the large-capacity coal colliers, a deep draft anchorage is necessary in order to accommodate the industry and maintain the port's competitive edge. In fact, in the past year alone, approximately 3 vessel calls per week were made on the Port of Hampton Roads that required a draft of over 48 feet outbound. It is vitally important to consider that a deep draft anchorage, while presently most significant to large-capacity coal colliers, will ultimately be necessary in order for the Port of Hampton Roads to attract and support container mega-ships.

As part of the Norfolk Harbor and Channels project, the 50-Foot Anchorage element would consist of the deepening and maintenance of the existing natural anchorage to a depth of 50 feet below mean low water to provide for a conventional, circular anchorage with a radius of 1,500 feet. In addition, shoals located between the channel and the anchorage area would be removed and maintained to a depth of 50 feet to allow for adequate access. The estimated project cost for the 50-Foot Anchorage and Access Areas is $4,347,000 (October 1997, fully-funded dollars), with maintenance estimated at $1,030,000 every six years ($141,000 on an annual average basis).

The Water Resources Development Act of 1986, as amended, specifies the cost-sharing requirements associated with the construction and maintenance of Federal

navigation projects. For project *construction*, the Non-Federal sponsor is required to provide, prior to construction, a cash contribution equal to 50 percent of the total cost of construction of the general navigation features at depths below 45 feet, mean low water. In this instance, the Non-Federal Sponsor would be responsible for $2,608,200 of the cost of project construction.

With regard to *maintenance*, the Federal government will assume responsibility for 100 percent of the cost of maintenance of the project to 45 feet. The Non-Federal sponsor will be required to contribute 50 percent of the added cost of maintenance for depths greater than 45 feet. Thus, the Non-Federal Sponsor's estimated share of the project's maintenance cost is approximately $515,000 every six years, or $85,833 annually. **(The U.S. Army Corps of Engineers has estimated the average annual benefits of the Anchorage project to be $632,000).**

In addition to the cost-sharing requirement, another factor that must be considered is the time frame in which the Non-Federal share must be submitted. According to the Army Corps of Engineers, Congress will likely add Federal funding for the construction of the project to the Federal Fiscal Year (FY) 1998 budget. This means that Federal construction funds could be received sometime between early November 1997 through late January 1998. If that is the case, the Army Corps of Engineers intends to award a construction contract by the last quarter of FY 1998 and accomplish construction during FY 1999. This schedule is contingent upon the Commonwealth of Virginia, through the Virginia Port Authority as the local sponsor, providing its share of the project construction cost soon after July 1, 1998. Otherwise, the Commonwealth could lose federal support for the Project, and the ability to execute a program that Congress has authorized.

This report details the history behind, and the need for, the Deep Draft Anchorage, as well as provides an analysis of three alternative methods of funding the Non-Federal share of the construction and annual maintenance cost of the Project. The first of three alternative funding methods studied involves the imposition of a fee on each vessel that passes through the Port of Hampton Roads. The second funding alternative analyzed is a fee on all coal colliers that utilize the Port. The third funding method

reviewed involves a fee levied on all large-capacity coal colliers (those ships that require a 50-foot draft).

The study reveals flaws inherent in each potential funding solution. Imposing costs on all vessels would be damaging to the port's competitive position, would be vigorously opposed by those who would not be immediate beneficiaries of a deep draft anchorage, and would be likely challenged in court. In addition, the economic burden imposed on each vessel would be significant.

Further, it would be counter-productive and contrary to the purpose behind the Virginia Coalfield Employment Enhancement Tax Credit to levy a tax against coal exporters. In summary, the competitive position of the industry would not be able to withstand the imposition of added fees.

These flaws, coupled with the need to respond quickly with the Non-Federal share of the project, lead the committee to conclude that the Non-Federal share of the Deep Draft Anchorage Project must be funded through a General Fund appropriation by the General Assembly.

Introduction:
History of and Need for the Project

The Port of Hampton Roads is among the largest and busiest harbors in the world, as well as the setting for the world's largest naval base. Activity at the Port makes major contributions to the Virginia economy. In 1996, it is estimated that Port activity supported 130,117 Virginia jobs, provided $3.712 billion in wages, and contributed $508.7 million in taxes to the Virginia economy.

The movement of coal is essential to the Port of Hampton Roads, as the Port is the world's leading exporter of coal with over 500 coal sailings in 1996. This represented 84% of the tonnage handled by the Port. The large-capacity coal colliers, increasingly utilized by coal exporters (see Figure 1), need the deepest water because those ships draw 50 feet of water. Thus, deep draft vessels frequently transit the Port of Hampton Roads. In order to maintain its position as the world's leading coal outlet, it is vital that the Port upgrade its capacity to handle these large colliers.

While the Port has an outbound channel of 50 feet, no *anchorage* west of the Hampton Roads Bridge-Tunnel is available to vessels with a 50-foot draft. Without such a suitable anchorage in the port, those vessels needing 50 feet of water must either berth at a suitable facility or anchor offshore outside of the harbor. The limited number of suitable facilities and possible adverse weather conditions off-shore obviate the need for a deep draft anchorage in order to accommodate ships which may have to remain in port temporarily because of factors such as needed repairs or sick or injured crew.

Anchorages are an important part of the channel navigation system and, as such, require the use of a systematic design process that evaluates transportation and safety requirements, port throughput requirements, available alternatives and overall project economics. An evaluation of general sites shows the obvious advantage of the Port of Hampton Roads as the choice for the location of a Deep Draft Anchorage in terms of proximity to both the entrance to the harbor and the facilities served.

Deep Draft Anchorage improvements for Hampton Roads, Virginia, were authorized, though not then funded, by Section 201 (a) of the Water Resources

Development Act of 1986 (Public Law 99-662) under the heading "Norfolk Harbor and Channels, Virginia." The 50-foot Anchorage was an adjunct to the 55-foot Outbound channel dredging element. For economic and construction reasons, the project was divided into separate elements. Although authorized to be dredged to 55 feet in 1989, the channels that were included under the 55-foot Outbound were dredged to 50 feet and the Inbound channels were dredged to 45 feet. However, the 50-foot Anchorage was not constructed at that time.

The presently available natural deep anchorage (designated Anchorage F) can accommodate a vessel of 800 feet in length, with a 46-foot draft, within the Port of Hampton Roads. The anchorage element of the Norfolk Harbor project would consist of the deepening and maintenance of the existing natural anchorage in the Port of Hampton Roads to a depth of 50 feet below mean low water in order to provide for a conventional, circular anchorage with a radius of 1,500 feet. The circular anchorage area is located just west of the Hampton Roads Bridge-Tunnel and at a distance of approximately 350 feet from the main navigation channel.

In addition, shoals located between the channel and the anchorage area would be removed and maintained to a depth of 50 feet to allow for adequate vessel access. Approximately 474,000 cubic yards of dredged material resulting from project construction would be placed in the Craney Island Dredged Material Management Area or in the Craney Island Rehandling Basin.

The purpose of constructing a 50-foot anchorage is to provide a safe, accessible anchorage location, in the port area, for the deep draft vessels that call on the Port of Hampton Roads. Inbound vessels can be safely anchored currently; however, vessels that have been loaded or partially loaded that are delayed due to the need to load at multiple facilities, mechanical problems, marine safety requirements, legal matters, or other difficulties, do not have access to an adequate anchorage within the protected waters of Hampton Roads. The construction of a 50-foot anchorage and access area will allow deep draft vessels to be conveniently anchored within the Port of Hampton Roads.

Although the proposed 50-foot Anchorage is a necessary component to the existing and planned maritime infrastructure, it has significant *project* benefits associated solely with the benefit of the anchorage. Without construction of the 50-Foot anchorage,

potential economic losses include the loss of foreign export business due to delays and inconvenience caused by the lack of an adequate anchorage within the port area. Without an adequate anchorage, the potential for problems will rise, as increasing volumes of coal move through the port on deep-draft vessels.

The Army Corps of Engineers has estimated the average annual benefits of the Anchorage project to be $632,000. The benefits are based on transportation savings consisting of vessel time saved by having an anchorage available for partially or fully loaded vessels with lengths of 750 feet or greater and vessel drafts of 46 feet or greater. Vessels loading at two facilities are generally allowed to remain at the first loading terminal only long enough to complete loading operations there. In the absence of a suitable anchorage in Hampton Roads, these vessels would have to sail to Cape Henry or offshore until the next terminal became available. This could result in significant additional vessel time of up to 8 hours which equates to additional costs. In addition, other vessel movement in and out of port may be hindered in the event a vessel becomes incapacitated and blocks the channel.

Since 1986, there has been a significant increase in the movement of large vessels between Hampton Roads port facilities and a consequent increase in the need for a deep draft anchorage capable of supporting these loaded or partially loaded vessels. These intra-port movements are primarily between the coal piers in Newport News and the coal piers in Norfolk. The vessels typically are partially loaded at one location and then receive additional coal at another coal pier prior to the overseas voyage. This practice is just one example of why a prompt improvement to the existing anchorage is necessary in order to provide an adequate and accessible anchorage area for the deep draft vessels. Also, it is important to consider that, in order to competitively position the Port of Hampton Roads for the growth anticipated in the next several years, ultimately the deep draft anchorage will be necessary in attracting and supporting container mega-ships.

Cost Analysis

The anchorage element of the Norfolk Harbor project would consist of the deepening and maintenance of the existing natural anchorage (designated Anchorage F) in the Port of Hampton Roads to a depth of 50 feet below mean low water to provide for a conventional, circular anchorage with a radius of 1,500 feet. In addition, shoals located between the channel and the anchorage area would be removed and maintained to a depth of 50 feet to allow for adequate access. Dredged material resulting from project construction and maintenance would be placed in the Craney Island Dredged Material Management Area. The estimated project cost for the 50-Foot Anchorage and Access Areas is $4,347,000 (October 1997, fully-funded dollars), with maintenance estimated at $1,030,000 every six years ($141,000 on an annual average basis).

The Water Resources Development Act of 1986, as amended, specified the cost-sharing requirement that would be associated with the construction and maintenance of Federal navigation projects. The Commonwealth, through the Virginia Port Authority as the local sponsor, has the estimated Non-Federal share of the *construction* of the Deep Draft Anchorage project of $2,608,200. The estimated share of the cost of the *maintenance* of the project is approximately $515,00 every six years, or approximately $85,833 annually. This amount represents 50 percent of the total estimated cost to maintain the 50-Foot Anchorage and Access Areas.

In anticipation of Congressional funding for construction in the first quarter of FY 1998, the U.S. Army Corps of Engineers intends to award a construction contract by the last quarter of FY 1998 and accomplish construction during FY 1999. All of this, however, is contingent upon the Commonwealth of Virginia, through the Virginia Port Authority as the local sponsor, providing its share of the project construction cost soon after July 1, 1998. The commitment of funds for the Non-Federal portion from the Commonwealth for July 1998 is critical so that federal support of the project is not lost.

The following two tables represent the estimated cost sharing associated with the construction and maintenance of the 50-Foot Anchorage and Access Areas.

Table 1

Anticipated Project Cost Sharing for 50-Foot Anchorage and Access Areas

Item	Amount
Estimated Project Cost:	
Dredging	2,944,000
Dredged Material Management (toll charges) (a)	430,000
Lands, easements, rights-of-way, and relocation (LERR)	0
Engineering and Design (including Plans and Specs)	838,000
Construction Management	135,000
Total Project Cost (b)	$4,347,000
Estimated Non-Federal Share: (c)	
Dredging (50%)	1,472,000
Dredged Material Management (50% of toll charges) (d)	215,000
Lands, easements, rights-of-way, and relocation (LERR)	0
Engineering and Design (50%)	419,000
Construction Management (50%)	67,500
Total Non-Federal Share (during Construction)	$2,173,500
Plus Additional 10% Non-Federal Contribution (e)	434,700
LERR Credit Against 10% Contribution	0
Ultimate Non-Federal Share	$2,608,200
Estimated Federal Cost Share:	
Dredging (50%)	1,472,000
Dredged Material Management (50% of toll charges) (d)	215,000
Engineering and Design (50%)	419,000
Construction Management (50%)	67,500
Total Federal Cost (during Construction) (f)	$2,173,500
Less Additional 10% Non-Federal Contribution	-434,700
Ultimate Federal Share	$1,738,800

(a) The toll charge represents the cost to place dredged material in the Craney Island Dredged Material Management Area.

(b) This cost minus the LERR cost represents the total cost of construction of the general navigation features.

(c) The Non-Federal share is 50 percent of the total cost of construction of the general navigation features during construction plus an additional 10 percent of the total cost of construction of the general navigation features [see note (e)].

(d) WRDA 1996 modified the cost-sharing requirement in WRDA 1986 to require that dredged material management costs now be included in and cost-shared on the basis of the cost of the general navigation features of the project.

(e) The additional 10 percent contribution at the end of project construction or can be repaid over a period not to exceed 30 years.

(f) The Federal share up-front accounts for the 10 percent Non-Federal share.

Table 2

Anticipated Maintenance Cost-Sharing for 50-Foot Anchorage and Access Areas

(Estimated Six-Year Dredging Cycle)

Item	Amount
Estimated Maintenance Cost:	
Dredging/Maintenance	835,000
Dredged Material Management (toll charges) (a)	69,000
Lands, easements, rights-of-way, and relocation	0
Engineering and Design	45,000
Construction Management	81,000
Total Maintenance Cost	$1,030,000
Estimated Non-Federal Cost Share:	
Dredging/Maintenance (50%)	417,500
Dredged Material Management (50% toll charges) (b)	34,500
Lands, easements, rights-of-way, and relocation (100%)	0
Engineering and Design (50%)	22,500
Construction Management (50%)	40,500
Total Non-Federal Share	$515,000
Estimated Federal Cost Share:	
Dredging/Maintenance (50%)	417,500
Dredged Material Management (50% toll charges) (b)	34,500
Engineering and Design (50%)	22,500
Construction Management (50%)	40,500
Total Federal Share	$515,000

(a) The toll charge represents the cost to place dredged material in the Craney Island Dredged Material Management Area.

(b) WRDA 1996 modified the cost-sharing requirements in WRDA 1986 to require that dredged material management costs now be included in and cost-shared on the basis of the cost of the general navigation features of the project.

Alternative Methods of Funding And Considerations

Pursuant to legislation adopted at the 1997 Session of the General Assembly, the Virginia Port Authority (VPA), in consultation with the Hampton Roads Maritime Association (HRMA) and other parties identified by VPA and HRMA, was charged with the task of studying *"alternative methods of funding, on a cost sharing basis, the deep draft anchorage project of the Port of Hampton Roads."* A study committee was formed consisting of representatives from the Virginia Port Authority, Hampton Roads Maritime Association, Virginia Pilot Association, U.S. Army Corps of Engineers, as well as from shipping and terminal industries.

The Committee identified three funding methods as potential means to finance the Non-Federal portion of the cost of construction and maintenance of the Deep Draft Anchorage and Access Areas Project. Each of the three methods involves a user fee, based on vessel calls to the Port. The methods are:

(1) A per-vessel fee assessed on all vessels that pass through the Port of Hampton Roads;

(2) A per-vessel fee assessed on all coal colliers, regardless of the draft, that pass through the Port of Hampton Roads; and,

(3) A per-vessel fee assessed on all coal colliers requiring a 50-foot draft that pass through the Port of Hampton Roads.

It is assumed that each alternative funding method will recoup the total Non-Federal share of construction costs in a one-year period. In addition, annual maintenance costs have been factored in. An analysis of each proposed method of funding, along with considerations relevant to each method, follows.

(1) Total Vessel-Based Fee

A total of all vessels that pass through the Port of Hampton Roads includes container, breakbulk, and bulk cargo ships. The per annum average (based upon 1995 and 1996 sailings) is 2729.5 ships. Using this amount as a tax base, a one year recovery of the Commonwealth's cost share of construction ($ 2,608,200), plus annual maintenance

cost ($85,833), would require a fee of **$987 per vessel, per sailing** to be assessed against all vessels which pass through the Port of Hampton Roads to recoup the total annual cost of $2,694,033.

This funding alternative, although seemingly even-handed on the surface, is replete with potential discriminations. In an effort to spread the costs across all vessels that utilize the Port, it will affect many shippers and carriers that have no need for deep draft anchorage or access. In fact, prior efforts at establishing a "user" or "port" fee have been met with a great deal of resistance and opposition.

Across the United States, opponents of the federally imposed Harbor Maintenance Tax have vigorously attacked the "user" fees on Constitutional grounds. Indeed, the U.S. Court of Appeals upheld the 1995 decision that concluded the Harbor Maintenance Tax unconstitutional as applied to exports because, among other things, an exporter is not considered a direct user of the harbor.

A similar legal attack can be predicted if a fee were levied against all vessels which pass through the Port of Hampton Roads in order to finance the Non-Federal share of the Deep Draft Anchorage project, due to the mere fact that not all vessels would utilize such a service. It is known that courts generally have only permitted charges when the basis for a charge can be found either in an actual service performed for, or some benefit conferred upon, the person assessed the charge.

U.S. ports have been increasingly concerned about the large volume of U.S. inbound and outbound cargo moving through Canadian ports due to the imposition of the U.S. Harbor Maintenance Tax. Another fee levied against shippers would only exacerbate the problem. Similarly, the Port of Hampton Roads should not impose a fee that would inevitably impact on Hampton Roads' competitive position with other East Coast ports, when those ports do not have similar user fees.

(2) Total Coal Vessel-Based Fee

Hampton Roads is the principal U.S. outlet for the exportation of bituminous coal, primarily that mined in western Virginia, West Virginia and eastern Kentucky, with over 500 coal sailings in 1996. Total coal vessel sailings for calendar years 1995 and 1996 were used to compute a per annum average. Using the derived average of 512.5 vessels as the baseline, a fee of **$5,257 per vessel, per sailing** would have to be levied against all coal colliers to recover the $2,608,200 construction share and $85,833 annual maintenance share ($2,694,033 total Non-Federal share) within one year.

The majority of the coal shipped through the Port of Hampton Roads is destined for metallurgical markets in Western Europe and Asia. Only modest growth is expected in these markets over the next decade. The international energy consulting firm WEFA Energy projects world coking coal trade of 200 million tons in the year 2000, and 210 million tons in the year 2010. These expectations reflect only slight increases for the 188.5 million tons recorded in 1996. (Source: International Energy Agency, Coal Information 1996. Table 4.13). Much of the world's new steel-making capacity is expected to be built in the world's developing economies, as opposed to the western European markets traditionally served by Hampton Roads coal-shippers.

Although the principal export coal product shipped through Hampton Roads is metallurgical coal, steam coal has also been exported through the port. Presently the port is experiencing a significant loss of steam coal exports due to competition from South Africa, Columbia, Venezuela, and Indonesia. These countries have reduced prices to levels that make it extremely difficult for coals shipped through eastern U.S. ports to be competitive. Under these circumstances, as with metallurgical coals, there is no room to impose additional cost burdens on steam coal.

In 1995, in an effort to maintain coal-related employment in the coalfield counties of Virginia and to offset the decline in coal exports from Virginia since the early 1990s,

the General Assembly passed, and the Governor signed, legislation establishing the Virginia Coalfield Employment Enhancement Tax Credit. This tax credit applies to coal produced from mines located within the state's borders. The tax credit ranges are $0.40 per ton for surface-mined coal, $2.00 per ton for coal produced in deep mines with seam thickness 36 inches and under, and $1.00 per ton for deep mined coal from seams more than 36 inches in thickness. Without the tax credit, Virginia coal production was expected to decline beyond the year 2000.

In 1996, 36.8 million tons of coal were produced, which reversed the steady decline in coal production since the early 1990's. In addition, figures for Virginia production through late September of 1997 show an increase of about 1.6 million tons, compared to 1996. Although Virginia Department of Energy export figures are not yet available for 1996, Norfolk Southern (NS) loadings at Virginia mines for export through Hampton Roads indicate an increasing trend through 1996 and 1997. Total coal shipments from the Port increased to 52.9 million tons in 1996, about 20 percent above the 43.3 million tons recorded in 1994, but still well below the 65 million tons of coal handled in 1991. This reversal of a long-run declining trend provides evidence of favorable impact due to Virginia's production tax credit. Overseas export shipment through the Port of Hampton Roads is an important market outlet for Virginia-mined coal. (See Figure 2)

International markets for metallurgical coal are competitive. Major suppliers include Canada and Australia, in addition to the U.S. Poland, South Africa, China and Russia also supply metallurgical coals to international markets. The majority of U.S. metallurgical-coal exports originates in the central Appalachian mining areas of southwestern Virginia, southern West Virginia, and eastern Kentucky, and is shipped through the Port of Hampton Roads.

Three major factors important to international buyers of metallurgical coal are quality, reliability and price. The central Appalachian coals being shipped through Hampton Roads are generally of very high quality. However, reserve depletion

threatens central Appalachian producers' ability to continue supplying some grades. Reserve depletion is a major factor behind Virginia's declining coal production from 1990 through 1995, prior to establishment of the coal production tax credit.

U.S. coal suppliers' reliability has allowed them to maintain market share in some markets where they have difficulty competing on price, such as the Far East. The quality of services provided by the Port of Hampton Roads to coal exporters is one factor that has allowed U.S. metallurgical exporters to maintain a reputation for reliable supply.

U.S. suppliers' major problem in international markets is price. (See Figure 3) All metallurgical coal markets are highly price competitive and likely to become more so in the future, as use of steel-making technologies which allow some substitution of lower-grade coals for premium-grade metallurgical product (such as pulverized coal injection) become more widespread.

Terrain, geology, and reserve depletion combine to make central Appalachian mining conditions costly, relative to those faced by competitors. Long transport distances from mine-mouth to the Port also add to Hampton Roads coal exporters' costs. However, competitive ocean transport rates, relative to rates faced by Australian and Canadian suppliers, is one factor which has allowed Hampton Roads' coal shippers to maintain a significant share of western European metallurgical markets.

At present, the margins that the Port of Hampton Roads enjoys as a top coal outlet are too narrow to levy an additional fee without experiencing the negative effects on the port's competitive position. As such, a fee levied against all coal vessels undermines the intent behind the Virginia General Assembly's efforts to capture and maintain Virginia coal production and the ports' status as a premier coal export facility.

(3) Deep Draft Coal Collier-Based Fee

Coal ships with a draft greater than 48 feet are called "tide ships" because they may only sail at high tide. The Deep Draft Anchorage must be maintained to accommodate these ships. The assumption is made that deep draft colliers carry a proportional amount of tonnage relative to other coal colliers. The percentage of total coal collier sailings represented by tide ship sailings may be used to estimate a tax base for deep draft colliers. Based upon the deep draft annual sailing average of 204, with a construction recovery cost of $2,608,200 and an annual maintenance recovery cost of $85,833 ($2,694,033 total Non-Federal share), a fee of **$13,206 per vessel, per sailing** would need to be levied in order to recover the Non-Federal share in a one year period.

Large-capacity coal colliers are increasingly handling worldwide coal traffic. Given the increasing importance of these deep-draft colliers to international coal trade, establishment of the deep draft anchorage is essential to the continued capability of the Port of Hampton Roads to serve as a premier coal-exporting facility.

As discussed in the preceding section (Total Coal Vessel Basis), the imposition of a fee against any coal collier would defeat the purpose behind the Coalfield Employment Enhancement Tax Credit. In addition, the margins that the Port of Hampton Roads enjoys as a top coal outlet are too narrow to levy an additional fee without experiencing the negative effects on the port's competitive position

Conclusion

The purpose of constructing the Deep Draft Anchorage is to provide a safe, accessible anchorage area for the deep draft vessels that call on the ports of Hampton Roads. Since 1986, there has been a significant increase in the movement of large vessels between Hampton Roads port facilities, and a consequent increase in the need for a deep-draft anchorage capable of supporting these loaded or partially loaded large-capacity vessels.

The need for such an anchorage is justified in terms of vessel layovers when utilizing more than one loading terminal, the volume of vessel traffic, vessel repair requirements, and the possibility that a partially or fully loaded vessel could break down and block the channel. A 50-foot anchorage would ensure the safety of the vessel, crew and cargo, as well as maintain accessibility to the ports. The presently available natural deep anchorage can accommodate a vessel of 800 feet in length, with a 46-foot draft, within the Port of Hampton Roads. However, with the advent of the "mega-ship" and the heightened use of the large-capacity coal colliers, a deep draft anchorage is necessary in order to accommodate the ever-changing industry and maintain the port's competitive edge. In fact, in the past year, approximately 3 vessel calls per week were made on the Port of Hampton Roads that required a draft of over 48 feet outbound.

In response to this need, the Hampton Roads maritime community requested a prompt improvement to the existing anchorage in order to provide an adequate and accessible anchorage area for the deep draft vessels. The federal government, through the U.S. Army Corps of Engineers, is expected to furnish federal funds for the project within days. However, in order for this project to commence in a timely manner, it is imperative that the Commonwealth support this initiative and furnish the Non-Federal sponsor's share of the costs.

The Deep Draft Anchorage is a component of the current and projected maritime infrastructure, necessary to maintain the Port of Hampton Roads' competitive position. As part of the Norfolk Harbor and Channels project, the 50-Foot Anchorage element would consist of the deepening and maintenance of the existing natural anchorage to a

depth of 50 feet below mean low water to provide for a conventional, circular anchorage with a radius of 1,500 feet. In addition, shoals located between the channel and the anchorage area would be removed and maintained to a depth of 50 feet to allow for adequate access.

The estimated project cost for the 50-Foot Anchorage and Access Areas is $4,347,000 (October 1997, fully funded dollars), with maintenance estimated at $1,030,000 every six years. The Water Resources Development Act of 1986, as amended, specifies the cost-sharing requirements associated with the construction and maintenance of Federal navigation projects. The estimated Non-Federal share of the construction cost of the project is $2,608,200, with the 6-year maintenance cost at $515,000. This study reviews three methods of funding the Non-Federal portion of the construction and maintenance costs of the Project.

As shown in the analysis of the several alternative funding methods, the use of "harbor" or "port" fees as a financing mechanism, whether on all vessels, on all coal colliers, or on deep draft coal colliers alone, will almost inevitably impact on the competitive position of the port. The federally imposed Harbor Maintenance Tax has already resulted in a loss of business to the Canadian ports. Another fee levied against the shipping industry would only exacerbate the problem. In addition, such a fee would likely be subject to a constitutional challenge, similar to what the Harbor Maintenance Tax has experienced.

In addition, the Port of Hampton Roads should not impose a fee that would affect Hampton Roads' competitive position with other East Coast ports, when those ports do not have similar user fees. In fact, efforts to stem cargo diversion is exactly what the Deep Draft Anchorage Project is all about. As part of the Norfolk Harbor and Channels project, the Deep Draft Anchorage was identified as necessary in order to provide an accessible anchorage for deep draft vessels inside the port area. Congress has authorized this project and the Commonwealth must now provide the Non-Federal share in order to keep the federal support and to commence the project in a timely manner. As indicated in the study, the Non-Federal share of the construction cost must be received soon after July 1, 1998. This time frame precludes the collection of any fees, even if not challenged, by the alternative methods identified in this study. The Non-Federal shares

of $2,608,200 for construction and $85,833 for annual maintenance are minimal amounts to insure that Virginia remains a world class port.

As such, it is the recommendation of the Deep Draft Anchorage Study Committee that the Non-Federal share of the Deep Draft Anchorage Project be funded through a General Fund appropriation by the 1998 Session of the General Assembly.

DUE TO THE DETAILED APPENDICES ATTACHED TO THIS REPORT, A COPY MAY BE REVIEWED BY CONTACTING:

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