

Users Guide to Dredging in Tidewater Virginia

Providing guidance through a dredging project - from the identification of a dredging need, to identification of sediment disposal site, to applying for a dredging permit, to the dredging of a channel

*Middle Peninsula Planning
District Commission*

September 2011



Middle Peninsula
Planning District Commission



Virginia Coastal Zone
MANAGEMENT PROGRAM



This project was funded the Virginia Coastal Zone Management Program at the Department of Environmental Quality through Grant #NA10NOS4190205 Task 44 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended.

The views expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Department of Commerce, NOAA, or any of its subagencies.

Executive Summary

As a coastal region, navigable waterways are critical to the economic fabric of the Middle Peninsula. Open waterways invite residents as well as tourists to explore and enjoy the coastal natural resources and wildlife of the region.

Over the years, the U.S. Army Corps of Engineers has been responsible to “ensuring navigation on our nation’s waterways moves safely, reliably, and efficiently with minimal impact to the environment, thus sustaining a vital component of the economy (USACE, 2010).” In 2009, however, Representative Robert Wittman held a meeting at the Middle Peninsula Planning District Commission to inform regional stakeholders that federal funding once available for the dredging of the shallow draft channels (ie. federally designated channels with depth of -15 feet mean lower low water (MLLW) or less), will no longer be available in the near future. Consequently localities, commercial property and/or private citizens will likely bear the burden of funding these shallow draft projects previously funded by the Corps.

The Middle Peninsula Planning District Commission (MPPDC), therefore, partnered with the Middle Peninsula Chesapeake Bay Public Access Authority (MPCBPAA), Virginia Marine Extension Program, and the U.S. Army Corps of Engineers to develop a Regional Shallow Draft Navigation and Sediment Management Plan that provides a matrix of channels designated as Federal Navigation Channels within the Middle Peninsula that will need to be maintained, the approximate cost of the project, as well as a recommended timetable to dredge channels within the Middle Peninsula. To supplement that report the MPCBPAA developed this guidance report to assist localities, as well as commercial property and/or private citizens with the execution of a shallow draft channel dredging projects (ie. federally designated channels or non-federally designated channels).

Although each project is unique and may require unique considerations there are a variety of common components that factor into a successful dredging project within Tidewater Virginia: (1) identification of a channel with a dredging need, (2) conducting a pre-dredge bathymetric survey to determine the current condition of the channel and volume of material to be removed, (3) identification and selection of a dredge disposal site, typically public or, private beaches and/or, private or public upland containment sites, (4) applying for and receiving the necessary permits via the submission of the Commonwealth of Virginia’s Standard Joint Permit Application (JPA) and attendance, as necessary, at one or more required public hearings, (5) selection of a contractor and execution of the contract, (6) convening a pre-dredging conference with representatives from the appropriate regulatory agencies, (7) initiation and completion of the proposed dredging project, and (8) submission of a post-dredge bathymetric survey to permitting authorities for determination of permit compliance. As each component influences the overall cost of a dredging project it is important that applicants, whether a public entity, private entity or a public private partnership, weigh the various options as federal funding to maintain shallow draft navigable waterways will likely no longer be available in the future.

Introduction

In October 2010, the Middle Peninsula Planning District Commission (MPPDC) and the Middle Peninsula Chesapeake Bay Public Access Authority (PAA) partnered with the U.S. Army Corps of Engineers (USACE) and Virginia Marine Extension Services to develop a Regional Shallow Draft Navigation and Sediment Management Master Plan. As part of the plan a clear understanding of the dredging process and associated regulatory issues was critical, particularly as the financing paradigm for shallow draft channel dredging projects switch from being primarily federally funded to a privately funded activity. This document outlines the steps and the applicant responsibilities necessary to execute a dredging project in Tidewater Virginia - from identifying the dredging need, to identifying a disposal site for the dredge material, to applying to the appropriate regulatory authorities for a permit, to the actual dredging of the channel. Thus, before significant local investments are committed to regional dredging efforts, Virginia localities as well as commercial property and/or private citizens will need to consider various approaches to dredging, the placement of dredged material, and project financing regimes.

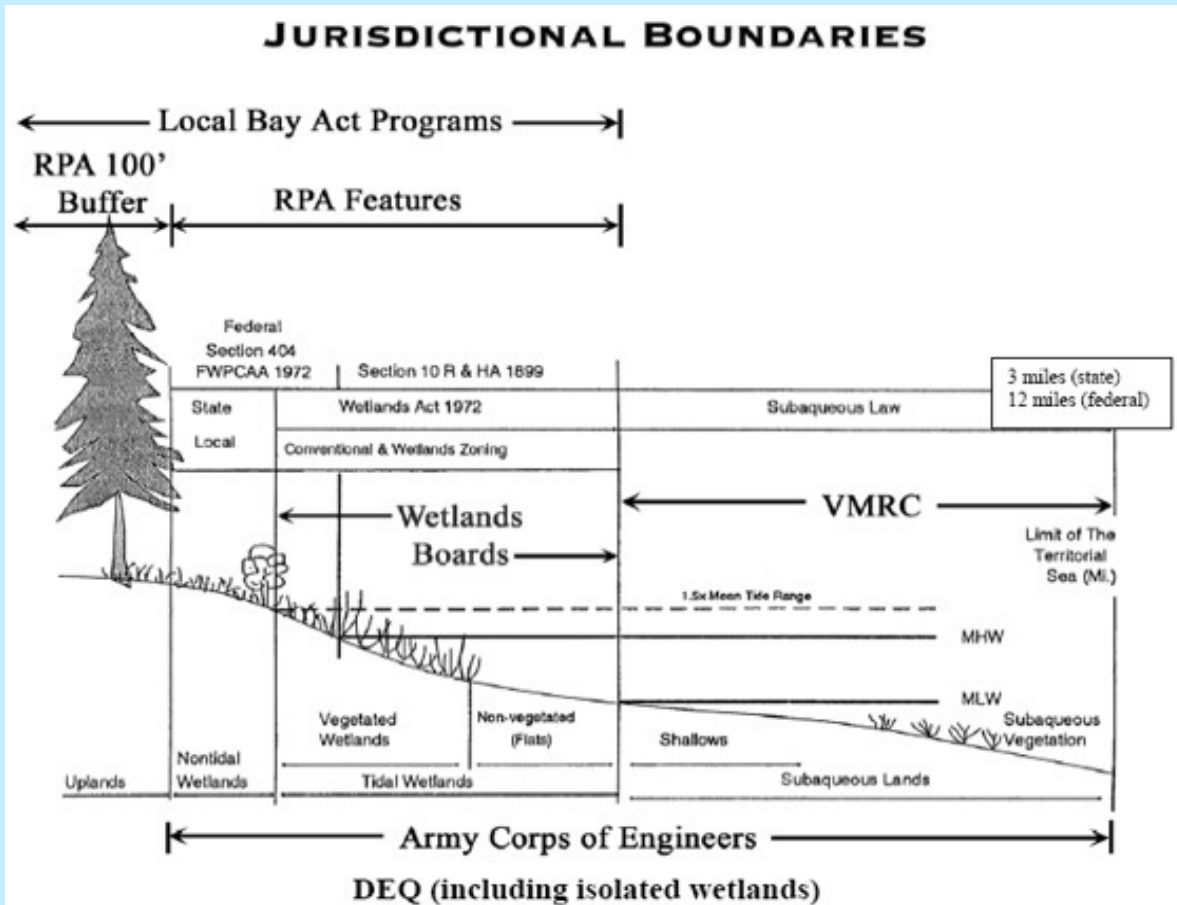
STEPS: The Execution of a Dredging Project

1. Identify Channel with Dredging Need:

To begin the dredging process, a navigable channel must be identified as having a need for dredging, which is evident when navigation becomes obstructed and/or limited, particularly due to shoaling. The need may be identified by a private or public entity, but may also be identified by the USACE if a problem is noticed during a routine survey of a channel. Following the identification of a channel in need of dredging, the party interested in having the channel dredged may choose to meet with the regulatory agencies responsible for the review and permitting of the proposed dredging. These agencies typically include the USACE, Virginia Department of Environmental Quality (DEQ), Virginia Marine Resources Commission (VMRC) and local wetlands board. The agencies will review the channel in question and the associated project need. Preliminary comments will be offered relative to the information necessary to complete the JPA and the agencies will recommend design considerations necessary to avoid or minimize adverse environmental impacts. Also there will be consideration and discussing regarding the suitability of the proposed disposal site as well as the associated permit fees, royalties and/or mitigation costs.

The Role of Jurisdictional Boundaries

The jurisdictional boundaries of the Virginia Commonwealth in conjunction with the specifics of the individual dredging project will ultimately determine the permits necessary to complete a dredging a project. As shown in the figure, the jurisdictional boundaries of federal, state and local jurisdictions are have the tendency to overlap which makes the permitting process project specific and at times complicated.



With a specific channel identified, it is important to note whether the channel has been previously dredged or not. This will likely influence the amount of permit fees and royalties required by the permitting agencies. According to VMRC's Subaqueous Guidelines Section II, K, II maintenance dredging is defined by VMRC as dredging activities for navigation purposes that have been previously authorized by the Commission, to the depth previously authorized by the Commission, and where a royalty, if applicable, has been previously paid to the Commission for the initial removal of State-owned submerged lands. (Please note that public entities, including towns, cities and counties are exempt from dredging royalties). As a maintenance dredging project, the applicant is required to pay VMRC's permit fee, but shall be exempt from all other fees and royalties. Typically, maintenance dredging requires no additional permit fees from the USACE or DEQ, however, mitigation costs may or may not be applicable. If a project is within the jurisdiction of the local wetlands board, permit fees and/or mitigation costs may be required. This will vary between counties.

2. Pre-Dredge Bathymetric Survey:

For the identified channel, a pre-dredge bathymetric survey is needed to determine the water depths relative to mean low water (MLW). The pre-dredge survey may be performed by anyone (ie. certified engineer, licensed land surveyor or firm, private entity, etc), but should include sufficient transects and be referenced to MLW. The survey evaluates current depth conditions and ultimately guides the amount of dredging that will occur at the site (Figure 1). For private channels, maximum project depths typically are governed by the draft of the vessels utilizing the area. For channels designated as federally maintained, maximum project depths are previously established by the District Engineer (USACE) or by Congress.

3. Identify and Select Disposal Site:

Once a channel is identified as having a dredging need, a disposal site location should be determined and prepared to receive and permanently contain the dredged material. Since overboard disposal of dredged material into tidal waters is generally not permitted (VMRC Subaqueous Guidelines Section III, E), applicants will need to consider disposal areas that are acceptable to the various permitting agencies. Factors to consider for a disposal site, include, but are not limited to the following (VMRC Subaqueous Guidelines Section III, C):

1. Encroachment into natural drainage ways;
2. Chemical nature of the dredged material and its potential for polluting adjacent or nearby underground water supplies;
3. Encroachment over the underground utilities, ie. water lines and sewer facilities;
4. Value of the site to the natural environment;
5. Proximity to populated areas; and
6. Anticipated use of the material or disposal site after dredging material is placed and consolidated.

According to §10.1-704 of the Code of Virginia, the beaches of the Commonwealth (ie. beaches classified as public) shall be given priority consideration as sites for the disposal of dredged material determined to be suitable for beach nourishment for public benefit. The Secretary of Natural Resources shall have the responsibility of determining if the dredged material is suitable for beach nourishment; however if a public beach placement site is not suitable or available, dredged material may be placed on private beach, or in a

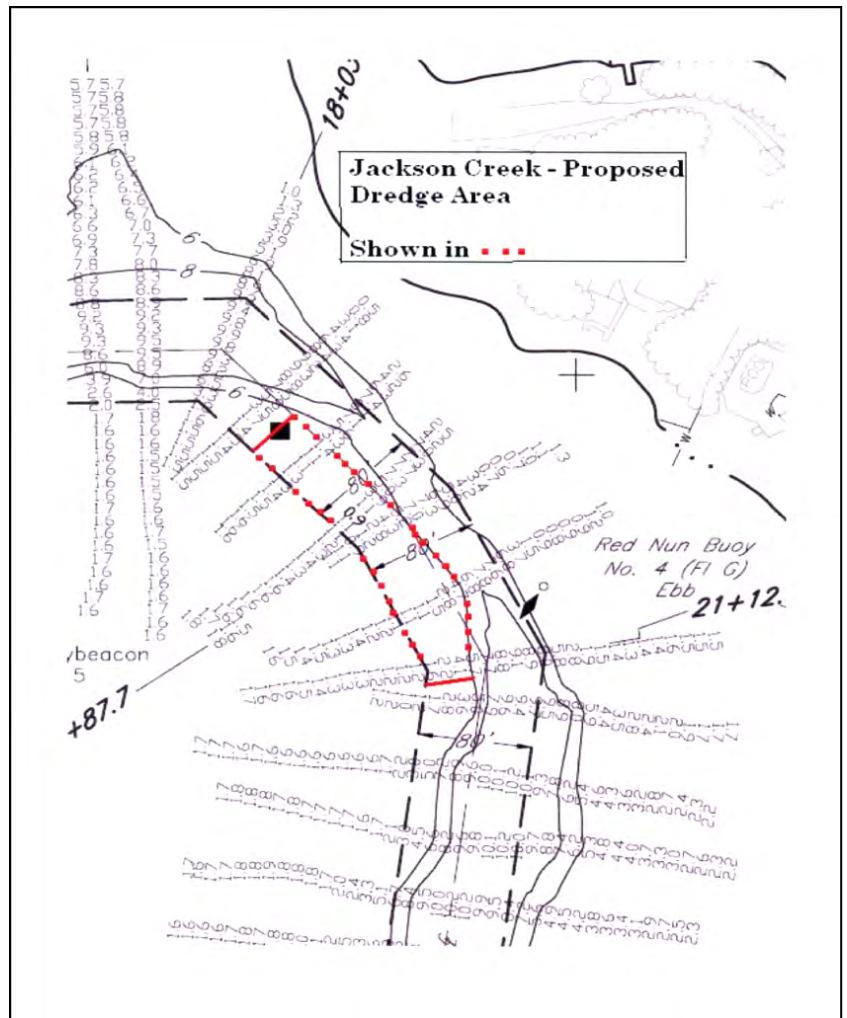


Figure 2: Example of a bathymetric survey indicating the depth of the Jackson Creek (Middlesex County) Channel. The red denotes the proposed dredged location parameters.

private or public upland containment site. In general the regulatory and advisory agencies reach a decision on the suitability of an area for beach nourishment.

Depending on the sediment disposal site, VMRC has associated royalties. Such royalties may be important in determining the most feasible disposal site for the dredge project:

a. Public Beach –

If a public beach is chosen as the disposal site, fee simple and adjacent property owners may benefit from the additional protection offered by the larger beach. VMRC requires a permit and charges an encroachment royalty of \$0.05 per square foot for placement of sandy dredge material over the adjacent State-owned subaqueous lands (ie. area channelward of MLW). The placement of sandy dredge material on public or private beaches, landward of MLW, is exempt from local wetlands boards. Permits may, however, be required from the DEQ and the USACE.

b. Private Beach or Shoreline-

Applicants may have to work with fee simple and adjacent property owners to obtain an easement if the proposed disposal site is a private beach or shoreline. If the private property owner is unwilling to relinquish property rights to the applicant, then they will need to apply for permits to allow for the placement of the dredge material on their property. Ideally the applicant and property owner will be co-applicants on the VMRC JPA (see Section 3 for more information). VMRC has no jurisdiction landward of MLW; therefore, there will never be a placement royalty assessed by VMRC for the disposal of dredge material above MLW. The placement of sandy dredge material on public or private beaches, landward of MLW, is exempt from local wetlands boards. Permits may, however, be required from the DEQ and the USACE. The placement of dredge material on intertidal shorelines which do not meet the definition of a beach will require permits from the local wetland board, DEQ and the USACE.

c. Private Upland Containment Site –

A containment site owned privately may be used for disposal of dredged material, particularly if the dredge material is unsuitable for beach nourishment. The upland containment site acts as a permanent reserve for dredged sediment and in some case acts as a holding location for dredged material to dry. Also in ideal situations the upland containment site is not located within the Resource Protection Area¹ (RPA).

d. Public Upland containment site –

A containment site owned by a public entity may be used for disposal of dredged material, if it is unsuitable for beach nourishment. The upland containment site acts as a permanent reserve for dredged sediment and in some case acts as a holding location for dredged material to dry. Also in ideal situations the upland containment site is not located within the RPA.

Additionally as county wetland boards regulate the use and development of wetlands, the placement of dredged material on public and private beach, and/or upland private or public containment site may fall in the jurisdiction of the local Wetlands Board. Wetlands Boards within the Middle Peninsula have varying wetland permit application fees and they each have varying degrees of experience in working with dredging projects. Wetland Boards will receive the JPA application for review and within 45 days the Wetland Board will make the notify the applicant if a wetland permit is required or not. Table 1 reviews the fee schedule for wetland permits within the Middle Peninsula.

¹ **RESOURCE PROTECTION AREA (RPA):** that component of the Chesapeake Bay Preservation Area comprised of lands adjacent to water bodies with perennial flow that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts which may result in significant degradation to the quality of state waters (9VAC10-20-40).

Table 1: Local Wetland Board Permit Fee Schedule

County	Wetland Permit Fee	Contact for more information
Essex	Currently the county does not have fee schedule in place. However there a public hearing would be needed for the project.	804-443-4951
Gloucester	Non-commercial/residential: \$200 Commercial Projects: \$300	804-963-1217
	<ul style="list-style-type: none"> ▪ Includes cost of advertising the proposed project in public notice section of local newspaper ▪ permit valid for 1 year 	
King & Queen	Residential: \$300 Commercial Projects: \$400	804-785-5975
	<ul style="list-style-type: none"> ▪ permit application needs to be submitted 6 weeks prior to Wetlands Board Meeting ▪ permit valid for 18 months ▪ if project is exempt then there is still a \$25 fee to review the JPA 	
King William*	\$300 Wetland Permit Fee (ie. flat rate) for Public Hearing and review by the Wetland Board	804-769-4969
Mathews	Single-User (private, non-commercial, residential): \$150 Multi-User (commercial, community, industry, government): \$200 After the fact Application – Double the application fee and subject to possible violation fees up to \$10,000	804-725-1624
	-fees include advertising for public hearing paid by county	
Middlesex	Private Use: \$150 Commercial Use or community Use \$250	804-758-3382
	-fee includes cost of public hearing, the cost of advertising proposal in Southside Sentinel for two weeks and Wetland Permits	

4. Submission of the Joint Permit Application:

One of three parties, including a public entity (ie. political subdivision), private entity (ie. home owner, home owner association), or a public private partnership, may request a dredging project. This request is made upon the completion and submission of a Local/State/Federal Standard Joint Permit Application (JPA) (Appendix B) to VMRC. Commission serves as the clearinghouse agency for the distribution of the JPA to the advisory and regulatory agencies routinely involved in the review and permitting of dredge projects. This application must be submitted for any and all projects which propose to impact to tidal and non-tidal shorelines and submerged lands. This includes dredging projects, erosion control project, private or commercial piers, utility and road crossings, etc. Upon receipt of a given application by all of these regulatory agencies, the JPA is concurrently reviewed by the wetlands board, VMRC, USACE, and DEQ. Most dredge projects additionally are received by the National Marine Fisheries Service (NMFS), the Environmental Protection Agency (EPA), the Virginia Institute of Marine Science and possibly other State advisory agencies.

In accordance with the Code of Virginia, VMRC assesses a permit fee of \$25 for projects costing \$10,000 or less, and \$100 for projects costing more than \$10,000. Copies of the JPA may be obtained from the local wetlands boards, VMRC, DEQ, USACE, or can be downloaded from the Norfolk District Corps of Engineers web site at <http://www.nao.usace.army.mil/technical%20services/Regulatory%20branch/Web2008StdJPA.pdf>.

Agencies will review the JPA application and contact the applicant individually about additional permit requirements for the project. As mentioned earlier each project is unique which requires unique consideration as well as associated permits.

As the USACE has regulatory authority over Section 404 of the Clean Water Act (33 U.S.C. §1344), Section 10 of the Rivers Harbors Act of 1899 (33 U.S. C. §403), and Section 103 of the Marine Protection Research and Sanctuaries Act (33 U.S.C. §1413), shallow water dredging projects may qualify for additional national and regional permits. The USACE will notify the prospective permittee within 45 days of receiving the JPA application whether the project may proceed under the nationwide permit or whether an individual permit is required. If, after reviewing the notification, the District Engineer determines that the proposed activity would have more than a minimal individual or cumulative adverse impact on the aquatic environment or otherwise may be contrary to the public interest, the engineer will either condition the nationwide permit authorization or reduce or eliminate the adverse impacts, or notify the prospective permittee that the activity is not authorized by the nationwide permit and provide the permittee with instruction on how to seek authorization under an individual permit. The specifics of the projects will determine the type of permits required for the project, but below is sample of permits that dredging project may require:

Nationwide Permit 3 Maintenance²: authorizes the removal of accumulated sediments and debris in the vicinity of and within an existing structure and the placement of new or additional riprap to the structure. The removal of sediment is limited to the minimum necessary to restore the waterway in the immediate vicinity of the structure to the approximate dimensions that existed when the structure(s) was built but cannot extend further than 200 feet in any direction from the structure.

Nationwide Permit 19 Minor Dredging³: authorizes dredging of no more than 25 cubic yards below the plane of the ordinary high watermark or the mean high water mark from navigable waters of the United States.

LOP-2 (Letter of Permission)⁴: authorizes dredging (channels and basins) for certain navigationally-related recreational and commercial dredging projects, by either mechanical or hydraulic method, in waters of the United States, within the geographical limits of the Commonwealth of Virginia under the regulatory jurisdiction of the Norfolk District Corps, subject to the terms and conditions further set out herein.

To have questions answered about particular projects within the region please call the Northern Neck USACE field office at 804-435-9362 or Gloucester County USACE field office at 804-642-5389.

As the Virginia Department of Environmental Quality administers the Virginia Water Protection (VWP) Permit Program (§§ [62.1-44.15](#) and [62.1-44.15:20](#) of the Code of Virginia) for the Commonwealth, impacts to surface waters such as land clearing, dredging, filling, excavation, draining or ditching in open water, streams and

² For more details and a copy of the permit visit: www.nao.usace.army.mil/technical%20services/Regulatory%20branch/NWP2007/NW-3.pdf

³ For more details and a copy of the permit visit: www.nao.usace.army.mil/technical%20services/Regulatory%20branch/NWP2007/NW-19.pdf

⁴ For more details and a copy of the permit visit: www.nao.usace.army.mil/technical%20services/Regulatory%20branch/08-LOP-Final/08-LOP02%20Permit.pdf

wetlands require such a permit. For maintenance dredging previously authorized, a regional permit 19 (RP-19) may be required which does not include a fee. However if it is determined that a permit from DEQ is required, then the fee structure is based on the size of the area to be dredged, the amount of material to be removed, the habitat of the area, and if the area is tidal or non-tidal. Since each project is case specific and such things as avoidance and minimization of wetland impacts, and project purpose and need are all taken into consideration it is best to call the DEQ Tidewater Regional Office for more details at (757) 518-2158.

Once the application has been approved by all of the regulatory agencies exerting jurisdiction, the permittee is responsible for the project's permit fees, associated dredging and placement royalties and/or mitigation costs. With respect to VMRC, according to VA Code §28.2-1206 Section E, "All counties, cities and towns of the Commonwealth shall pay the required permit fee but shall be exempt from all other fees;" such fees include dredging and placement fees. For private applicants, dredging fees will apply while VMRC will consider the dredging fees for private public partnerships on a case by case basis. The approved permit shall specify a royalty which may not be less than \$0.20 per cubic yard and no more than \$0.60 per cubic yard. In establishing the royalty, VMRC takes the following factors into consideration:

1. The primary and secondary purpose for removing the bottom material;
2. Whether the material has any commercial value and whether it will be used for any commercial purpose;
3. The use to be made of the removed material and public benefit or adverse effect upon the public that will result from the removal or disposal of the material;
4. The physical characteristics of the material to be removed; and
5. The expense of removing and disposing of the material.

In most cases the applicant is charged \$0.45 per cubic yard for dredged material, proposed to be removed from State-owned bottom. If the dredged material is high quality and has the potential for commercial use, then the applicant may be charged \$0.60 per cubic yard.

As stated earlier, another factor contributing to the project's associated dredging royalty is whether the project is considered a maintenance dredge project or not. A maintenance dredge, as defined by VMRC, is a dredging activity for navigation purposes that have been previously authorized by the Commission, to the depth previously authorized by the Commission, and where a royalty, if applicable, has been previously paid to the Commission for the initial removal State-owned submerged lands (Constitution VMRC Subaqueous Guidelines Section II). Therefore if one's project meets this definition the permittee is exempt from dredging royalties. If the project is not considered maintenance then the permittee will be charged \$0.20-\$0.60 per cubic yard.

A permittee is also responsible for placement royalties. If the dredged sediment is placed below mean low tide then the associated royalty is \$0.05 per square foot. However to place dredged material above the mean low water mark on private property, the private property owner may have to obtain a wetlands or coastal primary sands dunes and beaches permit.

Ultimately the permittee is liable for the proper completion of the project, in particular closely adhering to all of the permit conditions issued by the regulatory agencies. These include strict adherence to the maximum permissible project depths, vegetated wetlands buffers, allowable dredge footprints and proper erosion and sediment control at the dredge cut, pipeline or transfer route and dredge disposal site. The permittee is also required to adhere to any regulations or laws that protect threatened and endangered species and other sensitive habitats such as submerged aquatic vegetation or oyster reefs.

For a comprehensive overview of permit fees, dredging fees, and encroachment/placement fees associated with dredging projects, please refer to the Table 3.

5. Selection of a contractor:

With the parameters for a dredged project approved by the appropriate regulatory agencies, the permittee seeks bids from marine contractors and subcontractors capable of meeting the permits parameters.

6. Pre-dredging conference:

Often, as permit condition, a pre-dredging conference is held at the site prior to the commencement of dredging. The permittee, the dredging contractor, and a member of the VMRC staff must attend the meeting. Other agencies may choose to participate. Held seven days prior to the commencement of dredging, the conference includes an inspection of the dredge material containment area, an inspection of the previously staked dredge area, and a discussion of the terms and conditions of the permit.

7. Dredging

Initiation of the dredge project commences only after all parties acknowledge that they understand the terms and conditions of the permits issued.

8. Post-Dredge Bathymetric Survey:

The permittee will often be required to provide a post-dredging bathymetric survey of the dredged area within 30 days following dredging of the channel. The survey must be signed and dated as being accurate and true. The survey must be referenced to mean low water and include a transect at the channelward end of the dredge cut and at specified intervals along the dredged channel to the landward terminus of the dredged area. Accurate bathymetric data from each transect shall be used to establish the top width of the dredge cut ($\pm 1'$) and must include a depth measurement exterior to both sides of the dredge cut. If applicable, the survey must also indicate the horizontal distance between the top of the dredge cut and the vegetated wetlands depicted on the project drawings.

9. VMRC Final Review:

VMRC is responsible for regulating activities on State-owned submerged land, tidal wetlands and dunes/beaches pursuant to Chapters 12, 13, and 14, Subtitle III, of Title 28.2 of the Code of Virginia. Hence, following dredging activities and receipt of the required post-dredge bathymetric survey, VMRC staff will review the dredged activity to verify that it was completed in accordance with the terms and conditions of their permit. The remaining permitting authorities will also review the project to insure project compliance with their laws and regulations.

Table 3: This matrix identifies sediment disposal options as well as the associated costs (ie. permit fees, dredging fees and royalties and encroachment fees) for entities interested in pursuing a maintenance or new dredging project.

Dredging Project Applicant	Type of Dredging		Sediment Disposal Site Options				Associated Costs			
	Maintenance	New	Public Beach	Private Beach		Public Upland Containment Site	Private Upland Containment Site	Permit Fees	Dredging fees and royalties	Encroachment/Placement royalties
				Easement	No easement					
Public Entity	*		✓	✓		✓	✓	VMRC: Dredging Permit is \$25, but if the cost of the project is to exceed \$10,000 the permit fee of \$100 shall be paid DEQ: will vary based on permit requires (ie. Virginia Water Protection Permit) USACE: individual permits may require a fee up to \$100 (case sensitive); additional permits related to a nationwide permit there are no additional permit fees Local Wetland Board: Wetland Permit fees vary (Refer to Table 2)	Counties, Cities and Towns are exempt from all other dredging royalties	Counties, Cities, and Towns are exempt from all other dredging royalties
Public Entity		*	✓	✓		✓	✓			
Public Entity	*		✓		✓	✓	✓			
Public Entity		*	✓		✓	✓	✓			
Private Entity	*		✓	✓		✓	✓	VMRC: Dredging Permit is \$25, but if the cost of the project is to exceed \$10,000 the permit fee of \$100 shall be paid DEQ: will vary based on permit requires (ie. Virginia Water Protection Permit) USACE: individual permits may require a fee up to \$100 (case sensitive); additional permits related to mulit-user permits there are no additional permit fees Local Wetland Board: Wetland Permit fees vary (Refer to Table 2)	Exempt from all other fees and royalties due to being a maintenance dredging activity	\$0.05 / ft ² below MLW and the applicant may have to pay legal fees to obtain an easement for placement on private property
Private Entity		*	✓	✓		✓	✓			
Private Entity	*		✓	✓	✓	✓	✓			
Private Entity		*	✓	✓	✓	✓	✓			
Public Private Partnership	*		✓	✓		✓	✓	VMRC: Dredging Permit is \$25, but if the cost of the project is to exceed \$10,000 the permit fee of \$100 shall be paid DEQ: will vary based on permit requires (ie. Virginia Water Protection Permit) USACE: individual permits may require a fee up to \$100 (case sensitive); additional permits related to mulit-user permits there are no additional permit fees Local Wetland Board: Wetland Permit fees vary (Refer to Table 2)	Exempt from all other fees and royalties due to being a maintenance dredging activity	\$0.05 / ft ² below MLW and the applicant may have to pay legal fees to obtain an easement for placement on private property
Public Private Partnership		*	✓	✓		✓	✓			
Public Private Partnership	*		✓		✓	✓	✓			
Public Private Partnership		*	✓		✓	✓	✓			

Additional Information:

The U.S. Army Corps of Engineers also has a primary responsibility for the removal of debris from federally maintained navigable channels and waterways. Section 202 of the Water Resources Development Act of 1976 authorizes the USACE to remove debris from federally maintained commercial harbors and water areas immediately adjacent thereto. Additionally, the USACE is responsible for the removal of salvable vessels, marine debris, and other obstructions from federally maintained navigable waterways under emergency conditions. In the case that a waterway is obstructed by large pieces of debris, on a non-emergency basis, funds for removing debris are limited for localities.

Added Value and Benefit:

As mentioned earlier, an applicant has four general options to dispose of dredged material (i.e., private beach, public beach, public containment site, and private containment site). However, to add additional value to the dredged material, which may benefit the public, Middle Peninsula localities could consider placing dredged material at road endings to improve regional water access. Through past research, the Middle Peninsula Chesapeake Bay Public Access Authority (PAA) identified over three hundred road endings within the Middle Peninsula that could potentially yield access to public water. Additionally, the PAA could work with neighbors at these road ending sites to expand public beach or water access.

Conclusions:

Although dredging projects within the Tidewater Virginia area have a general procedure to follow, each project presents unique permitting requirements. Therefore, as the funding paradigm for shallow water projects is anticipated to change from a primarily federally funded to a privately funded activity, private citizens and public entities have a variety of factors to consider in the future dredging of shallow draft channels; however, closely working with Virginia regulatory agencies involved with authorizing JPA may ease the permitting process for shallow draft navigation projects and will ultimately help to keep channels open for navigation within the region.

Check List for Executing a Dredging Project

- Identify channel with dredging need
- Conduct a pre-dredge bathymetric survey
- Identify and select a location for disposal of dredged material
- Apply for and receive the necessary permit via the submission of the Commonwealth Joint Permit Application (Appendix A- JPA) and attend one or more required public meetings.
 - Applicant name and address
 - Detailed description of the proposed activity
 - Map drawn to an appropriate and uniform scale – should include area of wetlands directly affected, the location of the proposed work thereon, the area of existing and proposed fill and excavation, the location width depth and length of any proposed channel and disposal area, and the location of all existing and proposed structures, sewage collection and treatment facilities, utility installations, roadways, and other related appurtenance of facilities
 - Description of the type of equipment to be used and the means of access to the activity site;
 - Names and addresses of record of adjacent land and known claimants water rights in or adjacent to the wetland of whom the applicant has notice
 - Cost estimate
 - Primary purpose of the project
 - Secondary purpose of the proposed project
 - Complete date of the measures to be taken during and after alternation to reduce detrimental offsite effects;
 - Completion date of the proposed work, project or structure
 - Additional material and documentation as the wetlands board may require.

When Joint Permit Application is approved by the various regulatory agencies....

- Put project out to bid and select a contractor
- Conduct pre-dredging conference with representatives from the appropriate regulatory agencies and the dredging contractor
- Executive contract (ie. dredge channel and place dredged material)
- Conduct post-dredge bathymetric survey

Appendix A: **Glossary**

Beach- the shoreline zone comprised of unconsolidated sandy material upon which there is mutual interaction of the forces of erosion, sediment transport and deposition extending from the mean low water line landward to where there is a marked change in either material composition or physiographic form such as a dune, bluff, or marsh, or where no such change can be identified, to the line of woody vegetation (usually the effective limit of storm waves), or the nearest impermeable manmade structure, such as a bulkhead, revetment, or paved road (§28.2-1400 of the Code of Virginia).

Beach nourishment- placement of good quality sand along a beach shoreline to raise the elevation of the nearshore area.(VIMS, 2006)

Beach of the Commonwealth- public beach

Joint Permit Application or JPA- The standard Joint Permit Application for shoreline stabilization structures and other activities conducted in wetlands and the marine environment. The applicant completes one form and submits to either local agency or VMRC, which is responsible for distributing to local, state and federal permitting and advisory agencies (e.g. VIMS, Department of Game and Inland Fisheries, Department of Conservation and Recreation, Department of Environmental Quality, U.S. Army Corps of Engineers). (VIMS, 2006)

Maintenance Dredging- is strictly defined by the VMRC as dredging activities for navigation purposes that have been previously authorized by the Commission, to the depth previously authorized by the Commission, and where a royalty has been previously paid to the Commission for the initial removal State-owned submerged lands (Constitution of Virginia Article XI Section II)

Mean Lower Low Water- A tidal datum, a standard elevation defined by a certain phase of the tide The average of the lower low water height of each tidal day observed over the National Tidal Datum Epoch (The specific 19-year period adopted by the National Ocean Service as the official time segment over which tide observations are taken and reduced to obtain mean values (e.g., mean lower low water, etc.) for tidal datums.) For stations with shorter series, simultaneous observational comparisons are made with a control tide station in order to derive the equivalent datum of the National Tidal Datum Epoch. (NOAA, 2011)

Mean low water -The average height of low waters over a nineteen year period. Virginia is a low water state, meaning private property extends to the mean low water line. (VIMS, 2006)

Private beach- a beach, as defined by §28.2-1400 of the Code of Virginia, whose underlying fee (ownership) is held privately and not by a local, state or federal governmental entity and whose public use is restricted or controlled by the property owner.

Public beach- a sandy beach located on a tidal shoreline suitable for bathing in a county, city or town and open to indefinite public use (Code of Virginia §10.1-705)

Royalties- fees paid to the Commonwealth for certain uses of submerged public lands. They are assessed in addition to permit fees. All royalties are subject to change in accordance with the Commission's public participation procedures and regulatory adoption process. Contact the Virginia Marine Resources Commission Habitat Management Division for a current royalties schedule. (VMRC Subaqueous Guidelines Section I)