2023 VIRGINIA COASTAL ZONE MANAGEMENT PROGRAM GRANT

Project Title: Virginia Dredged Material Beneficial Use Guidance Document

I. LEGAL APPLICANT

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Unique Entity Identifier (UEI-SAM): VQLKFKKVDWL7

II. PROJECT DETAILS

Geographic Area of Impact: Virginia's Coastal Zone
Congressional District(s): VA-001, VA-002, VA-003, VA-004, VA-007, VA-008
Start Date: October 1, 2023 End Date: September 30, 2024

Project continuing from previous year? No

III. PROJECT SUMMARY

Despite the known benefits of reusing dredged material to restore coastal habitats, Virginia does not currently have a working process or policy to align dredging projects with beneficial use (BU) projects. A myriad of project elements including design, permitting, construction timeline, ecologic and socio-economic considerations, and financing must align between both the dredge and the proposed restoration project to properly coordinate and implement a BU project. Due to the complexity of the process, few BU projects have historically been implemented in Virginia, although the Commonwealth has committed and increased levels of funding in recent years to support local government dredging activities with preference for projects which involve BU. It is anticipated that the demand for BU projects will increase substantially over the coming years with the increase in funding and more frequent and severe storm impacts resulting in greater negative impacts to coastal habitats and property.

This project will result in a guidance manual that will create a framework for coordinating, planning, siting, and implementing BU of dredged material. The intent of this manual is to inform, expedite dredge projects and dredge material use planning and approvals and encourage new forms of sediment management in Virginia. It can support new enforceable policy development for BU projects and will support Virginia's Wetland Action Plan wetland restoration goals and the Chesapeake Bay Watershed Agreement Wetland Outcomes. Additionally, it will support new BU goals for the United States Army Corps of Engineers (USACE)'s Norfolk District. The guidance document will summarize best management

practices from a national review of BU projects and describe the state and federal permitting process to inform Virginia specific criteria, and technical standards for project design, construction, and monitoring. It will describe the range of BU opportunities in coastal Virginia, identify potential project partners and locations, include recommendations to achieve net benefits that are typically associated with habitat restoration projects. The project will assess the application of existing dredged material decision tools to evaluate the feasibility of several projects proposed in Virginia and propose tool modification, as needed, to serve Virginia's needs more specifically.

The proposed guidance manual will assist both governmental and non-governmental entities to plan, propose, permit, and implement projects that use dredged material from navigation channels, harbors, and other sources with projects that potentially provide multiple ecosystem, resilience, and water quality benefits. Economic benefits could be achieved in the reduction of time spent planning and permitting, and in reducing costs that would otherwise be incurred to transport dredged material to an upland placement site or to bring fill material to a restoration site.

The project will be managed by Rachael Peabody of the Virginia Marine Resources Commission (VMRC), who will oversee a competitive bid process to select a qualified consulting firm to perform the project tasks; 1) produce a Technical Guidance Document, 2) create the Project Feasibility Decision Framework, and 3) lead and collaborate with the project team on Stakeholder Engagement, including the creation of a Project Advisory Committee. VMRC will also assist with Stakeholder Engagement and will produce the final report summarizing efforts associated with Products #1, #2, and #3. The Virginia Institute of Marine Science (VIMS), Virginia CZM, and the Middle Peninsula Planning District Commission (MPPDC) will assist in development of Products #1, #2, and #3 by providing regional and local knowledge of dredging projects and practices, scientific assessments of dredged material and site suitability mapping, and document review.

IV. DELIVERABLES/PRODUCTS

Product #1

Title: **Technical Guidance Document**
Percent total project budget: 60%
Description: The consultant will compile and document existing technical and planning manuals that are relevant for use in coastal Virginia, invite Maryland CZM staff (previous work on beneficial use) to provide consultation, and incorporate elements of the technical guidance manual being produced by the Elizabeth River Project (ERP) through the 2022 National Fish & Wildlife Foundation (NFWF) grant *Developing and Piloting a Coastal Resilience Toolkit for Thin Layer Placement in Coastal Virginia* into a more comprehensive manual for all potential BU methods applicable to coastal Virginia, including the creation of new or expanded Virginia-specific definitions of sediment BU. The consultant, VMRC, MPPDC, and VIMS ("Project Team") will work with project partners to identify and describe the range of fates, including disposal and uses, for dredged material considering existing standard practices and new approaches within the context of potential beneficial and adverse impacts; provide general guidance and risk-based screening criteria for the sampling and testing of dredged material and dredged material blends/mixtures and propose BU options; propose recommendations for sediment screening protocols for county, municipal and private use of the BU site as well as water quality criteria associated with different types of material placement; review potential products for habitat restoration and shoreline resilience using a variety of dredged material. The Project Team will also recommend frameworks for long-term monitoring, adaptive management, and maintenance plans for BU sites; estimate to the extent practicable the volume of material (by sediment type) that will result from dredging

projects in Virginia based on feedback from stakeholders; and describe BU opportunities within Virginia and discuss the technical merits of each solution, including a MPPDC test cases. Additionally, the MPPDC is utilizing funding from the Virginia General Assembly to launch a municipal dredging program for the Middle Peninsula, and it is desired that volumes of dredged material produced through the program be utilized in a manner that benefits the recently designated NOAA Habitat Focus Area (HFA) in the Middle Peninsula. MPPDC staff will explore conceptual BU projects with VMRC and the USACE so that forthcoming permit applications are submitted in a manner that best suits the priorities and requirements of permitting authorities. It is intended that lessons learned from the BU projects in the region will benefit the development of the guidance manual. Finally, a design charrette will be hosted by VMRC, Virginia CZM, the USACE, and MPPDC to explore and discuss pilot BU projects intended to contribute to the Middle Peninsula HFA. Please see the Project Timeline section below for more details on each task.

Product Format: Word and PDF copies of a standalone document that will be included as an appendix in the Final Report (Product #4). A summary of the methods used (literature review, etc.) to develop the Technical Guidance Document will be part of the Final Report.

Timeframe: *Start:* November 1, 2023
End: September 30, 2024

Product #2

Title: **Project Feasibility Decision Framework**

Percent total project budget: 15%

Description: The Project Team will a) include in the guidance a description of the permitting process and regulatory players within a permit review in Virginia; b) assess the overall feasibility of several proposed dredging locations using the U.S. Environmental Protection Agency (EPA)'s existing Dredged Material Decision Tool (DMMT), then tailor the tool's parameters to align with conditions and priorities in Virginia; c) develop a short user's guide for the new Virginia tool, including a detailed logistics checklist for different project types that features how the material can be transported from the dredge site to the BU site as well as cost data for all permitted disposal options; and d) describe alternative means to USACE funding to finance projects in Virginia by outlining timelines, eligibility criteria, and common application terms for federal, state, regional, and local government as well as the private sector funding opportunities. VIMS and MPPDC will develop a framework with criteria for a GIS-based BU suitable site inventory or database, including sites identified by conservation entities in most need of restoration or enhancement. The Project Team will develop planning timelines for using dredged material for beneficial purposes based on project type. The Project Team will create a collaborative decision framework to be utilized by Virginia project managers and permitting decision makers and establish a BU framework and manual that identifies options to align Virginia efforts with the habitat restoration and natural resilience goals established by the Chesapeake Bay Watershed Agreement, USACE Norfolk District, Virginia CZM, and NGO's participating in the stakeholder engagement aspect of the project. The Project Team will work with the Project Advisory Committee (see Product #3 below) to create general criteria to establish BU use for each habitat type. Finally, the Project Team will incorporate the consideration of community-based justice screening tools such as (e.g., EPA's EJScreen, ERP's Environmental Justice Mapping Tool, and relevant layers from the Virginia Coastal Resilience Web Explorer into the BU decision framework. Please see the Project Timeline section below for more details on each task.

Product Format: Word and PDF copies of a standalone document that will be included as

an appendix in the Final Report (Product #4). A summary of the methods used to develop the Project Feasibility Decision Framework (cost calculations, graphics, etc.) will be part of the Final Report.

Timeframe: *Start:* November 1, 2023
End: September 30, 2024

Product #3

Title: **Project Advisory Committee & Stakeholder Engagement**
Percent total project budget: 15%
Description: The Project Team will establish a Project Advisory Committee comprised of technical experts (federal and state natural resource agencies, PDCs, local governments, ERP, and other stakeholders TBD) and hold a series of meetings (2-3) with the Project Team over the course of the grant period. The Project Team will engage the Project Advisory Committee to review materials such as the literature review, material testing, draft decision framework, draft guidance document, and policy recommendations. The Project Team will also incorporate safeguards for habitat protection and environmental justice in the recommended best practices for dredging and BU projects in the guidance document. Additionally, VIMS's Center for Coastal Resources Management (CCRM) may incorporate the guidance into CCRM training and present it during their annual Tidal Wetland/Shoreline Workshop and incorporate the decision tool into CCRM suite of online decision tools. The proposed GIS layers will be incorporated within Virginia CZM's Coastal GEMS online GIS mapping tool and the guidance will be available on Virginia CZM's public website page and VMRC public website and will be featured in other workshops and webinars that will be developed in the future. Additional stakeholders, as determined by the Project Team may be invited to participate in meetings, review documents, and contribute expertise. Please see the Project Timeline section below for more details on each task.

Product Format: Copies of agendas, presentations, and notes/summaries of meetings and comments received by Project Advisory Committee members will be saved and included as appendices in the Final Report (Product #4). A summary of stakeholder engagement efforts will also be part of the Final Report.

Timeframe: *Start:* October 1, 2023
End: September 30, 2024

Product #4

Title: **Final Report**
Percent total project budget: 10%
Description: This document will summarize key elements of the project, including efforts associated with Products #1, #2, and #3. Appendices will include a standalone Technical Guidance Document, Project Feasibility Decision Framework, and materials associated with other stakeholder engagement.

Product Format: Word and PDF documents.

Timeframe: *Start:* October 1, 2023
End: September 30, 2024

V. PROJECT TIMELINE.

- VMRC will create an RFP and hire a consultant with expertise in dredge material management (*October 2023 – November 2023*).
- VMRC will convene a Project Team kickoff meeting once the consultant is selected (*November*

2023).

- The Project Team will identify and describe the possible fates and uses of dredged material including existing and new uses and technologies, describing BU approaches and reviewing the potential benefits and detriments each solution (*November 2023 – January 2024*).
- The consultant will compile and document existing technical and planning manuals recommended for use in Virginia (*November 2023 – January 2024*).
- The consultant will incorporate elements of the technical guidance manual being produced by ERP through the 2022 NFWF grant (*November 2023 – May 2024*).
- VMRC will recruit, invite, and convene members of the Project Advisory Committee and relevant stakeholders for a secondary kickoff meeting (*December 2023*).
- The Project Team and Project Advisory Committee will describe the permitting process and regulatory players for dredging and habitat restoration projects in Virginia, including basic requirements/elements for conceptual designs that can be more easily permitted (*December 2023 – February 2024*).
- The Project Team will propose general criteria to establish BU zones and goals for each habitat type (*January 2024 – March 2024*).
- The Project Team will compile existing information on planned, proposed or possible dredge projects and develop an estimate the volume of material from dredging projects (*January 2024 – April 2024*).
- The consultant will provide general guidance and risk-based screening criteria for the sampling and testing of dredged material and dredged material blends/mixtures for identified proposed use options and create recommendations for sediment screening protocols for county, municipal and private use of the BU site. The consultant will create recommendations for water quality criteria associated with different types of material placement at a designated BU site (*February 2024 – April 2024*).
- VMRC will invite and convene the Project Advisory Committee and relevant stakeholders for a 6-month update meeting (*April 2024*).
- The contractor will create frameworks for long-term monitoring, adaptive management, and maintenance plans for inclusion in the guidance document (*February 2024 – April 2024*).
- The Project Team will Initiate development of decision framework (*March 2024 – April 2024*).
- The consultant will evaluate the efficacy of the EPA's DMMT using several proposed dredge projects in Virginia and modify the DMMT to align to Virginia conditions, standards, permit requirements and priorities. The contractor will develop a short user's guide for the new Virginia tool. (*December 2023 – March 2024*).
- The Project Team will describe alternative means of financing BU projects in Virginia by outlining timelines, eligibility criteria, and common application terms for federal, state, regional, and local government as well as the private sector funding opportunities (*January 2024 – June 2024*).
- The Project Team will develop a framework and criteria for a GIS-based BU suitable site inventory or database, including sites in most need of restoration or enhancement (*March 2024 – May 2024*).
- The Project Team will develop planning timelines for using dredged material for beneficial purposes based on project type (*May 2024 – July 2024*).
- The Project Team will review potential products for habitat restoration and shoreline resilience using a variety of dredged material (*May 2024 – July 2024*).

- The Project Team will convene a 9-month update meeting of the Project Advisory Committee and discuss an approach to setting BU targets or outcomes for Virginia that aligns and/or compliments other regional habitat restoration and natural resilience goals (*July 2024*).
- The Project Team will coordinate internal review and finalize the guidance document, including a public comment process as prescribed in the Administrative Process Act (§2.2-4002.1) to notice the draft guidance document in the Virginia Register and hold a 30-day comment period. Creation of coordinated BU websites with educational materials and links to final documents will occur during and after the public comment period. A fourth meeting of relevant stakeholders may occur prior to or immediately after the public comment period. (*August 2024 – September 2024*).
- VMRC with Project Team support will finalize the deliverables for Products #1, #2, #3, and #4 due to Virginia CZM on November 15, 2024 (*September 2024 – November 2024*).

VI. EXTENDED PROJECT DESCRIPTION

Virginia has a consistent and growing demand for dredging navigation channels and harbors of all sizes within our tidal waterways. Federal, state, and local groups undertake dredging activities constantly in the Bay environment for navigation maintenance, infrastructure, and/or hydrological connectivity. There is a rapidly growing need in dredge activity across Virginia from large projects such as the federal channel widening at the port of Norfolk, to the smaller non-federal channels that maintain commercial fishing vessel access, to the growth in locality sponsored community dredge projects for private small vessel use. Additionally, many shallow draft navigation channels historically maintained with Congressional funds have not been maintained to ensure adequate depths for commerce and navigation due to Congressional defunding of the USACE's Shallow Draft Navigation Program. For instance, a recent study of the 120 tidal channels in Virginia's Middle Peninsula showed that approximately 75% of the region's navigable waterways needed dredging. To address this resource gap, the Virginia General Assembly began to provide funding for shallow draft navigation dredging projects in 2018 via the creation of the Virginia Waterway Maintenance Fund grant program. MPPDC and the Middle Peninsula Chesapeake Bay Public Access Authority (MPCBPAA) have since taken the lead in project planning, but with the current lack of guidance and collaborative framework with other partners to direct material to be used beneficially as well as the regulatory uncertainty associated with the shift from federal to state and PDC responsibility for some dredging projects, progress has stalled.