



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NORTH ATLANTIC DIVISION
FORT HAMILTON MILITARY COMMUNITY
302 JOHN WARREN AVENUE
BROOKLYN, NY 11252-6700

CENAD-PD-P (1105-2-10c)

5 Jan 2024

MEMORANDUM FOR Commander, U.S. Army Corps of Engineers, Philadelphia
District, 1650 Arch Street Philadelphia, PA 19103-2004

SUBJECT: Review Plan Approval for the Dredged Material Management Plan (DMMP)
Study Phase II for Delaware River, Philadelphia to the Sea Project (DPS)

1. Reference Memorandum, CENAP-PLP-C dated 11 October 2023, Subject: Request Approval of the Review Plan (RP), Dredged Material Management Plan (DMMP) Study Phase II for Delaware River, Philadelphia to the Sea Project (DPS).
2. The Deep Draft Navigation Planning Center of Expertise of the South Atlantic Division (SAD) is the lead office to execute the referenced Review Plan. The Review Plan does not include Independent External Peer Review, as it is not required.
3. The enclosed Review Plan is approved for execution and is subject to change as study circumstances require, consistent with study development under the Project Delivery Business Process. Subsequent revisions to this Review Plan or its execution require new written approval from NAD.
4. The point of contact is Mr. Larry Cocchieri, NAD Planning Program Manager at 347-370-4571 or Lawrence.J.Cocchieri@usace.army.mil.

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JOHN P. LLOYD
Brigadier General, USA
Commanding



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT
1650 ARCH STREET
PHILADELPHIA PA 19103-2004

CENAP-PLP-C (1165-2-26b2)

11 October 2023

MEMORANDUM FOR Commander, U.S. Army Corps of Engineers, (CENAD-PD-C/Mr. Robert Vietri), Fort Hamilton Military Community, 302 John Warren Avenue, Brooklyn, NY 11252-6700

SUBJECT: Request Approval of the Review Plan (RP), Dredged Material Management Plan (DMMP) Study Phase II for Delaware River, Philadelphia to the Sea Project (DPS)

1. REQUEST: North Atlantic Division (NAD) approval is requested for the RP (Enclosure 1) for Phase II of the DMMP Study for DPS.
2. CONTEXT: Following review and coordination of comments with NAP and NAD, the Deep Draft Center for Expertise (DDNPCX) reviewed the RP for technical sufficiency and then endorsed the RP in September 2023 and concurred that no IEPR is warranted (Encl 2,3). The RP is associated with NAP's responses to NAD comments on the associated study phase I Project Management Plan report (Encl 4) in April 2023.
3. OBJECTIVE: The DPS DMMP study will develop a long-term (greater than 20 years) plan for regional placement of materials dredged from the main channel project. Alternatives to be evaluated include improving the infrastructure of current dredged material placement facilities (DMPFs), expanding beneficial use of dredged material, restoring former DMPFs that are currently offline, and developing new upland storage (through horizontal expansion or the establishment of new placement area sites).
4. The point of contact is Alexander Renaud, Study Manager at (267) 876-1886 or Alexander.d.renaud@usace.army.mil.

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3 Encls

1. RP for DPS DMMP Study Phase II
2. DDNPCX RP Endorsement
Transmittal Memo
3. DDNPCX RP Checklist

JEFFREY M. BEEMAN
LTC, EN
Commanding

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REVIEW PLAN

Phase II Dredged Material Management Plan Study for the Delaware River, Philadelphia to the Sea Project

First Approved: 5 Jan 2024

Revision No: NA
Revision Date: NA

REVIEW PLAN

Last Updated: December 2023

1. OVERVIEW

This review plan (RP) defines the scope and level of peer review for the following study:

- **Study Name:** Phase II Dredged Material Management Plan Study for the Delaware River, Philadelphia to the Sea Project
- **P2 Number:** TBD
- **Federal Project:** Delaware River, Philadelphia to the Sea
- **Decision Document – Type:** Dredged Material Management Plan (DMMP)
- **Project Type:** Single Purpose Navigation (Deep Draft)
- **Congressional Approval Required (Yes/No):** No
- **District:** Philadelphia District (NAP)
- **Major Subordinate Command (MSC):** North Atlantic Division (NAD)
- **Review Management Organization (RMO):** Deep Draft Navigation Planning Center of Expertise (DDNPCX)
- **Review Plan (RP) Contacts:**
 - **District:** Planning Technical Lead, 267-876 -1886
 - **MSC:** Planning and Policy Reviewer, 917-751-3013
 - **RMO:** DDNPCX Review Manager, 251-694-3842

2. KEY REVIEW PLAN DATES

Action	Date – Actual ¹
RMO Endorsement of RP	Pending
MSC Approval of RP	Pending
Independent External Peer Review (IEPR) Exclusion Approval	N/A
Has RP changed since PCX endorsement?	N/A
Last RP revision ²	N/A
RP posted on District Website	Pending
Congressional notification ³	Pending

¹Date action occurred or 'pending' if not yet approved

²Enter 'none' if no updates have been made since approval

3. MILESTONE SCHEDULE

Action	Date-Scheduled	Date – Actual	Status – Complete?
Phase I PMP Approval	11/13/22		No
Phase II Launch	10/1/23		No
Alternatives Milestone Meeting	4/22/24		No
Tentatively Selected Plan	2/21/25		No
Agency Decision Milestone	8/12/25		No
Final Report Approval	9/25/2026		No

4. BACKGROUND

- **RP References:**
 - Engineer Regulation (ER) 1165-2-217, Civil Works (CW) Review Policy, 1 May 2021
 - Engineer Circular (EC) 1105-2-412, Assuring Quality of Planning Models, 31 March 2011
 - ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 November 2007
 - Director's Policy Memorandum (DPM) CW Programs 2018-05, Improving Efficiency and Effectiveness in USACE CW Project Delivery (Planning Phase and Planning Activities), 3 May 2018
 - Director of Civil Works (DCW) Memorandum, Revised Delegation of Authority in Section 2034(a)(5)(A) of the Water Resources Development Act of 2007 (WRDA 2007), as amended (33 U.S.C. 2343), 7 June 2018
 - Planning Bulletin (PB) 2018-01, Feasibility Study Milestones, 26 September 2018
 - DPM 2019-01, Policy and Legal Compliance Review, 9 January 2019
 - DPS DMMP Preliminary Assessment, 2 Jun 2022
 - DPS DMMP Project Management Plan, 23 April 2023
 - MSC Quality Management Plan, Pending as of 2023
- **Authority:** The Delaware River, Philadelphia to the Sea project was authorized in 1910 (HD 733, 61st Cong., 2nd Session) and modified in 1930 (HD 304, 71st Cong., 3rd Session); 1935 (R&H Comm. Doc 5, 73rd Cong., 1st Session); 1938 (SD 159, 75th Cong., 3rd Session); 1945 (HD 580, 76th Cong., 3rd Session and HD 340, 77th Cong., 1st Session); 1954 (HD 358, 83rd Cong., 2nd Session) and 1958 (HD 185, 85th Cong., 1st Session). Project channel dimensions are 45' and 40' deep, and 400' to 1000' wide.
- **Sponsor:** As DPS is a federally managed project, there is no non-Federal sponsor for this study. It should be noted that PhilaPort was the NFS for the deepening of the channel to 45', a modification of DPS. The implementation of any major project improvements or modifications may require the identification of a NFS and associated cost-share.
- **SMART Planning Status:** While DMMP guidance originates from ER 1105-2-100, efforts have been made to work in the SMART planning milestones and processes into the PMP. The study will be completed within 3 years.
- **Project Area:** The DPS project is an existing Operation and Maintenance (O&M) project within the Navigation Business Line. The purpose of the DPS project is to provide a 96.5-mile navigation channel from Allegheny Avenue, Philadelphia, to deep water in the Delaware Bay. The Delaware River channel is 45 ft deep mean lower low water (MLLW) with widths of 1,000 ft in Delaware Bay, reducing first to 800 ft and then to 400 ft in Philadelphia Harbor. Project funds support Dredged Material Placement Facilities (DMPF) O&M in order to manage the majority of material dredged from the main channel.

DPS ports are located within the heart of the Northeast Corridor, with superior connections to New York City, Washington DC, the U.S. Midwest, and Canada. Due to the increased draft of vessels involved in international trade and utilizing the ports of the Delaware River, NAP investigated deepening the 40 ft channel and completed a Feasibility Report for deepening the Delaware River navigation project in February 1992. That report recommended a channel depth of 45 ft MLLW. The project was authorized for construction by WRDA 1992, Section 101 (6) and was modified and further modified by Section 308 of WRDA 1999 and Section 306 of WRDA 2000, respectively. NAP initiated the channel deepening to 45 ft MLLW in March 2010 and completed this work in 2020. Since the original completion of Preconstruction Engineering and Design and Supplemental Environmental Impact Statement for the DPS Deepening in 1997, updated estimates provided in Appendix A of the 2009 Environmental Assessment reduced original estimates for disposal needs, and therefore the utilization of existing Federal placement sites was deemed feasible and cost-effective. Approximately 14 million cubic yards (MYC) were placed within DMPFs while 2 MCY were beneficially used for the initial construction of a USACE CSRM project. Since the implementation of the project, capacity has been utilized more quickly than the updated assumptions estimated (especially the more frequent placement of dredged material, and hence less time for DMPF maintenance/drying of placed material).

Problem Statement: DPS is likely to experience significant reductions in dredged material placement capacity within the next twenty years through continued use.

The likelihood of this problem is principally driven by continued utilization of existing DMPFs, potential increased utilization due to new projects, changes in climate and weather, and unknowns about fill rates associated with the channel deepening that took place over the past decade.

- **Study/Project Goals and Objectives:** The primary objective of this study is to develop a plan for the regional placement for dredged material from the main channel of the DPS project for a period of greater than 20 years.
- **Description of Action:** The DSP project will continue to undergo maintenance dredging to ensure the operation of the authorized 45' deep channel. As the volume of material dredged at different periods of time continues to accumulate, additional capacity will be required through standard O&M activities such as dike elevation, or other approaches. This study is currently examining different alternatives to expand capacity for the placement of dredged material along the DPS project. These alternatives would address the shortfalls of any bottlenecks within the DMPF network through improving the infrastructure of current DMPFs, expanding beneficial use of dredged material, restoring former DMPFs that are currently offline, and developing new upland storage (through horizontal expansion or the establishment of new placement area sites).
- **Federal Interest:** There is Federal interest in this study due to an opportunity to contribute to National Economic Development through minimizing disruptions to

shipping along the DPS project as well as recognizing potential opportunities to anticipate the resources and timing needed to manage sediment from the DPS project.

- **Risk Identification:**

- **Environmental –**

The consideration for additional environmental impacts is limited. The majority of the alternatives evaluated here involve the utilization and or modification of DMPFs already owned or operated by USACE. Any alternative practices at these sites have been assumed to have limited additional impacts to the environment as the existing DMPF network and DPS project already comply with federal, state, and local environmental requirements. Any updates, changes, or related considerations to current placement practices will be coordinated with the appropriate resource agencies. In the case of increased likelihood of a recommended alternative plan requiring additional site development, NEPA, and other environmental compliance work may be required.

- **Engineering –** Material placement sites, analysis, and preparations constitute key study risks. Projecting shoaling rates based on historical rates could also constitute a risk, as the deepening of the project to 45' was only completed in 2020 and therefore new trends have not been established to evaluate past forecasts. The relationship between fill rates and maintenance rates affects capacity forecasts.

- **Economics –** Given recent global events and the recent completion of the main channel deepening, there are some uncertainties in forecasting DPS utilization and therefore the impacts of any potential disruptions to navigation there. The study will therefore update these channel utilization forecasts from the previous analyses conducted prior to the deepening.

- **Real Estate –** The continuing development along the Delaware River continues to decrease real estate available to serve as potential DMPF sites as identified within older studies. Alternative development will update the possibility and utility of such locations.

- **Other –** From a funding perspective, an aggressive schedule of DMPF maintenance and dike elevation will likely be needed even if the study does not recommend additional alternatives to modifying the existing placement sites. Any delays or shortfalls in funding could contribute to unplanned shortfalls in capacity in the short-term (as well as the long-term).

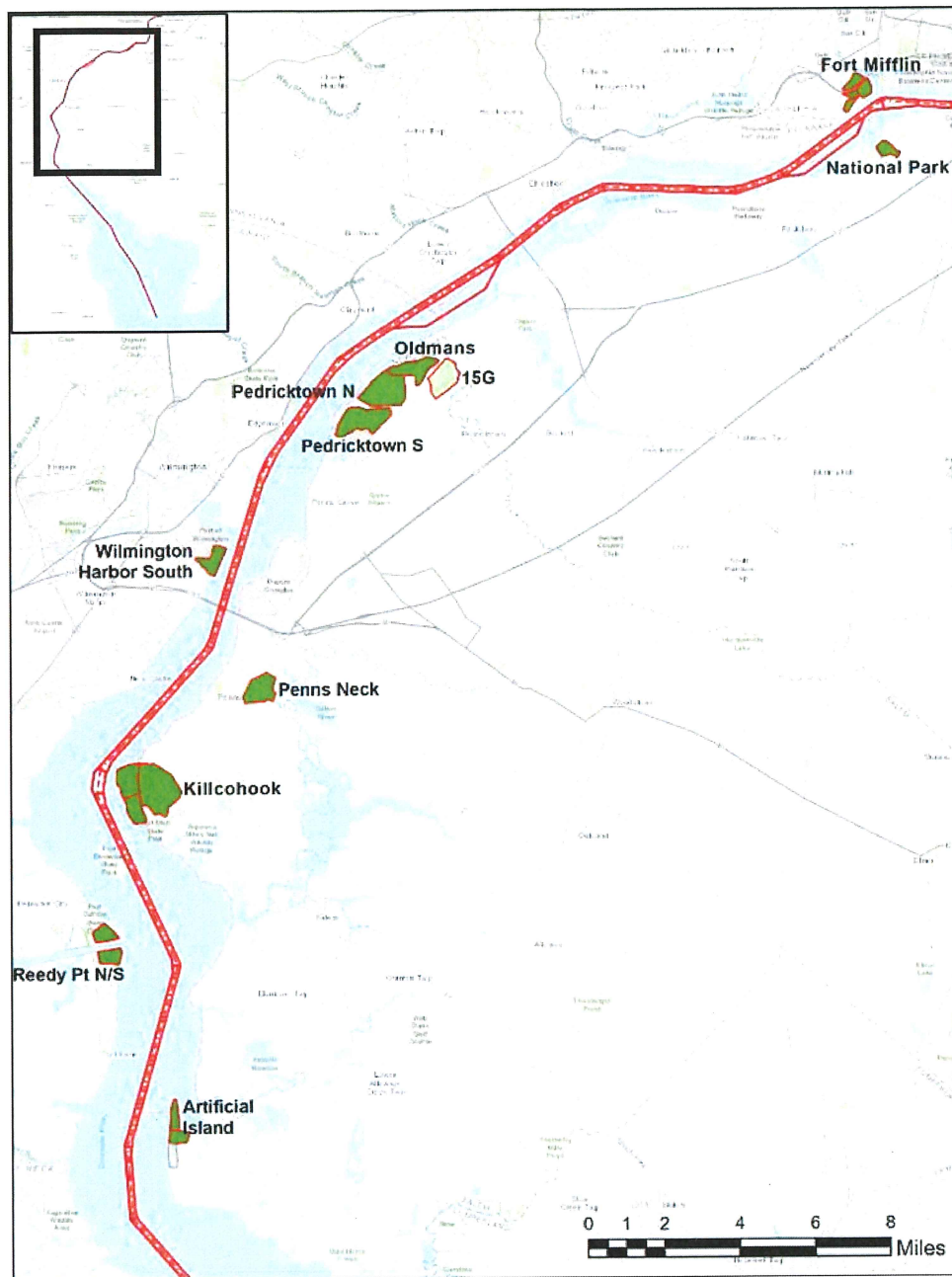


Figure 1. Current DMPFs along DPS Project. Federal Channel in Red.

5. FACTORS AFFECTING THE SCOPE AND LEVEL OF REVIEW

A. Is it likely that part(s) of the study will be challenging (ER 1165-2-217, paragraph 3.6.1)?

The study will be challenging mainly due to the size of the study area (~100 miles) and the network of DMPFs utilized currently and in the past. The principal challenges involve the evolution of the DMPF network infrastructure (number and distribution of system capacity) as well as the recent short-term trends in DPS shoaling post-deepening (including dredge frequency) that may demand updating previous capacity utilization forecasts for the next 20 years. For example, changing in shoaling and drying rates could no longer align with the location of current DMPFs as shoaling hot spots did in the past – thereby affecting the utilization of some DMPFs over others.

B. Provide a preliminary assessment of where the project risks are likely to occur and assess the magnitude of those risks (ER 1165-2-217, paragraph 3.6.1/3.6.2.2).

Initial scoping has identified that project risks center around a few areas including:

- **DMPF Fill Rate Impacts** – Conditions have changed associated with the quantity and placement of material in recent years (e.g. higher rates than estimated following the DPS deepening, Covid impact on placement rates through time, and changed expectations with the Port of Wilmington expansion). Changes in placement timing influence the ability of normal O&M activities to thoroughly dewater between dredging cycles. Therefore various DMPFs may be filled more quickly than anticipated due to increased dredging quantities. Besides the fact that capacity is being used up faster due to greater sediment volumes through time, capacity may also be used more quickly due to less sediment shrinkage than anticipated. Therefore, shrinkage rate assumptions may not meet expectations. The study will reexamine the most recent trends to update these considerations.
- **Real Estate** – The continuing development along the Delaware River continues to decrease real estate available to serve as DMPF sites as identified within older studies. Alternative development will update the possibility and utility of such locations.
- **Sustained Funding** – Any risks of disruption or delay in O&M maintenance budget can ripple throughout the lifespan of the project, given the likely aggressive schedule needed to achieve goals currently.
- **Optimized Placement Amongst DMPFs** – Risks exist that the easiest or cheapest placement option in any given year does not necessarily consider future cost or capacity ramifications.
- **Environmental Impacts** – The consideration for additional environmental impacts is limited. The majority of the alternatives evaluated here involve the utilization and or modification of DMPFs already owned or operated by USACE. Any alternative practices

at these sites have been assumed to have limited additional impacts to the environment as the existing DMPF network and DPS project already comply with federal, state, and local environmental requirements. Any updates, changes, or related considerations to current placement practices will be coordinated with the appropriate resource agencies. In the case of increased likelihood of a recommended alternative plan requiring additional site development, NEPA and other environmental compliance work may be required.

- C. Is there a significant threat to human life associated with aspects of the study or failure of the project or proposed project (ER 1165-2-217, paragraph 3.6.2.2.2)?

The project covered by this DMMP is limited to identifying solutions to placement of dredged material and, therefore, does not involve human life and safety assurance analysis. This project addresses how to place the dredged material derived from maintaining an existing navigation project. Maintenance dredging, including placement of material and maintenance of placement sites/facilities, will continue to follow established design and construction methods and standard, routine best management practices, thereby minimizing risks to human life and safety during DMPF modification, dredging, and placement operations. In the case that project identifies the need for the need for the development of new placement sites and/or beneficial use of material, any decision documents will reference established methods for dredging activities and maintenance of placement facilities in order to minimize human life and safety threats during construction. This assessment has been coordinated with the NAP Chief of Engineering and Construction, who agrees that this dredged material disposal project does not involve human life and safety assurance analysis.

- D. Is the estimated total cost of the project greater than \$200 million (ER 1165-2-217, paragraph 6.4.1)?

Based upon best available information and professional judgement, the estimated total project cost will be less than \$200 million, particularly if dike elevation associated with the base plan and/or modification of practices at existing placement sites is the primary method for expanding capacity. The greatest potential risk in exceeding \$200 million would be associated with the recommendation of acquiring significant acreage of new real estate at higher costs than anticipated.

- E. Has the Governor of an affected state requested a peer review by independent experts (ER 1165-2-217, paragraph 6.4.2)?

No. There has not been a request for independent peer review by the Governor of Delaware, New Jersey, or Pennsylvania.

- F. Does/will the study/project have significant interagency interest (ER 1165-2-217, paragraph 3.7.2.2)?

If sufficient capacity is generated within existing DMPF sites, there likely will be limited interest. If new placement areas are developed there probably will be significant interagency interest among environmental agencies. The interest would likely be most associated with

any need for mitigation of sites impacted by a new DMPF (or the expansion of one) or beneficial use within any marsh. In addition to any concern about impacts, the potential for beneficial use via placement within marshes or equivalent habitats could earn positive interest from those wanting to increase the amount of sediment within these coastal environments. At this point of preliminary analysis and scoping, there has been no indication that an Environmental Impact Statement (EIS) should be prepared or that significant controversy should be expected.

- G. Has the Chief of Engineers determined that the project study is controversial due to significant public dispute over the size, nature, or effects of the project or the economic or environmental costs or benefits of the project (ER 1165-2-217, paragraph 6.4.3))?

No such determination has been made at this point in time. The most likely source of controversy would involve any perceived impacts this project could have upon stakeholders, such as the relation of DPS material placement and capacity alongside other projects and developments utilizing that placement. Direct impacts would come with the need for any new placement sites developed for DPS requiring a NFS. Given the federal nature of DPS yet past NFS involved in various aspects (PhilaPort was the NFS for the deepening), certain controversy could come into play.

- H. Has another agency requested IEPR due to significant environmental impacts (ER 1165-2-217, paragraph 6.5.1.1)?

No. Scoping has been completed, and cooperating agency coordination is on-going; no requests for IEPR have been received to date

- I. Is the information in the decision document or anticipated project design likely to contain influential scientific information or be a highly influential scientific assessment – i.e., be based on novel methods, involve innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices (ER 1165-2-217, paragraphs 6.5.2 and 7.4.1.1)?

No, the information in the decision document or anticipated project design is unlikely to contain influential scientific information or be a highly influential scientific assessment as the project is anticipated to involve traditional methods of dredging and placement of dredged material (including its beneficial use). While new techniques may be considered relative to current practices, standard engineering, economic, and environmental information and analyses will be used.

- J. Will the study/project require an environmental impact statement (ER 1165-2-217, paragraph 6.6.1)?

No, the PDT does not anticipate significant additional environmental impacts that would require an EIS. The PDT will assess the significance of the potential environmental impacts

of the alternatives in the final array to determine if an EIS is necessary prior to identification of the TSP milestone. Unavoidable significant effects would require an EIS under NEPA. Should an EIS be required, this RP will be updated to reflect the change in project scope.

- K. Is the project expected to have more than negligible adverse impacts on scarce or unique tribal, cultural, or historic resources (ER 1165-2-217, paragraph 6.6.1.2)?

No. The project is not currently expected to have more than negligible adverse impacts on scarce or unique tribal, cultural, or historic resources. The existing federal project has been in continuous use for over a century and the project DMPFs (and the Buoy-10 open water site) are currently (or have previously) been in active use, thereby limiting likelihood of Any adverse effects to cultural resources will be considered within the screening for their consideration and avoided. Any unavoidable effects to National Register eligible properties, if present in the area of potential effects (APE), will be mitigated in accordance with the National Historic Preservation Act. The alternative plans being considered would only be recommended if economically justified, environmentally acceptable, and technically feasible. The recommended plan would be coordinated with appropriate agencies and tribes .

- L. Is the project expected to have substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures (ER 1165-2-217, paragraph 6.6.1.3)?

The project is unlikely to have substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures. However, in the case of increased likelihood of a recommended alternative plan requiring additional site development or beneficial use, NEPA and other environmental compliance work may be required. Any recommendation made will be environmentally acceptable and ensure compliance with environmental laws and regulations.

- M. Is the project expected to have, before mitigation measures, more than a negligible adverse impact on an endangered or threatened species or their designated critical habitat (ER 1165-2-217, paragraph 6.6.1.4)?

No. Even in the case of additional placement site development, endangered species considerations would be kept in mind. Any recommendation made will be environmentally acceptable and ensure compliance with environmental laws and regulations.

- N. Does the project study pertain to an activity for which there is ample experience within the USACE and industry to treat the activity as being routine (ER 1165-2-217, paragraph 6.6.2.2)?

Yes, the study will contain standard engineering, economic, and environmental analyses and information. NAP has decades of experience placing and managing sediment from the DPS project in DMPFs and at the Buoy 10 in-water placement site within Delaware Bay. NAP also has increasingly developed expertise in the placement of dredged sediments for beneficial use purposes. If identified as part of the recommended plan, beneficial use via the placement of dredged material may require greater USACE feedback if the scale of volumes

placed within natural environments is greater and more novel than typically conducted in recent experience.

6. REVIEW EXECUTION PLAN

This RP section provides a general description of each type of review and identifies the reviews anticipated for this study/project (Table 1).

A. Types of Review

- 1) **District Quality Control (DQC)**. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements of the Project Management Plan. All decision documents (including data, analyses, environmental compliance documents, etc.) undergo DQC review. Additionally, DQC of milestone submittals is required (PB 2018-01).
- 2) **Agency Technical Review (ATR)**. ATR will assess whether study/project analyses are technically correct and comply with USACE guidance and whether documentation explains the analyses and results in a clear manner. The ATR team will ensure that proper and effective DQC has been performed (an assessment of which will be documented in the ATR report) and will ensure that the product is consistent with established criteria, guidance, procedures, and policy. ATR of the draft and final decision documents and supporting analyses is required (ER 1165-2-217, paragraph 5.3). Targeted reviews may be scheduled as needed.
- 3) **Independent External Peer Review**. IEPR may be required for decision documents under certain circumstances. IEPR is the most independent level of review and is applied in cases that meet criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. The PDT performs a risk-informed assessment whether IEPR is appropriate and documents that assessment/recommendation in the RP (ER 1165-2-217, paragraph 6.5.2). Should IEPR be required, the RMO will be contacted at least three months in advance of the anticipated start of the concurrent review period to allow sufficient time to obtain contract services. If required, IEPR will be managed by an Outside Eligible Organization (OEO), external to USACE. Neither the public nor scientific or professional societies would be asked to nominate potential external peer reviewers.
- 4) **Cost Engineering Review**. All decision documents will be coordinated with the Cost Engineering and ATR Mandatory Center of Expertise (MCX). The MCX will provide the cost engineering expertise needed on the ATR team and will provide certification of cost estimates. The RMO will be responsible for coordinating with the MCX for cost reviews. Cost reviews may occur as part of the draft/final report ATRs, but the schedule for specific reviews may also vary. Accordingly, the PDT will coordinate review related needs with both the MCX and RMO.

- 5) **Model Review and Approval/Certification.** EC 1105-2-412 provides the process and requirements for ensuring the quality of planning models. The EC mandates use of certified or approved planning models for all planning activities to ensure that planning products are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions regarding the availability of data, transparent, and described in sufficient detail to address any limitations of the model or its use.
- 6) **Policy and Legal Compliance Reviews (P&LCRs).** All decision documents will be reviewed throughout the study process for compliance with law and policy. ER 1105-2-100 (Appendix H) and DPM CW/DCW memos, provide guidance on policy and legal compliance reviews. These reviews culminate in a determination of whether report recommendations, supporting analyses, and coordination comply with law and policy and whether the decision document warrants approval or further recommendation to higher authority by the home MSC Commander.
- 7) **Public Review.** NAP will post the RMO-endorsed and MSC-approved RP on the District's public website. While there will not be a formal comment period, the PDT will consider any comments received from involved, partners, stakeholders and the public to determine if RP revisions are necessary. Should any additional NEPA steps be required, the public will also be provided with the opportunity to review and comment on the draft and final integrated recommended plan. Were the decision to change and an IEPR be required (currently not required), public comments will be provided to the IEPR panel for consideration.

B. Anticipated Project Reviews and Estimated Costs

Table 1 provides the estimated schedule and cost for reviews anticipated for this study.

Table 1: DPS DMMP Study – Anticipated Reviews

Product to Undergo Review	Review	Start Date	End Date	Cost	Complete
Pre-AMM Submittals	DQC	4/2/24	4/11/24	\$9,600	No
Pre-TSP Milestone Submittals	DQC	2/14/25	2/21/25	\$9,600	No
Draft DPS DMMP	DQC	3/10/25	4/18/25	\$28,800	No
	ATR ¹	5/12/25	7/11/25	\$61,800	No
	IEPR			NA	No
	P&LCR	5/12/25	7/11/25	n/a	No
Pre-ADM Submittals	DQC	8/1/25	8/12/25	\$9,600	No
Final DPS DMMP	DQC	5/18/26	6/29/26	\$24,000	No
	ATR	6/30/26	8/7/26	\$61,800	No
	P&LCR	8/26/26	9/26/26	N/A	No
Targeted reviews	N/A			N/A	
In-kind Products ²	N/A			N/A	

¹ The basis for estimated ATR costs is provided in Attachment 2 of this RP, which must be removed prior to posting on the District's public website.

² Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. No in-kind products or analyses will be developed by the non-Federal sponsor.

C. District Quality Control

NAP shall manage DQC and will appoint a DQC Lead to oversee that review (ER 1165-2-217, paragraph 4.4.2).

1) **Review Team Expertise.** Table 2 identifies the required expertise for the DQC team.

Table 2: Required DQC Expertise

DQC Team Disciplines	Expertise Required
DQC Lead	A senior professional with extensive experience preparing Civil Works decision documents and conducting/contributing to/participating in DQC. The lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc.). They should be an experienced water resources planner with experience in deep draft navigation projects and associated planning reports and documents.
Plan Formulation	The plan formulation reviewer should be an experienced water resources planner with experience in leading a multi-disciplinary PDT through a deep draft navigation dredged material management plan study, knowledge of deep draft navigation guidance/policies, and be able to draw on lessons learned for advising the PDT through the risk-informed decision-making SMART Planning Process.
Economics ¹	The economics reviewer should be a senior economist with experience in deep draft navigation dredged material management plan projects and channel utilization analyses. The reviewer should be familiar with economic models identified in Table 5.
Environmental Resources	The environmental reviewer should have expertise in evaluating the impacts associated with deep draft navigation dredging projects, dredged material placement requirements, and beneficial use assessments. The reviewer should also be experienced with environmental coordination and NEPA requirements for such assessments.
Cultural Resources	The cultural resources reviewer should have expertise in evaluating the impacts associated with deep draft navigation dredged material management plan evaluations (including beneficial use) and extensive knowledge of underwater archaeology. The reviewer should also be familiar with the environmental coordination and NEPA/National Historic Preservation Act (NHPA) requirements for deep draft navigation projects.
Hydrology, Hydraulics and Coastal (HH&C) Engineer	The HH&C engineering reviewer should be knowledgeable in the field of hydraulics, have a thorough understanding of river/estuarine channel dynamics, and have experience in deep draft navigation studies/projects and the design of dredged material placement and beneficial use sites .
Geotechnical Engineer	The geotechnical engineering reviewer will have experience performing geotechnical evaluations for deep draft navigation channel improvement projects, particularly involving the placement and maintenance of material within DMPFs and other potential placement

DQC Team Disciplines	Expertise Required
	considerations. This may require evaluation of the behavior of soils, site characterization, material management, slope stability, and the analysis and placement of dredged material (including beneficial use).
Cost Engineer	The cost engineering reviewer should have experience evaluating cost requirements for a deep draft navigation dredged material management plan, including beneficial use alternatives. The reviewer should also have experience with cost engineering models used. Potential models may include: MCACES, Crystal Ball CSRA, TPCS, and CEDEP (Table 6).
Operations	The operations reviewer will have experience with operating and managing deep draft navigation dredged material placement sites, including beneficial use.
Real Estate	The real estate reviewer should have expertise in the real estate requirements of deep draft navigation projects.

¹The economics DQC team member will be identified by the DDNPCX (OPORD 2012-15).

- 2) Documentation of DQC.** Quality Control will be performed continuously throughout the study. DrChecks software will be used to document DQC review comments, responses, and issue resolution. Certification of DQC completion will be obtained at the draft and final report stages. Documentation of DQC will follow the District Quality Manual and the MSC Quality Management Plan.

Documentation of the completed DQC review (i.e., all comments, responses, issue resolution, and DQC certification) will be provided to the MSC, RMO, and ATR Team leader prior to initiating the ATRs. The ATR team will assess the quality of the DQC performed and provide a summary of that assessment in the ATR report (ER 1165-2-217, paragraph 5.2.2).

D. Agency Technical Review

The ATR will assess whether the analyses are technically correct and comply with guidance, and that documents explain the analyses and results in a clear manner. The RMO will manage the ATR. ATR will be performed by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. ATR will be performed by a team whose members are certified or approved by their respective Communities of Practice (CoPs) to perform reviews. The RMO will identify an ATR lead and ATR team members. Neither the home District nor the MSC will nominate review team members. The ATR team lead will be from outside the home MSC. The ATR team lead is expected to participate in the study's milestone meetings (PB 2018-01), the cost of which is not included in the estimates provided in Table 1.

- 1) **Review Team Expertise.** Table 3 identifies the anticipated disciplines and ATR team expertise required for study efforts.

Table 3: Required ATR Team Expertise

ATR Team Disciplines	Expertise Required
ATR Lead	The ATR lead will be a senior professional with extensive experience preparing Civil Works decision documents and conducting ATR. The lead should have the skills to manage a virtual team through an ATR. The lead may serve as a reviewer for a specific discipline (e.g., plan formulation, economics, etc.).
Plan Formulation	The plan formulation reviewer should be a planner with experience in leading a team through a deep draft navigation study and analysis of dredged material placement requirements.
Economics	The economics reviewer should be a deep draft navigation economist with experience in navigation dredging and dredged material management related evaluation. While Waterborne Commerce Statistics Center data may be accessed in various forms, overall modeling may be limited. Tools such as the Automatic Identification System Analysis Package (AISAP) or Channel Portfolio Tool (CPT) could be considered.
Environmental Resources	The environmental reviewer should have expertise in evaluating the impacts associated with deep draft navigation dredging projects and dredged material placement requirements (including beneficial use assessments). The reviewer should also be experienced with environmental coordination and NEPA requirements for deep draft navigation projects. Limited modeling is assumed at this juncture.
Cultural Resources	The cultural resources reviewer should have expertise in evaluating the impacts associated with deep draft navigation projects, particularly regarding placement of dredged material. The reviewer should also be familiar with the environmental coordination and NEPA/NHPA.
HH&C Engineer	The HH&C engineering reviewer should have experience with deep draft navigation channels, channel maintenance and placement (including beneficial use) and a thorough understanding of channel dynamics. Limited modeling expected at this point in time.
Geotechnical Engineer/Geologist	The geotechnical reviewer will have experience performing geotechnical evaluations for deep draft navigation projects, including

	evaluating the behavior of soils, site characterization, material management, slope stability, construction requirements, and the analysis and placement of dredged material (including beneficial use). The Geotech Engineer will utilize the Geostudio Suite of Software for a number of applications.
Cost Engineering	The cost engineering reviewer will be identified by the Cost MCX and will have experience evaluating cost requirements for a deep draft navigation project (placement site construction, beneficial use, etc.). Models that may be used include: MCACES, Crystal Ball CSRA, TPCS, and CEDEP (Table 6).
Operations	The operations reviewer will have experience with managing deep draft navigation projects that require maintenance dredging and placement (upland DMPF and beneficial use).
Real Estate	The real estate reviewer should have expertise in the real estate requirements of deep draft navigation improvement projects.
<i>Climate Preparedness and Resilience</i>	<i>The selection of one of the above review team members</i> will also be coordinated with the Climate Preparedness and Resiliency CoP in order to review the evaluation of effects of climate change .

- 2) **Documentation of ATR.** DrChecks will be used to document ATR comments, responses, and issue resolution. Comments should be limited to those needed to ensure product adequacy. All members of the ATR team should use the four-part comment structure (ER 1165-2-217, paragraph 5.8.3). If a concern cannot be resolved by the ATR team and PDT, it will be elevated to the vertical team for resolution using the issue resolution process identified in ER 1165-2-217. The comment(s) can then be closed in DrChecks by noting the concern has been elevated for resolution. The ATR Lead will prepare a Statement of Technical Review Report (ER 1165-2-217, paragraph 5.11), for both draft and final decision documents. Any unresolved issues will be documented in the ATR report prior to certification. The Statement of Technical Review (ATR completion) includes signatures from the ATR Lead, Project Manager, and RMO, and the Certification of ATR includes signatures from the District's Chiefs of Engineering and Planning Divisions.

E. Independent External Peer Review

1) **Decision on IEPR.** *An IEPR is not required.*

The PDT does not recommend an IEPR. The only possible trigger the study to conduct an IEPR would be due to the need for an EIS associated for significant environmental impacts associated with the development of a new DMPF or significant new placement site with the potential for significant adverse environmental impacts (both which have been determined to be unlikely at this point in time). Otherwise, the PDT does not expect an IEPR to be triggered due to controversy or a governor's request. If the IEPR is triggered due to costs but an EIS is not needed, it is assumed that the IEPR would likely meet exclusion criteria: not controversial; negligible impacts on scarce or unique cultural, historic, or tribal resources; no substantial adverse impacts on fish and wildlife species and habitat; and has negligible adverse impact on listed or endangered species or critical habitat.

If circumstances change to require one, an IEPR is managed outside of USACE and is typically conducted on studies. IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and biological opinions of the project study.

- **Products to Undergo IEPR.** If circumstances changed, the entire draft report would undergo IEPR.
- **Required IEPR Panel Expertise.** If circumstances did trigger an IEPR, expertise would be determined to meet that trigger.
- **Documentation of IEPR.** If an IEPR were required, the OEO would submit a Final IEPR Report no later than 60 days after the end of the draft report public comment period. Upon RMO acceptance, the RIT would post the Final IEPR Report on the USACE public website. USACE would consider all recommendations in the Final IEPR Report and prepare evaluator responses for all findings adopted or not adopted. Evaluator responses would become the basis of the Agency Response. The final decision document would include an appendix which contains the Final IEPR Report and Agency Response. Please consult ER 1165-2-217 for a detailed explanation of the IEPR process, including public notification requirements.

F. Model Certification or Approval

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models are any models and analytical tools used to define water resources management problems and opportunities; to formulate potential alternatives to address study area problems and take advantage of opportunities; to evaluate potential effects of alternatives; and to support decision making. The use of a certified/approved planning model does not constitute technical review of a planning product. The selection and application of the model and assessment of input and output data is the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

a. Planning Models

No planning models are expected to be required for this DMMP.

b. Engineering Models

EC 1105-2-412 does not address engineering models and tools used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue. The professional practice of documenting the application of the software and modeling results will be followed. The USACE Scientific and Engineering Technology Initiative has identified many engineering models as preferred or acceptable for use in studies. These models and tools should be used when appropriate. The selection and application of the model and the input and output data is the responsibility of the user and is subject to DQC, ATR, and IEPR (if

required). A full extent of likely models that may be used to develop the decision document is listed below. This list may evolve as the study progresses, in which case the review plan will be updated.

Table 6: Engineering Models/Tools

Model Name and Version	Brief Model/Tool Description and How It Will Be Used in the Study	Model Certification / Acceptance Status
GeoStudio Suite of Software (GeoStudio) (Geotechnical Engineer)	The GeoStudio suite of programs (SLOPE/W, SEEP/W, SIGMA/W, etc.) is a state of the art software package that uses the limit equilibrium method to analyze slope stability. The programs can handle a variety of analysis methods from Fellenius' and the Ordinary Method of Slices to more rigorous analyses using Spencer's and Morgenstern and Price's methods. The software can handle total and effective stress analyses with or without the addition of pore water pressures from a steady state or transient condition. GeoStudio can also handle stability concerns resulting from the rapid-drawdown case. It will be used to model the stability of various alternatives of dike layouts during the site life cycle analyses.	Allowed
Microcomputer Aided Cost Engineering System (MCACES), MII (Cost Engineer)	MCACES is the cost estimating software program tools used by cost engineering to develop and prepare Class 3 Civil Works cost estimates.	Civil Works Cost Engineering and Agency Technical Review MCX mandatory
Cost Schedule Risk Analysis (CSRA) (Cost Engineer)	Cost risk analyses identify the amount of contingency that must be added to a project cost estimate and define the high-risk drivers. The analyses will include a narrative identifying the risks or uncertainties. During the alternatives evaluation, the PDT will assist the cost engineer in defining confidence/risk levels associated with the project features within the abbreviated risk analysis. For the Class 3 estimate, an evaluation of risks will be performed using Crystal Ball CSRA for construction costs over \$40 million or the	Civil Works Cost Engineering and Agency Technical Review MCX mandatory
Total Project Cost Summary (TPCS) (Cost Engineer)	The TPCS is the required cost estimate document that will be submitted for either division or HQUSACE approval. The total project cost for each Civil Works project includes all Federal and authorized non-Federal costs represented by the Civil Works Work Breakdown Structure features and respective estimates and schedules, including the lands and damages, relocations, project construction costs, construction schedules, construction contingencies, planning and engineering costs, design contingencies, construction management costs, and management contingencies.	Civil Works Cost Engineering and Agency Technical Review MCX mandatory

Corps of Engineers Dredge Estimating Program (CEDEP) (Cost Engineer)	CEDEP is the required software program that will be used for dredging estimates using floating plants. CEDEP contains a narrative documenting reasons for decisions and selections made by the cost engineer. Software distribution is restricted as it is considered proprietary to the Government.	Civil Works Cost Engineering and Agency Technical Review MCX mandatory
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G. Policy and Legal Compliance Reviews

In accordance with DPM CW 2018-05, P&LCRs for draft and final planning decision documents are delegated to the MSC responsible for the execution of the study.

With input from MSC and Headquarters, USACE (HQUSACE) functional leaders and through collaboration with the Chief of Office of Water Project Review (OWPR), the MSC Chief of Planning and Policy is responsible for establishing a competent interdisciplinary P&LCR team (DPM 2019-01). The composition of the policy review team will be drawn from HQUSACE, the MSC, the Planning Center of Expertise (PCX), and other review resources as needed. The identification of Counsel members will follow the procedures set forth by the HQUSACE Chief Counsel, as coordinated by HQUSACE and MSC Counsel functional leaders. The MSC Chief of Planning and Policy and the Chief of OWPR will collaborate to identify and endorse a P&LCR Manager from among the P&LCR team identified for the study. The manager may be a MSC, PCX, or HQUSACE employee.

The P&LCR team will:

- Provide advice and support to the PDT and decision makers at the District, MSC, HQUSACE, and Assistant Secretary of the Army (CW) levels.
- Engage at both the MSC and HQUSACE levels, ensuring that the vertical teaming aspect of SMART planning is maintained.
- Help guide PDTs through project development and the completion of policy and legally compliant documents, identifying policy and legal issues as early as possible such that issues can be addressed while minimizing impacts to study and project costs and schedules.
- Provide impartial and unbiased recommendations, advice, and support to decision makers.

ATTACHMENT 1: TEAM ROSTERS

PROJECT DELIVERY TEAM			
Name	Office	Discipline	Phone Number
Alexander Renaud	CENAP-PLP-C	Planning	(267) 876 -1886
Michael Fritzges	CENAP-ECE-G	Design Manager	(215) 656-6694
Timothy Rooney	CENAP-OP	Operations	(215) 656-6592
Daniel Kelly	CENAP-OP	Operations	(215) 656-6889
L. Alfredo Montes	CENAP-ECT-E	Cost Engineering	(215) 656-6635
Heather Sachs/ Janay Dixon	CENAB-REC	Real Estate	(443) 425-5770
Eric Orticelle	CENAP-ECE-G	Geotech	(215) 656-6539
Joel Belsterling	CESAM-PD-FE	Economics	(215) 656-6185
Beth Brandreth	CENAP-PL-E	Environmental	(215) 656-6558
Alyssa Dunlap	CENAP-ECD-C	Civil Engineering	(610) 226-5592
TBD/Laura Bittner	CENAP-ECH	HH&C	(215) 656-6688
W.Skip Harris	CENAP-ECD-V	Geo-Environmental	(215) 656-6657
Amanda Phily	CENAP-OC	Office of Counsel	(215) 656-6528
Stephen Rochette	CENAP-PA	Public Affairs	(215) 796-8517

DISTRICT QUALITY CONTROL TEAM			
Name	Office	Discipline	Phone Number
Scott Sanderson	CENAP-PL-PC	DQC Lead	(215) 656-6571
TBD/Adrian Leary	CENAP-PL	Plan Formulation	(215) 656-6576
Tim Kelly	CENAP-OP	Operations	(215) 656-6721
Travis Fatzinger	CENAP-EC-EG	Geotech	(215) 656-6681
TBD	TBD	Economics	
Barbara Conlin	CENAP-EC-EG	Environmental Resources	(215) 656-6557
TBD	TBD	Cultural Resources	TBD
Laura Bittner	CENAP-ECH	HH&C Engineer	(215) 656-6688
Gizella Geissele	CENAP-ECD-C	Civil Engineering	(215) 656-6655
Seth Cleaver	CENAP-ECD-V	Geo-Environmental Engineer	(570) 441-3806
Joseph Hannings	CENAP-ECT-E	Cost Engineer	(215) 656-6490
Craig Homesley	CENAB-RE	Real Estate	(410) 962-4944

AGENCY TECHNICAL REVIEW TEAM			
Name	Office	Discipline	Phone Number
TBD		ATR Lead	
TBD		Plan Formulation	
TBD		Economics	
TBD		Environmental Resources	
TBD		Cultural Resources	
TBD		HH&C Engineer	
TBD		Geotechnical Engineer/Geologist	
TBD		Cost Engineering	
TBD		Operations	
TBD		Real Estate	
TBD		Climate Preparedness and Resilience	

VERTICAL TEAM			
Name	Office	Position	Phone Number
Peter Blum	CENAP-PL	Chief, Planning	215-656-6540
Michael Landis	CENAP-OP-O	Chief, Operations	215-656-6720
Andrew Schwaiger	CENAP-EC-EG	Chief, Engineering & Construction	215-656-6451
Douglas Stamper	CENAD-PD-OR	Program Manager	347-370-4608
Valerie Cappola	CENAD-PD-P	Program Manager	347-370-4557
Jodi McDonald	CENAD-PD-OR	Chief Operations and Regulatory Division	347-370-4556
Joseph Vietri	CENAD-PD-P	Chief, Planning & Policy	347-370-4570
Nate Richards	HQUSACE	Senior Program Planner	202-263-9388

POLICY and LEGAL COMPLIANCE REVIEW TEAM			
Name	Office	Discipline	Phone Number
Robert Vietri	NAD	District Support Team	917- 790-8379
Douglas Stamper	NAD	Plan Formulation	347-370-4608
Naomi Frankel	NAD	Economics	917-359-2819
Valerie Cappola	NAD	Environmental	347-370-4557
Javier Jimenez-Vargas	NAD	Engineering	347-370-4599
Patricia Bolton	NAD	Cost Engineering	347-370-4682
Carlos Gonzalez	NAD	Real Estate	347-370-4529
Nancye Bethurem	NAD	Office of Counsel	479-586-4895
Hank Jarboe	LRD	Climate CoP (CPR)	513-684-6050

ATTACHMENT 2: BASIS FOR REVIEW COSTS

The estimated ATR costs shown in Table 1 are based upon the following assumptions. The actual cost for draft and final report review could vary, however, due to product quality, project complexity, etc.

Draft Report ATR:

- ATR Team Lead – 32 hours, \$140/hour
- ATR Team – 10 Technical Disciplines, 40 hours/discipline, average \$140/hour
- RMO – 40 hours, \$173/hour

Final Report ATR:

- ATR Team Lead – 32 hours, \$140/hour
- ATR Team – 10 Technical Disciplines, 40 hours/discipline (average), average \$140/hour
- RMO – 40 hours, \$173/hour



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
SOUTH ATLANTIC DIVISION
60 FORSYTH STREET SW, ROOM 10M15
ATLANTA, GA 30303-8801

CESAM-PD-D

19 September 2023

MEMORANDUM FOR Mr. Alexander Renaud, CENAP-PLP-C, U.S. Army Corps of Engineers, Philadelphia District, 1650 Arch Street, Philadelphia, Pennsylvania 19103

SUBJECT: Review Plan (RP) Endorsement, Phase II Dredged Material Management Plan Study for the Delaware River, Philadelphia to the Sea (DPS) Project

1. The subject document (Enclosure 1) has been presented to the Deep Draft Navigation Planning Center of Expertise (DDNPCX) for its review and endorsement in accordance with Engineer Regulation 1165-2-217, Civil Works Review Policy, 1 May 2021.
2. The DPS DMMP study will develop a long-term (greater than 20 years) plan for regional placement of materials dredged from the main channel project. Alternatives to be evaluated include improving the infrastructure of current dredged material placement facilities (DMPFs), expanding beneficial use of dredged material, restoring former DMPFs that are currently offline, and developing new upland storage (through horizontal expansion or the establishment of new placement area sites).
3. The DDNPCX concurs with the level and scope of review identified and supported in the RP, including the determination that Independent External Peer Review (IEPR) is not warranted. As documented, the decision document does not meet any of the mandatory triggers for IEPR: the total project cost will be less than \$200 million; neither the Governor of Delaware, New Jersey, nor Pennsylvania has requested peer review by independent experts; and the Chief of Engineer's has not determined that the project study is controversial due to significant public dispute over either the size, nature, or effects of the project or the economic or environmental costs or benefits of the project. Additionally, the project study is for an activity for which there is ample experience within USACE and the industry to treat the activity as being routine and has minimal life safety risk.
4. The RP was reviewed for technical sufficiency and policy compliance by the undersigned. The RP checklist that documents that review is provided as Enclosure 2.
5. DDNPCX review did not assess compliance with the 28 July 2023 CECW-P memorandum, Subject: Model Coordination for Civil Works Planning Studies. The DDNPCX will work with the Philadelphia District and North Atlantic Division to collaboratively address the requirements of the model coordination memo. Upon meeting the requirements, the review plan will be updated as appropriate.

CESAM-PD-D

19 September 2023

SUBJECT: Review Plan (RP) Endorsement, Phase II Dredged Material Management Plan Study for the Delaware River, Philadelphia to the Sea (DPS) Project

6. The DDNPCX recommends the RP for approval by the Major Subordinate Command (MSC) Commander. Following approval, please provide the DDNPCX with a copy of the MSC Commander's Approval Memorandum and a link to where the RP is posted on the District website. Prior to posting, team rosters and the basis for review cost estimates should be removed (RP Attachments).

7. Thank you for the opportunity to assist in the preparation of the RP. Please coordinate any review related efforts outlined in the RP with the undersigned at (251) 694-3842.

Kimberly P. Otto

Encls

KIMBERLY P. OTTO
Review Manager, DDNPCX

CF:

CENAP-OP (Landis, Kelly, Rooney)

CENAP-PL (Blum, Leary)

CESAD-PDP (Summa, Upah)

REVIEW PLAN CHECKLIST For DECISION DOCUMENTS				
Date:	19 September 2023			
Originating District:	Philadelphia			
Project/Study Title:	Phase II Dredged Material Management Plan Study for the Delaware River, Philadelphia to the Sea Project			
P2#	TBD			
District POC:	Alexander Renaud			
PCX Reviewer:	Kim Otto			
Please fill out this checklist and submit with the draft Review Plan when coordinating with the DDNPCX. Unless otherwise noted, references are to paragraphs in Engineer Regulation (ER) 1165-2-217.				
REQUIREMENT	REFERENCE	EVALUATION		
1. Is the Review Plan (RP) a standalone document?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does the first page identify it as a RP and listing the project/study title, originating district or office, and date of the plan?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Is the purpose of the RP clearly stated and ER 1165-2-217 referenced?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does it reference the Project Management Plan (PMP) of which the RP is a component?	Paragraph 3.6		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d. Does it succinctly describe the three levels of peer review: District Quality Control (DQC), Agency Technical Review (ATR), and Independent External Peer Review (IEPR)?	Paragraphs 3.6.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e. Does it identify the subject and purpose of the decision document to be reviewed?	Paragraph 3.6.2		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
2. Is the RP detailed enough to assess the necessary level and focus of peer review?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it indicate which parts of the study will likely be challenging?	Paragraph 3.6.1		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it provide a preliminary assessment of where the project risks are likely to occur and what the magnitude of those risks might be?	Paragraph 3.6.1/3.6.2.2		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
3. Mandatory triggers requiring IEPR include:				
a. Is the estimated total cost of the project including mitigation costs greater than \$200 million?	Paragraph 6.4.1		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>If yes, IEPR may be required.</i>				
b. Has the Governor of an affected state requested peer review by independent experts?	Paragraph 6.4.2		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>If yes, IEPR is required.</i>				
c. Is the project study controversial due to significant public dispute over the size, nature, or effects of the project or the economic or environmental costs or benefits of the project?	Paragraph 6.4.3		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>If yes, the Chief of Engineers would determine the project study to be controversial and IEPR is required.</i>				
4. A project study may be considered for exclusion from IEPR in cases where only the mandatory cost trigger is met but at least one of the				

following criteria is applicable (option a or option b):				
a. If the project study does not include an EIS and the Chief of Engineers determines that it (<i>must all be answered no</i>)				
<ul style="list-style-type: none"> Is the project controversial? 	Paragraph 6.6.1.1		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> Will the project have more than negligible adverse impacts on scarce or unique cultural, historic, or tribal resources? 	Paragraph 6.6.1.2		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> Will the project have substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures? 	Paragraph 6.6.1.3		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> Will the project have, before implementation of mitigation measures, more than a negligible adverse impact on a species listed as endangered or threatened species under the Endangered Species Act of 1973 or the critical habitat of such species designated under such Act? 	Paragraph 6.6.1.4		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
b. Option b- If the project study (<i>must both be answered yes</i>)				
<ul style="list-style-type: none"> Is for an activity for which there is ample experience within USACE and the industry to treat the activity as being routine? 	Paragraph 6.6.2.1		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<ul style="list-style-type: none"> Has minimal life safety risk? 	Paragraph 6.6.2.3		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5. Does the RP address Safety Assurance Review (SAR) factors?	Paragraph 3.6.2.2.2		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Are design and construction activities justified by life safety?			<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
b. Will failure of the project pose a significant threat to human life?			<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>If yes to either 5 a. or b., SAR is required.</i>				
<i>Other factors considered when determining whether to conduct SAR include whether the project/project design require:</i>				
c. Will the project use innovative materials or techniques, is the engineering based on novel methods\complexity\ precedent-setting models or methods, or will the study present conclusions that are likely to change prevailing practices?	Paragraph 6.5.2/7.4.1.1		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
6. Does the RP define the appropriate level of peer review for the project/study?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it state that DQC will be managed by the home district in accordance with the Major Subordinate Command (MSC) and District Quality Management Plans?	Paragraph 3.3.3		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it state that ATR will be conducted or managed by the lead PCX?	Paragraph 5.6.1		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does it state whether IEPR will be performed?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d. <i>Will an IEPR be performed?</i>			<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
e. Does it provide a defensible rationale for the decision on IEPR?	Paragraph 6.5.2.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

f. Does it state that IEPR will be managed by an Outside Eligible Organization, external to the Corps of Engineers?	Paragraph 6.8.1	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
7. Does the RP present the tasks, timing, sequence (including deferrals), and costs of reviews?	Paragraph 3.5.2		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it provide a schedule for DQC of the draft and final reports and other supporting materials?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it include interim DQC reviews for milestone submittals?	Planning Bulletin 2018-01 Feasibility Study Milestones		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does it provide a schedule for ATR of the draft and final reports and other supporting materials?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d. Does it include interim (targeted) ATR for key technical products?		<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
e. Does it present the timing and sequencing for IEPR?		<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
f. Does it present the timing and sequencing for Policy and Legal reviews?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
g. Does it include cost estimates for the peer reviews?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
8. Does the RP explain how ATR will be accomplished?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it identify the anticipated number of reviewers?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it provide a succinct description of the primary disciplines or expertise needed for the review (not simply a list of disciplines)?	Paragraph 5.5.2		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does it indicate that ATR team members will be from outside the home district?	Paragraph 5.5.1		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d. Does it indicate that the ATR team leader will be from outside the home MSC?	Paragraph 5.5.1.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e. Does the RP state that the RMO (lead PCX) is responsible for identifying the ATR team members?	Paragraph 5.5.1		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
f. If the reviewers are listed by name, does the RP describe the qualifications of the ATR team members?	Paragraph 3.6.2.6	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
9. Does the RP explain how IEPR will be accomplished?		<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it identify the anticipated number of reviewers?			<input type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it provide a succinct description of the primary disciplines or expertise needed for the review (not simply a list of disciplines)?	Paragraph 3.6.2.6		<input type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does it indicate that the IEPR reviewers will be selected by an Outside Eligible Organization?	Paragraph 6.8.1		<input type="checkbox"/> Yes	<input type="checkbox"/> No
d. Does it indicate the IEPR will address all the underlying planning, safety assurance, engineering, economic, and environmental analyses, not just one aspect of the project?	Paragraph 6.9		<input type="checkbox"/> Yes	<input type="checkbox"/> No
10. Does the RP address peer review of sponsor in-kind contributions?		<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No

a. Does the RP list the expected in-kind contributions to be provided by the sponsor?	Paragraph 3.6.2.9		<input type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it explain how peer review will be accomplished for those in-kind contributions?	Paragraphs 4.3 & 5.4.1		<input type="checkbox"/> Yes	<input type="checkbox"/> No
11. Does the RP address how peer review will be documented?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does the RP address the requirement to document ATR comments using DrChecks?	Paragraph 5.8		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does the RP explain how the IEPR will be documented in a Review Report?	Paragraphs 6.11.1	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does the RP document how written responses to the IEPR Review Report will be prepared?	Paragraph 6.11.3	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
d. Does the RP detail how the District/PCX will disseminate the final IEPR Review Report, USACE response, and all other materials related to the IEPR on the internet and include them in the applicable decision document?	Paragraphs 6.11	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
12. Does the RP address Policy Compliance and Legal Review?	Paragraph 3.5.2.3		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
13. Does the RP address model certification requirements?	EC 1105-2-412 and ER 1165-2-217 Paragraph 3.6.2.8		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it list the models and data anticipated to be used in developing recommendations (including mitigation models)?	Paragraph 3.6.2.8		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it indicate the certification/approval status of those models and if certification or approval of any model(s) will be needed?	Paragraph 3.6.2.8		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c. If needed, does the RP propose the appropriate level of certification/approval for the model(s) and how it will be accomplished?	EC 1105-2-412 and Paragraph 3.6.1.	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
14. Does the RP address opportunities for public participation?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it indicate whether there will be opportunity for the public to comment on the PCX endorsed and MSC approved RP?	Paragraph 3.8.2		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it indicate how and when there will be opportunities for public comment on the decision document?	EC 1105-2-410 and ER 1165-2-217 Paragraph 3.6.2.5		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does it indicate when significant and relevant public comments will be provided to reviewers?	Paragraph 3.6.2.5	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
d. Does the RP list points of contact at the home District, the PCX and the MSC for inquiries about the RP?	Paragraph 3.6.2.1.2		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
15. Does the RP address coordination with the appropriate RMO/Planning Center(s) of Expertise?	Paragraph 3.4.1		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it state if the project is single or multi-purpose? Single <input checked="" type="checkbox"/> Multi <input type="checkbox"/>			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
List purpose(s): Deep Draft Navigation				
b. Does it identify the lead PCX for peer review?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

<i>Identify PCX: DDNPCX</i>				
c. If multi-purpose, has the lead PCX coordinated the review of the RP with the other PCXs as appropriate?		<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
16. Does the RP address coordination with the Cost Engineering Mandatory Center of Expertise (MCX) in Walla Walla District for ATR and certification of cost estimates?	Paragraph. 5.5.3.3/5.6.4		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Will the decision document require Congressional authorization?			<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
17. Other Considerations: Were any of the following addressed in the RP:			<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
a. Are there additional Peer Review requirements specific to the home MSC or District (as described in the Quality Management Plan)?			<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>If yes, describe:</i>				
b. Are there additional Peer Review needs unique to the project study?			<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>If yes, describe:</i>				