DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NORTH ATLANTIC DIVISION
FORT HAMILTON MILITARY COMMUNITY
302 GENERAL LEE AVENUE
BROOKLYN, NY 11252-6700

CENAD-PD-O

24 January 2019

MEMORANDUM FOR Commander, New England District, 696 Virginia Road, Concord, MA 01742-2751

SUBJECT: Review Plan Approval for the Providence River and Harbor Federal Navigation Project (FNP) Maintenance Dredging – Dredged Material Management Plan and Environmental Assessment, State of Rhode Island (P2 No. 107660).

1. Reference CENAE-PPC memorandum dated 16 April 2018, subject as above.

2. The Deep Draft Navigation Planning Center of Expertise of the South Atlantic Division is the lead office to execute the referenced Review Plan. The Review Plan does not include Independent External Peer Review, as an exclusion request will be sought.

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 Management Business Process. Subsequent revisions to this Review Plan or its execution require new written approval from the NAD Commander.

4. The point of contact is Mr. Doug Stamper, NAD Operations Program Manager, 347-370-4608, douglas.h.stamper@usace.army.mil.

MILHORN.JEFFREY.LARRY.1149493928

Digitally signed by MILHORN.JEFFREY.LARRY.1149493928
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=MILHORN.JEFFREY.LARRY.1149493928
Date: 2019.01.25 15:08:39 -05'00'

Encls

JEFFREY L. MILHORN
Major General, USA
Commanding

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NEW ENGLAND DISTRICT
696 VIRGINIA ROAD
CONCORD MA 01742-2751

CENAE-PPC

16 April 2018

MEMORANDUM FOR Commander, North Atlantic Division, U.S. Army Corps of Engineers (CENAD-PD-OR/Attn: Mr. Stamper) Fort Hamilton Military Community, 302 General Lee Avenue, Brooklyn, New York 11252-6700

SUBJECT: Submission of the Review Plan for the Providence River & Harbor Federal Navigation Project (FNP) Maintenance Dredging - Dredged Material Management Plan and Environmental Assessment, State of Rhode Island (P2 No. 107660) for Approval

1. References: Engineer Circular (EC) 1165-2-214, Civil Works Review, 15 Dec 2012.

2. Background: The New England District developed the enclosed Review Plan for the Providence River & Harbor FNP maintenance dredging Dredged Material Management Plan (DMMP) and Environmental Assessment (EA), and has coordinated the Review Plan with the Deep Draft Navigation Planning Center of Expertise (DDN-PCX), as required. See enclosed memorandum from the PCX dated March 9, 2018 recommending Review Plan approval.

3. Request: The New England District requests NAD approve the subject Review Plan.

4. Point of Contact: Questions should be directed to the Project Manager, Michael Walsh, at 978-318-8586.

Encl

WILLIAM M. CONDE
COL, EN
Commanding

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

REPLY TO ATTENTION OF

CESAM-PD-D

9 March 2018

MEMORANDUM FOR MR. MICHAEL WALSH (CENAE-PPC) U.S. ARMY CORPS OF ENGINEERS, NEW ENGLAND DISTRICT, 696 VIRGINIA ROAD, CONCORD, MA 01742

SUBJECT: Review Plan (RP) Approval, Providence River & Harbor, Rhode Island, Navigation Project Maintenance Dredged Material Management Plan (DMMP) and Environmental Assessment (EA)

1. The enclosure 1, RP has been presented to the Deep Draft Navigation Planning Center of Expertise (DDNPCX) for its review and endorsement in accordance with Engineering Circular 1165-2-214, Civil Works Review, dated 15 December 2012.

2. The Providence River & Harbor Federal Navigation Project (PR&HFNP) DMMP study will result in identification of the least cost alternative for long-term placement of maintenance dredged sediments removed from the PR&HFNP. Beneficial use of dredged material will be investigated, and an EA will be prepared.

3. The RP was reviewed for technical sufficiency and policy compliance. Exclusion from Type I Independent External Peer Review (IEPR) will be pursued by the District. RP review was performed by Ms. Kimberly P. Otto, Review Manager, DDNPCX. The RP checklist that documents the review is enclosure 2.

4. The DDNPCX recommends the RP for approval by the Major Subordinate Command (MSC) Commander. Following approval, the District is requested to 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, the names of individuals identified in the RP should be removed (Attachment 1 of the RP).

5. Thank you for the opportunity to assist in the preparation of the RP. Please coordinate any Agency Technical Review and IEPR exclusion efforts outlined in the RP with the undersigned at (251) 694-3842.

OTTO.KIMBERLY.PERSONS.1230779984

Digitally signed by OTTO.KIMBERLY.PERSONS.1230779984
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=OTTO.KIMBERLY.PERSONS.1230779984
Date: 2018.03.09 09:25:42 -06'00'

Encls

KIMBERLY P. OTTO
Review Manager, DDNPCX

CF:
CENAE-PDP (Burnett)
CESAD-PDP (Bush, Small, Stratton)
CESAM-PD (Flakes)
CESAM-PD-D (Nettles)

REVIEW PLAN

PROVIDENCE RIVER & HARBOR, RHODE ISLAND FEDERAL NAVIGATION PROJECT MAINTENANCE DREDGED MATERIAL MANAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT

NEW ENGLAND DISTRICT

PCX Endorsement Date: 9 March 2018
MSC Approval Date: Pending
Last Revision Date: 9 February 2018

US Army Corps
of Engineers®

REVIEW PLAN

Providence Harbor, Rhode Island

Dredged Material Management Plan and Environmental Assessment

TABLE OF CONTENTS

1. PURPOSE AND REQUIREMENTS 1
2. REVIEW MANAGEMENT ORGANIZATION COORDINATION 3
3. PROJECT INFORMATION 3
4. DISTRICT QUALITY CONTROL 11
5. AGENCY TECHNICAL REVIEW (ATR) 11
6. INDEPENDENT EXTERNAL PEER REVIEW 14
7. POLICY AND LEGAL COMPLIANCE REVIEW 17
8. COST ENGINEERING REVIEW AND CERTIFICATION 17
9. MODEL CERTIFICATION AND APPROVAL 17
10. REVIEW SCHEDULES AND COSTS 18
11. PUBLIC PARTICIPATION 19
12. REVIEW PLAN APPROVAL AND UPDATES 19
13. REVIEW PLAN POINTS OF CONTACT 19

ATTACHMENT 1: TEAM ROSTERS 20

ATTACHMENT 2: STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS 21

ATTACHMENT 3: REVIEW PLAN REVISIONS 22

1. PURPOSE AND REQUIREMENTS

a. Purpose

This plan defines the scope and level of peer review for the Providence River & Harbor Federal Navigation Project (FNP) Dredged Material Management Plan (DMMP) and Environmental Assessment (EA). The Providence River & Harbor FNP is a Federally authorized navigation channel to a depth of 40-feet below Mean Lower Low Water (MLLW) over a 16.5-mile length in the Providence River estuary in Rhode Island (Figure 1). Inherent in the authorization, maintenance of this FNP is the responsibility of the Federal government, and managed by the US Army Corps of Engineers.

The channel was last maintained in 2005 and currently has excess shoaling, requiring at least 1,400,000 cubic yards (CY) of material to be removed through dredging and proper placement. Most of this sediment is unsuitable for traditional open water disposal, so will need one or more alternative disposal methods for this unsuitable material. The DMMP addresses these dredging placement needs over a 20-year period of maintenance, which includes three dredge cycles, with consideration of alternatives to produce the least-cost viable means of dredge material placement.

b. References

The following references guide the process of analysis, preparation, review, and approval of DMMPs in general and this DMMP for the Providence River & Harbor FNP.

(1) Engineer Circular (EC) 1165-2-214, Civil Works Review Policy, 15 Dec 2012
(2) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
(3) Engineer Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
(4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
(5) Planning SMART Guide (https://planning.erdc.dren.mil/toolbox/index.cfm)
(6) U.S. Army Corps of Engineers, New England District, Quality Control Plan For Civil Works Decision Documents, May 2016
(7) Project Management Plan for Providence River & Harbor, RI, DMMP, 2017
(8) The Providence River & Harbor maintenance dredging EIS – USACE August 2001, with ROD and MPRSA Site Selection Document – USACE-NAE March 2002
(9) The Providence River & Harbor Dredged Material Placement Facility Decision Document, USACE-NAE, Revised August 2002
(10) Project Cooperation Agreement, USACE and State of RI, November 2002, with amendments of 2005 (to accommodate Pawtuxet Cove FNP in the CAD cells) and 2008 (to accommodate Bullock Point Cove FNP in the CAD Cells).
(11) The RIS Disposal Site Designation EIS, USACE and USEPA, October 2004
(12) Providence River & Harbor Environmental Assessment for Change in Maintenance Dredging and DM Disposal Facility, USACE-NAE, December 2005
(13) Providence River & Harbor Environmental Assessment for Removal of Rock Obstructions, USACE-NAE, August 2006
(14) Disposal Area Monitoring System Contribution #178, Providence River and Harbor Maintenance Dredging Synthesis Report, August 2008

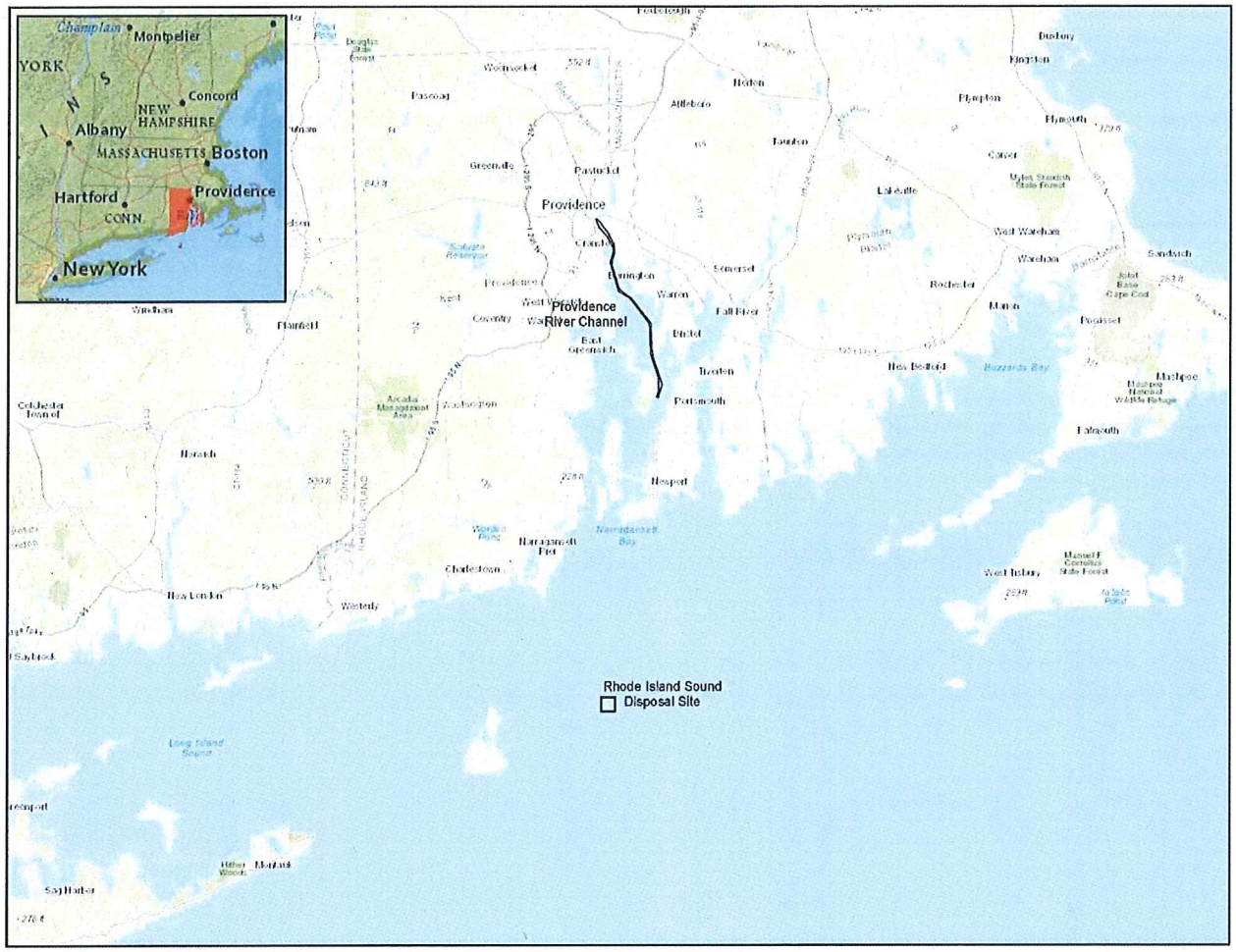

Figure 1. Providence River & Harbor, RI, FNP Location Map

c. Requirements

This plan has been developed in accordance with Engineering Circular EC 1165-2-214, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products. This circular provides a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement, and rehabilitation (OMRR&R). The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review.

In addition to these reviews, decision documents are subject to cost engineering review and certification (per EC 1165-2-214) and planning model certification/approval (per EC 1105-2-412).

2. REVIEW MANAGEMENT ORGANIZATION COORDINATION

The Review Management Organization (RMO) is responsible for managing the overall peer review effort described in this Review Plan. The RMO for decision documents is typically either a Planning Center of Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the decision document. For the purposes of the Providence River & Harbor navigation project, the RMO for the peer review effort is the Deep Draft Navigation PCX (DDNPCX). The DDNPCX will coordinate with the Cost Engineering Mandatory Center of Expertise (MCX) to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules, risk analysis, Total Project Cost Summary (TPCS), and contingencies.

3. PROJECT INFORMATION

a. Decision Document

The authorized name of the project is the Providence River & Harbor Federal Navigation Project, Rhode Island. The project is located in the upper reaches of Narragansett Bay in the cities of Providence, East Providence, Cranston, Barrington, Warwick, Bristol and Portsmouth, Rhode Island, as shown in Figure 1. The single purpose, commercial deep draft navigation study will result in a Dredged Material Management Plan (DMMP) and Environmental Assessment (EA). The EA will be prepared to meet requirements of the National Environmental Policy Act (NEPA). The purpose of the DMMP is to document the Corps formulation, evaluation, and selection of the least-cost and environmentally acceptable plan for maintenance dredging of the Providence River & Harbor Federal Navigation Project (PR&HFNP). The DMMP will investigate long-term maintenance dredging, over at least a 20-year period, to Federal channel authorized depths throughout the entire PR&HFNP boundaries. The 20-year period includes the current dredge cycle and anticipated two additional cycles, for a total of three dredge cycles. As part of the formulation process to arrive at the least cost alternative, the DMMP addresses a reasonable range of dredged material placement alternatives covering a variety of dredging, handling, transport, and disposal methods. The DMMP will also consider beneficial uses for the dredged materials generated from the project.

Based on requirements in ER 1105-2-100, the DMMP will require approval from the HQUSACE, CECW-O because the management plan will include dredged material disposal facilities construction, which meets the condition of requiring a non-recurring item of work or aggregate item of related work that qualifies as major maintenance as defined in the annual guidance for preparation of the program and budget request. The FY19 Budget EC defines major maintenance as "a non-repetitive item of work or aggregate items of related work for which the total estimated cost exceeds $6,200,000, and which does not qualify as Major Rehabilitation". Preliminary cost estimates to plan, design, and construct new CAD sites anticipated for project implementation are $60-million to $70-million for three dredge cycles. The EC further includes DM disposal facilities under this designation..

The Division commander will transmit the final report and associated NEPA documentation by concurring endorsement to HQUSACE, CECW-O for review and approval. Upon approval of the report, the Major Subordinate Commander shall prepare the draft Record of Decision following the completion of the final NEPA review, and if required, shall file the final NEPA

documentation. The DMMP supports existing authorized operation and maintenance activities, and, therefore, will not require Congressional Authorization.

b. Project Description

Providence River & Harbor is the state of Rhode Island's largest seaport and is located in the northern reaches of Narragansett Bay. The Bay extends northerly about 27 miles from Rhode Island Sound in the Atlantic Ocean, on the central Rhode Island Coast (Figure 1) to the confluence of the Providence and Seekonk Rivers at the City of Providence. The Providence River is a tidal river formed by the junction of the Woonasquatucket and Moshassuck Rivers, which flow from northern Rhode Island. From this confluence, the Providence River flows southerly for 8 miles before emptying into upper Narragansett Bay.

The Providence River & Harbor FNP is located in the Providence River and upper Narragansett Bay (Figure 2). The Providence River & Harbor FNP consists principally of a -40-foot Mean Lower Low Water (MLLW) channel, about 17 miles long by generally 600 feet wide from deep water in Narragansett Bay east of Prudence Island north to the city of Providence (Figure 2). A portion of the channel's upper reach widens to 1,700 feet wide for the maneuvering and turning of ships off the developed waterfront of Providence. A 25-foot anchorage at Green Jacket Shoal to the northeast of the head of the 40-foot channel and basin has not been maintained in several decades and is not included in current maintenance plans. The Providence River & Harbor FNP is divided into an entrance channel, to the south, and six reaches (Figure 2). The channel reaches from south to north are Rumstick Neck, Conimicut Point, Bullock Point, Fox Point, Sabin Point, and Fuller Rock.

The Providence River & Harbor FNP was originally adopted in 1852, and was modified by 17 subsequent authorizations through the Water Resources Development Act of 1986. Inherent in these authorizations, maintenance of this FNP is entirely the responsibility of the Federal government, and managed by the US Army Corps of Engineers.

The last dredging maintenance occurred in 2005, in which 3,800,000 CY of shoal material was dredged from the 40-foot-deep project features. Two thirds of this dredged material (2,600,000 CY) was determined to be suitable for open water placement at the Rhode Island Sound Disposal Area (Figure 1). Approximately one-third of this material (1,200,000 CY) was determined to be unsuitable for unconfined open water placement and was placed in confined aquatic disposal (CAD) cells under the upper-most reach of the FNP (Figure 3). Federal participation of implementation of these CAD cells for one dredge cycle was approved through a Decision Document prepared by the Corps in August 2002 along with an Environmental Impact Statement and Record of Decision signed in 2002.

The State of Rhode Island had paid for construction of additional capacity in these CAD cells to handle state and other non-Federal dredging needs. This additional state space has been supplemented by capacity created by the post-placement consolidation of the dredged material in the cells. Recent surveys reveal that a volume of approximately 300,000 CY remains available in the original CAD cells. The DMMP will consider this remaining space in determining future dredge placement needs.

The latest condition survey of the PR&HFNP, in 2015, revealed shoaling in the channel, sufficient to warrant the next cycle of maintenance dredging. Currently removal of about 608,000 CY of required shoal material would be necessary to restore the channel to its

authorized depth of -40 feet MLLW. An allowable overdepth of 2 feet would add about 830,000 CY, for a total of 1,438,000 CY in the current dredge maintenance cycle. With allowance for the time to complete and approve this DMMP and EA, and secure Federal and state funds for design and construction, a total of 1,500,000 CY of required plus allowable shoal material should be planned for in this maintenance cycle. Future maintenance cycles would require dredging of similar totals.

Chemical analysis has determined that nearly all of the shoal material to be dredged is unsuitable for unconfined placement in pre-approved open ocean disposal sites. Therefore, alternative disposal options for the dredged material from the channel will need to include upland disposal, contained disposal facilities (CDF), and various locations and configurations of contained aqueous disposal (CAD) cells within the Providence River corridor.

The Providence River and Harbor DMMP may also include the adjacent FNPS for Pawtuxet Cove and Bullocks Point Cove. These are separately authorized FNPS located along the Narragansett Bay reaches of the Providence entrance channel. During the most recent maintenance actions for these two projects, the dredged material was also placed in the Providence CAD cells. Accordingly, inclusion of future maintenance of these two shallow draft projects in the long-term planning for disposal of Providence materials will be examined as part of this DMMP.

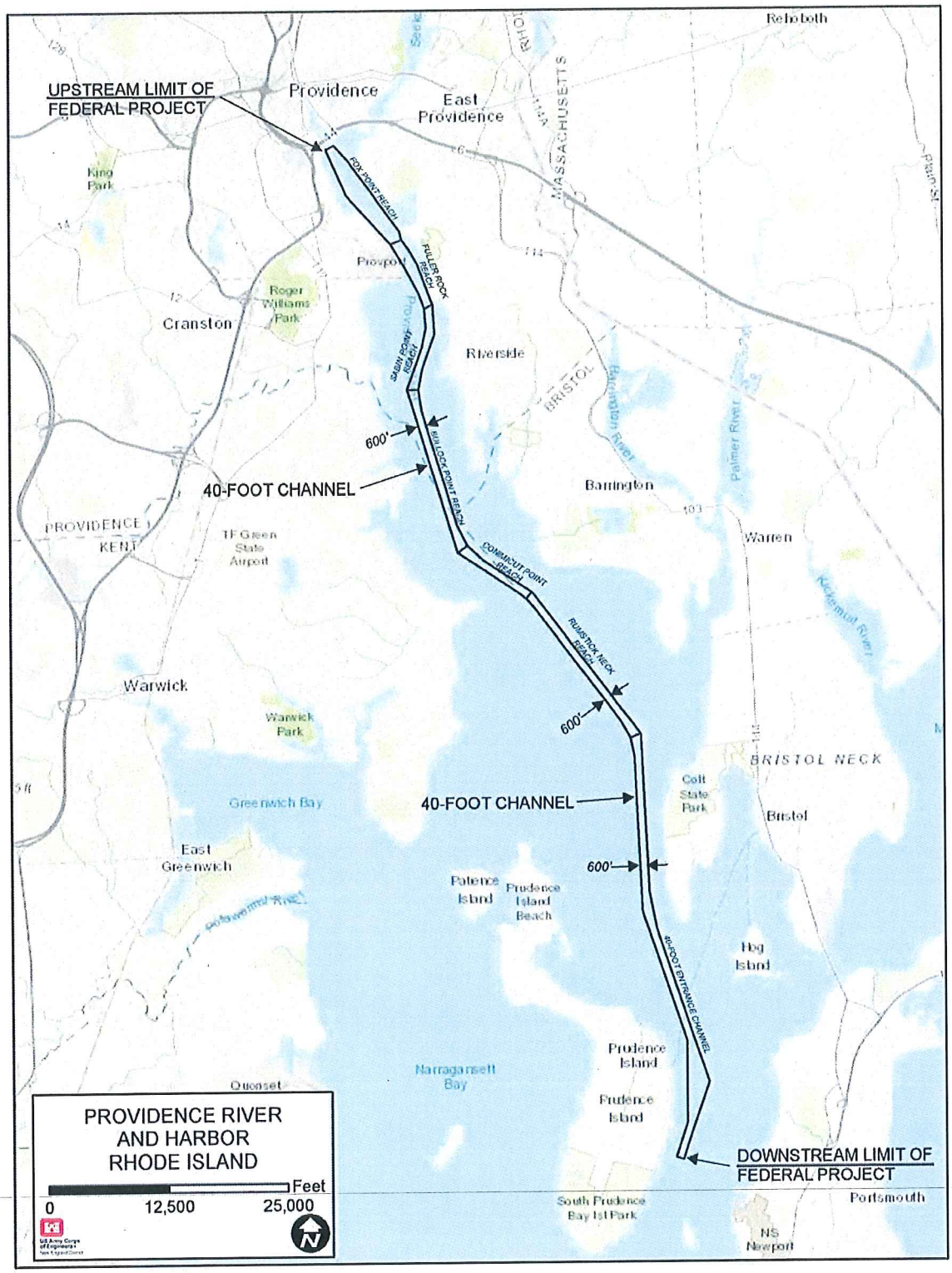

Figure 2. Providence River & Harbor Project Map, Providence RI

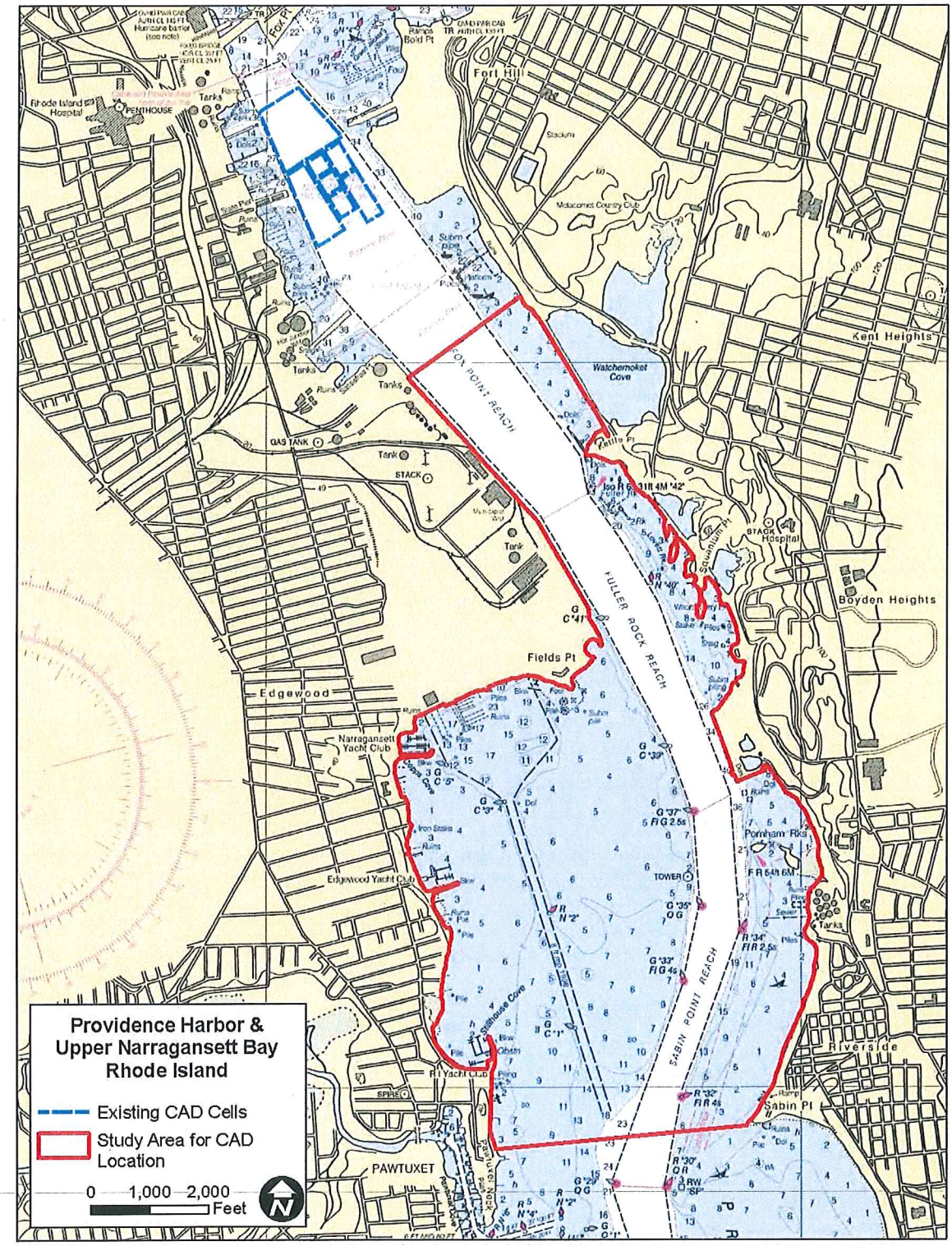

Figure 3. This drawing shows the general study area for CAD cell locations within the Providence River that the DMMP is considering for construction over three dredge cycles.

The current CAD cells are also shown at the north end of the Fox Point Reach. Appropriate CAD cells locations, both beneath the Federal navigation channel and in areas outside the navigation project footprint, will be assessed. The general areas for CAD cell locations for the next three dredge cycles, shown in Figure 3, including the Fields Point reach and Fuller Point reach of the navigation channel and an area south of Fields Point within a broad shallow area west of the navigation channel. Construction of CAD cells would involve excavation of a top layer of sediment that preliminary sample tests have shown to be unsuitable for open water disposal. This material would be held in scows until excavation of the remaining cell capacity was completed, or disposed of upland or otherwise sequestered. Common practice has been construct CAD cells in a series, with one of more starter cells used to sequester the upper unsuitable materials before final excavation of a main cell or cells to receive the bulk of the dredged materials.

The original CAD cells constructed in the upper end of the PR&HFNP in 2003 for the last maintenance cycle for the port currently have sufficient capacity to function as starter cells for this upper layer of sediment from the new CAD cells. Below this surface sediment native/parent materials to be excavated to form CAD cells are expected to be clean and suitable for unconfined open water placement in approved sites, such as the Rhode Island Sound Disposal Site (Figure 1), as well as available for certain beneficial uses.

Beneficial use of dredged material will be investigated in this study and will be considered as part of the Federal plan when found cost–effective. Beneficial use could include filling abandoned dredged areas in Narragansett Bay, shoreline stabilization/resiliency projects, beach nourishment if clean sand deposits are found, or capping aquatic or upland sites. Even if some beneficial uses are not part of the Federal plan, analysis and implementation could proceed if a non-Federal sponsor is willing and capable of providing any difference in cost, or if another cost-shared Federal authority is applicable to the specific use proposed.

A rough initial estimate for the cost of constructing a set of CAD cells for each maintenance cycle, including preconstruction engineering and design, is $20-million. The total cost of three cycles of CAD cell construction over the 20-year maintenance period is approximately $60-million to $70-million. The CAD cell construction costs will be estimated more accurately during final design analysis. The costs to dredge the Federal project will be covered by the Federal government as part of the Corps operations and Maintenance Program. The additional cost to construct CAD cells will be cost-shared by a non-Federal sponsor; currently identified as the Rhode Island Coastal Resources Management Council.

c. Factors Affecting the Scope and Level of Review

The factors affecting the risk informed decisions on the appropriate scope and level of review are listed below (*in italicized font*) each followed by an assessment of the applicability of that factor to this project.

(1) *If parts of the study will likely be challenging (with some discussion as to why or why not and, if so, in what ways – consider technical, institutional, and social challenges, etc.);* Maintenance dredging and placement will continue to follow established design and construction methods and standard, routine best management practices. CAD cells were used for the last major maintenance dredging cycle for the Providence FNP and no significant technical, institutional or social challenges were encountered in that action.

(2) *A preliminary assessment of where the project risks are likely to occur and what the magnitude of those risks might be (e.g., what are the uncertainties and how might they affect the success of the project):* The project does not involve novel or precedent-setting approaches. There is an abundance of data available to build upon, including historical dredging records, dredged-material-placement records, and extensive previous and present environmental compliance documentation. An EA and FONSI are planned to be prepared, based on no expected controversial issues and an expected finding of no significant impact.

(3) *If the project will likely be justified by life safety or if the project likely involves significant threat to human life/safety assurance:* 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 channel, which is justified to provide national and regional economic benefits to deep draft commercial navigation. Maintenance dredging, including the construction and filling of CAD cells, will continue to follow established design and construction methods and standard, routine best management practices, thereby minimizing risks to human life and safety during CAD cell construction, dredging, and placement operations.

This assessment has been coordinated with the NAE Chief of Engineering Division, who agrees that this dredged material disposal project does not involve human life and safety assurance analysis, and the project will follow established methods for marine construction activities to minimize human life and safety threats during construction.

(4) *If there is a request by the Governor of an affected state for a peer review by independent experts:* The office of the Governor of Rhode Island is not expected to request a peer review by independent experts.

(5) *If the project/study is likely to involve significant public dispute as to the size, nature, or effects of the project (with some discussion as to why or why not and, if so, in what ways):* The project will likely have the normal level of interagency interest that will require the usual level of coordination with marine resource-related Federal and state agencies for their input during analysis of affected resources required by applicable laws. The Corps is proceeding with an EA and expected Finding of No Significant Impact (FONSI) under NEPA guidance due to the anticipated low level of controversy related to CAD cell location and design, and placement of suitable material in Rhode Island Sound. This expectation is based largely on the experience with the last maintenance action and the subsequent EPA designation of the ocean placement site in RIS. To the extent practicable, any environmental concerns identified in this analysis can typically be addressed through mitigation measures of avoidance, minimization, or compensation, and through public education and outreach efforts.

At this stage in the project, the Corps anticipates no significant impacts to regulated resources. Preliminary analysis indicates that impacts to fish and wildlife, including threatened and endangered species, are not expected to be significant, in keeping with the experience of the last maintenance action. It is anticipated that proposed construction would be sequenced and dredging windows utilized to avoid and minimize potential impacts to biological resources. Since the NEPA analysis will involve

preparation of an EA and not an EIS, there is no need for identifying cooperating agencies for the development of the EA.

(6) *If the project/study is likely to involve significant public dispute as to the economic or environmental cost or benefit of the project (with some discussion as to why or why not and, if so, in what ways):* Continued maintenance of the FNP is warranted based on navigational use. The project is not anticipated to have impacts associated with flood risk management or coastal storm damage reduction. Preliminary analysis indicates that there are no scarce or unique cultural historic or tribal resources in the project area. During the DMMP analysis, additional research, coordination with resource agencies, and consultation with Tribal interests will be performed.

(7) *If the information in the decision document or anticipated project design is likely to be based on novel methods, involve the use of 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 (with some discussion as to why or why not and, if so, in what ways):* The final DMMP and supporting documentation will contain standard engineering, economic, and environmental analysis and information for which there is ample experience within USACE. Information in the decision document is not likely to be based on novel methods, will not involve the use of innovative materials or techniques, will not contain precedent-setting methods or models, and will not present conclusions that are likely to change prevailing practices. The project does not contain influential scientific information and will not include any highly influential scientific assessments.

(8) *If the project design is anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule (with some discussion as to why or why not and in what ways):* The project design is not anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design and construction schedule. Maintenance dredging and placement and CAD construction will continue to follow established design and construction methods and standard, routine best management practices.

d. In-Kind Contributions

Products and analyses provided by non-Federal sponsor as in-kind services are subject to DQC and ATR (and IEPR if found necessary). However, no in-kind contributions are anticipated for the study phase of this project. The non-Federal sponsor may desire to provide in-kind contributions for the project during the development of contract plans and specifications and construction, and these potential contributions will be addressed in a future cost sharing agreement that may result from this DMMP.

4. DISTRICT QUALITY CONTROL

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The home district shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the District and the home MSC.

a. Documentation of DQC

DrChecks review software will be used to document all DQC comments, responses, and associated resolutions accomplished throughout the review process. The ATR team will be provided with a copy of the DrChecks DQC comments and responses recorded in DrChecks.

b. Products to Undergo DQC

The draft and final DMMP (decision document) including feasibility-level design of the recommended plan and all technical appendices will undergo DQC prior to release from the District for external reviews (e.g., ATR and Type I IEPR). All DQC reviews will be complete and closed out before external reviews are initiated.

c. Required DQC Expertise

Required expertise for DQC includes individuals from plan formulation, economics, environmental and cultural resources, civil/coastal engineering with navigation design experience, geotechnical engineering, cost engineering, real estate, navigation operations and maintenance, and Office of Counsel.

5. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.). The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with published USACE guidance, and that the document explains the analyses and results in a reasonably clear manner for the public and decision makers. An ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside the home district that is not involved in the day-to-day management of the project. ATR teams will be comprised of certified senior USACE personnel and may be supplemented by outside experts as appropriate. The ATR team lead will be from outside the home MSC.

a. Products to Undergo ATR

The ATR team will review the draft and final DMMP (decision document) including feasibility-level design of the recommended plan, technical appendixes, and any supporting documentation that is not contained in the technical appendices. This review will occur following completion of DQC. The ATR team will also be informally engaged throughout the feasibility phase and will complete interim reviews on specific products as necessary.

b. Required ATR Team Expertise

Below is a list of anticipated disciplines for the ATR team. This list will be revised if the expertise needed for the review changes as the project progresses. The expertise represented on the ATR team reflects the significant expertise involved in the work effort and generally mirrors the expertise on the Project Development Team (PDT). The PDT made the initial assessment of expertise needed based on the PMP and the factors affecting the scope and level of review and may suggest additional technical disciplines as the project progresses. In addition to the expertise outlined below, ATR reviewers should be experienced in reviewing products resulting from risk-informed decision-making following SMART Planning processes. The RMO will determine the final make-up of the ATR team. The names, organizations, contact information, credentials, and years of experience of the ATR members will be included in Attachment 1 once the ATR team is established.

ATR Team Members and Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process.
Plan Formulation	The plan formulation reviewer should be a senior water resources planner and should be ATR certified with experience in formulation, evaluation, and selection of alternatives for deep draft navigation studies and DMMPs.
Economics	The Economics reviewer(s) is required to be an economist who is ATR certified for the deep draft navigation business line.
Environmental Resources	The Environmental Resources reviewer must be ATR certified and should have extensive knowledge of evaluation of potential environmental impacts related to dredging and dredge material placement, knowledge of threatened and endangered coastal species and experience with navigation projects. Knowledge of NEPA and other Federal environmental laws and regulations is also required.
Cultural Resources	The Cultural Resources reviewer should have a general background in cultural resources evaluation and management. Experience with Corps navigation and coastal projects is preferred. Knowledge of National Historic Preservations Act and NEPA is also required.
Civil/Coastal (Hydraulic) Engineering	The Civil/Coastal Engineering reviewer should have experience designing navigation improvement projects specifically channel deepening projects and DMMPs, and have knowledge of applicable engineering regulations and engineering manuals and other appropriate guidance for navigation projects. The reviewer must be certified by the Engineering and Construction Community of Practice as documented in the Corps of Engineers Reviewer Certification and Access Program (CERCAP).

ATR Team Members and Disciplines	Expertise Required
Geotechnical Engineer	The geotechnical engineering reviewer should have experience in sediment characterization, channel slope stability, dredged material placement, and characterization of the sub-surface conditions with identification of areas that may require rock removal. The reviewer must be certified by the Engineering and Construction Community of Practice as documented in CERCAP.
Real Estate	The Real Estate reviewer will have experience in development of SMART Planning Real Estate Plans and will have experience in preparing real estate plans for other navigation improvement projects/DMMPs including the application of navigational servitude for Federal navigations projects. The reviewer must be ATR certified for performing deep draft navigation reviews.
Operations	The operation reviewer will have experience with managing deep draft navigation projects that may periodically require maintenance dredging and placement of dredged maintenance material.
Cost Engineering	The Cost Engineering reviewer will be identified by the Cost MCX and will have experience using the Corps of Engineers Dredge Estimating program (CEDEP) and Micro-Computer Aided Cost Estimating System (MCASES), experience developing cost estimates for deep draft navigation improvement projects/DMMPs, and experience with Cost and Schedule Risk Analysis of navigation improvement projects.

c. Documentation of ATR

DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

(1) The review concern – identify the product's information deficiency or incorrect application of policy, guidance, or procedures;

(2) The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not be properly followed;

(3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and

(4) The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, comments may seek clarification to assess whether further specific concerns may exist. The ATR documentation in DrChecks will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team

includes the district, RMO, MSC, and HQUSACE), and the agreed upon resolution. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in either ER 1165-2-214, ER 1110-1-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns may be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

At the conclusion of each ATR effort, the ATR team will prepare a Review Report summarizing the review. Review Reports are considered an integral part of the ATR documentation and shall:

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and
- Include a copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed, based on work reviewed to date, for the draft report and the final report. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW

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 certain 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. A risk-informed decision, as described in EC 1165-2-214, is made as to whether IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR described below.

- Type I IEPR is managed outside the USACE and is conducted on project studies. Type I 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. Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and

environmental work, not just one aspect of the project. For decision documents where a Type II IEPR (Safety Assurance Review) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-214.

- Type II IEPR, or Safety Assurance Review (SAR), is managed outside the USACE and is conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. Type II IEPR panels will conduct reviews of the design and construction activities prior to initiation of physical construction and, until construction activities are completed, periodically thereafter on a regular schedule. The reviews shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.

a. Decision on IEPR

Based on a risk-informed decision process, Type I IEPR and Type II IEPR will not be required for the project based upon the following assessment. The factors affecting the risk-informed decisions on the appropriate scope and level of review are listed below (*in italicized font*), each followed by an assessment of the applicability of that factor to this project. The District will seek an exclusion from Type I IEPR in accordance with the risk informed decision process outlined in EC 1165-2-214, page 14 paragraphs 17 c and d. The review plan will be updated as necessary following coordination of the IEPR exclusion request with the DDNPCX, NAD, and HQUSACE.

(1) *If the decision document meets the mandatory triggers for Type I IEPR described in Paragraph 11.d.(1) and Appendix D of EC 1165-2-214:*

a) Significant threat to human life: The project does not involve significant threat to human life. The project to maintain an existing navigation channel is justified to provide regional and national economic benefits. Maintenance dredging, including the construction and filling of CAD cells, will continue to follow established design and construction methods and standard, routine best management practices.

b) Total Project Cost > $200M. The term "total cost", means the cost of construction (including planning and designing) of the project and includes lands, easements, rights of way, relocations, and disposal areas (LERRDs): Preliminary cost estimates to plan, design, and construct new CAD sites anticipated for project implementation are $60-million to $70-million for three dredge cycles. These estimates are based on historical project data and are subject to change as actual project alternatives are developed. These costs are in addition to ongoing channel maintenance costs.

c) A request by a State Governor of an affected state (all or a portion of a state that is within the drainage basin in which the project is or would be located and would be economically or environmentally affected as a consequence of the project): The office of the Governor of Rhode Island is not expected to request a peer review by independent experts.

(2) *Where the Director of Civil Works or the Chief of Engineers determines 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:* The Chief of Engineers is not expected to determine that the project study is

controversial for any reason. An EA and FONSI are planned to be prepared, based on no expected controversial issues and an expected finding of no significant impacts.

(3) *The status of any request to conduct IEPR from a head of a Federal or state agency charged with reviewing the project, if applicable:* No requests have been made for an IEPR, and the Corps does not anticipate that the head of a Federal or state agency will request an IEPR.

(4) *If the proposed project meets the criteria for conducting Type II IEPR described in Appendix E of EC 1165-2-214, including:*

a) If the Federal action is justified by life safety or failure of the project would pose a significant threat to human life: The project will not be justified by life safety, and failure of the project would not pose a significant threat to human life. The project to maintain an existing navigation channel is justified to provide regional and national economic benefits. Maintenance dredging, including the construction and filling of CAD cells, will continue to follow established design and construction methods and standard, routine best management practices.

b) If the project involves the use of innovative materials or techniques, where the engineering is based on novel methods, presents complex challenges for interpretations, contains precedent-setting methods or models, or presents conclusions that are likely to change prevailing practices: The project does not involve novel or precedent-setting approaches. There is an abundance of data available to build upon, including historical dredging records, dredged-material-placement records, and extensive previous and present environmental compliance documentation.

c) If the project design requires redundancy, resiliency, and/or robustness: The project is not anticipated to require redundancy, resiliency and/or robustness. Maintenance dredging and placement will continue to follow established design and construction methods and standard, routine best management practices.

d) If the project has unique construction sequencing or a reduced or overlapping design construction schedule: The project is not anticipated to involve unique design or construction sequencing. After design, plan implementation will be phased into routine annual channel maintenance contracts.

b. Products to Undergo Type I IEPR

Not Applicable

c. Required Type I IEPR Panel Expertise

Not Applicable

d. Documentation of Type I IEPR

Not Applicable

7. POLICY AND LEGAL COMPLIANCE REVIEW

All decision documents will be reviewed throughout the project process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the home MSC Commander. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.

8. COST ENGINEERING REVIEW AND CERTIFICATION

All decision documents shall be coordinated with the Civil Works Cost Engineering and Agency Technical Review Mandatory Center of Expertise (MCX) located in the Walla Walla District. The MCX will assist in determining the expertise needed on the ATR team and in the development of the review charge. The MCX will also provide the Cost Engineering MCX certification. The RMO is responsible for coordination with the Cost Engineering MCX.

9. MODEL CERTIFICATION AND 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, for the purposes of the EC, are defined as any models and analytical tools that planners use to define water resources management problems and opportunities, to formulate potential alternatives to address the problems and take advantage of the 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 the planning product. The selection and application of the model and the input and output data are still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

EC 1105-2-412 does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies and these models should be used whenever appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

a. Planning Models

No planning models are anticipated to be used in the development of the decision document:

b. Engineering Models

The following engineering models are anticipated to be used in the development of the decision document:

Model Name and Version	Brief Model Description and How It Will Be Used in the Project	Approval Status
MII	Used to estimate costs of alternatives and the selected plan	Enterprise
CSRA	Used to account for risk and uncertainty of the project and to develop the project cost contingency	Enterprise

c. Design Methodology.

Since this project involves operations and maintenance of a previously authorized FNP, no ship simulation will be conducted.

10. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost

ATR will be conducted seamlessly throughout the project and the ATR lead will be engaged throughout the development of the DMMP. The ATR team will conduct reviews of the draft and final DMMP.

Milestone	Estimated Date
Alternatives Developed	January 2018
Tentatively Selected Plan	March 2018
Release Draft DMMP/EA for Public Review	July 2018
Final DMMP/EA	October 2018

The ATR schedule and cost estimates are presented below.

Task	Date	Estimated Cost
ATR of draft DMMP/EA concurrent with Public Review	July 2018	$55,000
ATR of final DMMP/EA	Oct 2018	$40,000
Total:		$95,000

b. Model Certification/Approval Schedule and Cost

There are no models requiring certification or approval for this project.

11. PUBLIC PARTICIPATION

The public will be invited to comment directly to the New England District Commander and the New England District Project Manager through a public notice and public review comment period. This includes a public review of the draft DMMP (public review occurs concurrently with ATR, IEPR (if required), and HQ policy reviews). This Review Plan will be posted to the Division web site at: http://www.nad.usace.army.mil/Business-With-Us/Civil-Works-Review-Plans/ The public, including scientific or professional societies will not be asked to nominate potential external peer reviewers.

12. REVIEW PLAN APPROVAL AND UPDATES

The North Atlantic Division Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (district, MSC, RMO, and HQUSACE) as to the appropriate scope and level of review for the decision document. The Review Plan is a living document and may change as the project progresses. The home district is responsible for keeping the plan up to date. Minor changes to the Review Plan since the last MSC Commander approval are documented in Attachment 3. Significant changes to the Review Plan (such as scope and/or level of review changes) will be re-approved by the MSC Commander following the process used to initially approve the plan. The latest version of the Review Plan, along with the Commanders' approval memorandum, will be posted on the Home District's webpage. The latest Review Plan will also be provided to the RMO and home MSC.

13. REVIEW PLAN POINTS OF CONTACT

Questions and/or comments on this Review Plan can be directed to the following points of contact:

New England District Project Manager		978-318-8586
New England District Planning Technical Lead		978-318-8547
North Atlantic Division		347-370-4779
Deep Draft Navigation Planning Center of Expertise		251-694-3842

ATTACHMENT 1: TEAM ROSTERS

Project Delivery Team Roster	
Discipline	**Name**
Project Manager	Michael Walsh
Lead Planner	Adam Burnett
Environmental Compliance/Biologist	Beth Decelles
Economist	Mike Berner
Cultural Resources	Marcos Paiva
CADD	Scott Flanagan
Civil Engineer	Lauren Jacobs
Geotechnical Engineer	George Claflin
Geology	Paul Young
Sediment Evaluation	Ben Loyd
Survey Lead	Jeff Preston
Cost Engineer	Jeff Gaeta
Contracting	Jessica Kidd

ATR Team Roster	
Discipline	**Name**
ATR Lead	TBD
Plan Formulation	TBD
Economics	TBD
Environmental Resources	TBD
Cultural Resources	TBD
Civil/Coastal (Hydraulic) Engineering	TBD
Geotechnical Engineer	TBD
Operations	TBD
Cost Engineering	TBD
Real Estate	TBD

Vertical Team Roster	
Discipline	**Name**
DDPCX Technical Director	Todd Nettles
DDNPCX Review Manager	Kim Otto

ATTACHMENT 2: STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the *<project name and location>, <type of product>* . The ATR was performed in compliance with the requirements of EC 1165-2-214.
A panel of *<X>* reviewers was established by the Deep Draft Navigation Planning Center of Expertise (DDNPCX), the Review Management Organization (RMO) that managed this review. The review commenced on *<date>* and was completed on *<date>*. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. *<XXXX>* comments resulted from ATR of project documents; this total included *<XX>* comments posted by the Cost Engineering Mandatory Center of Expertise reviewer. All ATR concerns have been resolved, and all comments have been closed in DrChecks.

SIGNATURE _____ _____
Name Date
ATR Team Leader
Office Symbol/Company

SIGNATURE _____ _____
Name Date
Project Manager
Office Symbol

SIGNATURE _____ _____
Name Date
Review Management Office Representative
Office Symbol

CERTIFICATION OF AGENCY TECHNICAL REVIEW

We certify that the ATR *project name and location>, <type of product>* has been performed as required by EC 1165-2-214. All concerns resulting from ATR of the project have been fully resolved.

SIGNATURE _____ _____
Name Date
Chief, Engineering Division
Office Symbol

SIGNATURE _____ _____
Name Date
Chief, Planning Division
Office Symbol

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number