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PACIFIC OCEAN DIVISION, U.S. ARMY CORPS OF ENGINEERS
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CEPOD-PDC

MAY 3 0 2017

MEMORANDUM FOR Commander, Alaska Engineer District (CEPOA-PM-C-PL/Jan Deick), P.O. Box 6898 JBER, AK 99506-0898

SUBJECT: Approval of the Review Plan for the Kotzebue Small Boat Harbor, Kotzebue, Alaska, Integrated Feasibility Report and Environmental Assessment

1. References:

a. Engineering Circular 1165-2-214, Civil Works Review, 15 Dec 2012.

b. Review Plan for the Kotzebue Small Boat Harbor, Kotzebue, Alaska, Integrated Feasibility Report and Environmental Assessment, Alaska District, U.S. Army Corps of Engineers. (Encl)

2. This memorandum constitutes approval of the Review Plan for the Kotzebue Small Boat Harbor Feasibility Report, Alaska District, U.S. Army Corps of Engineers, which does not include a Type I Independent External Peer Review.

3. The approved Review Plan is subject to change as circumstances require, consistent with project development under the Project Management Business Process. Subsequent significant revisions to this Review Plan or its execution require my written approval.

4. For further information or clarification about the review process, please contact the Small Boat Harbor Planning Sub-Center of Expertise in the Alaska District, U.S. Army Corps of Engineers, at 907-753-5788.

5. POC is Mr. Russell Iwamura, Senior Economist, Civil Works Integration Division, at 808-835-4625 or email Russell.K.Iwamura@usace.army.mil.

Encl

PETER B. ANDRYSIAK, P.E.
Brigadier General, USA
Commanding

REVIEW PLAN

Kotzebue Small Boat Harbor, Kotzebue, Alaska
Integrated Feasibility Report and Environmental Assessment

Alaska District

2 May 2017

MSC Approval Date: 30 May 2017
Last Revision Date: None

US Army Corps
of Engineers ®

REVIEW PLAN

Kotzebue Small Boat Harbor
Kotzebue, Alaska
Integrated Feasibility Report and Environmental Assessment

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the Kotzebue Small Boat Harbor, Kotzebue, Alaska Integrated Feasibility Report and Environmental Assessment.

b. References.

(1) Engineering 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) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006.

(4) ER-11-5-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007.

(5) Kotzebue Small Boat Harbor Feasibility Study Project Management Plan, Dec 2015.

(6) Alaska District (POA) Quality Management Plan, CEPOA-QMP-001, Jan 2010.

(7) Pacific Ocean Division (POD) Quality Management Plan, Nov 2014.

(8) Project Management Business Process (PMBP) Reference 8023G and ER 11-1-321, Change 1.

c. Requirements. This Review Plan was developed in accordance with EC 1165-2-214, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing 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 levels of review, 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 (RMO) COORDINATION

The 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. The RMO for the peer review effort described in this Review Plan is the Deep Draft Navigation (DDN) PCX in Mobile, Alabama.

The RMO will coordinate with the Civil Works Cost Engineering and Agency Technical Review 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 and contingencies.

3. STUDY INFORMATION

a. Authority. This feasibility study is being conducted under a resolution adopted 2 December 1970 by the U. S. House of Representatives Public Works Committee, known as the "Rivers and Harbors in Alaska Resolution", which reads in part, "*Resolved by the Committee on Public Works of the House of Representative, United States, that the Board of Engineers for Rivers and Harbors is hereby requested to review the reports of the Chief of Engineers on Rivers and Harbors in Alaska, published as House Document Numbered 414, 83rd Congress, 2nd Session, ... Northwestern Alaska, published as House Document Numbered 99, 86th Congress, 1st Session, ... and other pertinent reports with a view to determining whether any modifications contained therein are advisable at the present time.*" This resolution authorizes a study of the feasibility for development of navigation improvements for Kotzebue, which is a coastal community of Northwestern Alaska.

b. Decision Document. The decision document for this study will be an integrated feasibility report and associated National Environmental Policy Act (NEPA) document. The primary objectives for this study are to determine the feasibility and Federal interest of constructing navigation improvements that would increase the efficiency of navigation at Kotzebue. Report approval will be at HQUSACE and result in a Chief of Engineers Report that will be provided to Congress with a request for construction authorization.

At this time, the District assumes an Environmental Assessment will be prepared with the feasibility report. If an Environmental Impact Statement (EIS) is required, the Alaska District will update the Review Plan accordingly.

c. Study/Project Description. There is currently no Federal navigation project at Kotzebue. This is a single-purpose small boat harbor study to determine Federal interest and feasibility of providing deep and shallow draft navigation improvements at Kotzebue, Alaska.

The navigational improvements have the objectives of:

- Increasing the efficiency of commercial, recreational, and subsistence-related navigation.

- Reducing the threat to human health/safety and the environment, especially during the delivery of fuel to Kotzebue.

General Navigation Features (GNF) may include a dredged entrance and maneuvering channel, turning basin, and/or causeway or break-water structure. Associated Local Service Facilities will also be evaluated to the extent they are needed for the GNF to provide the claimed benefits.

The City of Kotzebue is located on the northwestern tip of Baldwin Peninsula approximately 30 miles north of the Arctic Circle and 550 miles northwest of the nearest surface accessible port in Anchorage, Alaska (Figure 1). The population is 3,200 according to the 2010 Census.

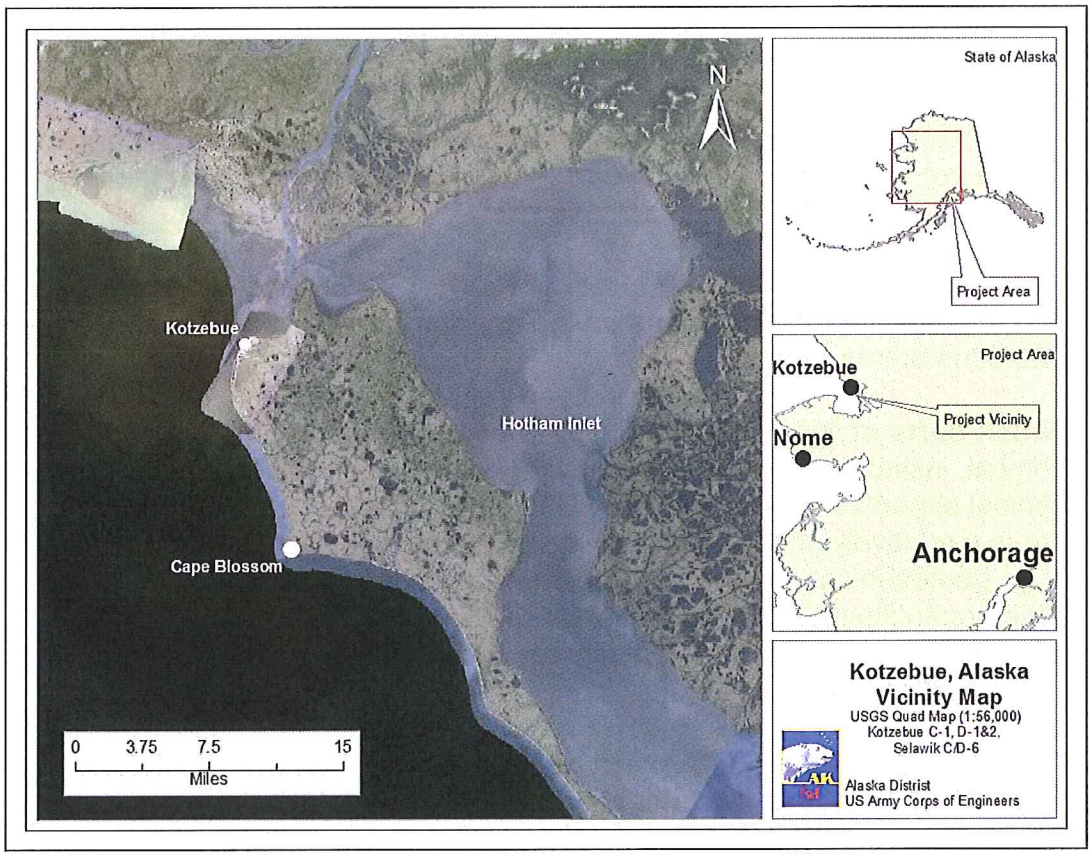

Figure 1. Study Area, Kotzebue, Alaska

Kotzebue serves as a logistical, social, and commercial hub for 10 other villages and tribes of the Northwest Arctic Borough. The region and all the other villages lack road access. Kotzebue and the other villages are accessible via water and air in the summer and via air and snow machine or dogsled in the winter.

Many of Kotzebue's residents practice a subsistence or mixed-subsistence lifestyle where all or a portion of their diet is procured by traditional means including: fishing, hunting, and gathering. This lifestyle necessitates the use of small vessels to reach subsistence resources. These vessels currently moor in Swan Lake.

As the regional hub, Kotzebue accepts delivery of a large amount of goods bound for other villages in the Northwest Arctic Borough. Currently, ocean going barges are forced to anchor 12-15 miles offshore of Kotzebue and lighter goods, including fuel to shore using shallower draft barges increasing delivery time and risk. Once goods arrive in Kotzebue, smaller river going barges load the goods for delivery to the surrounding villages. However, the ocean barges deliveries to Kotzebue are often delayed late in the season due to ice conditions, which delays river barge deliveries. This causes the river barges to carry lighter loads due to low water conditions and to make more frequent deliveries or even prevent delivery of needed goods, including petroleum fuels before the barge season ends.

The non-Federal co-sponsors are the Native Village of Kotzebue, Alaska, and the City of Kotzebue, Alaska. The Tribe and the City of Kotzebue have long supported the concept of developing further navigation improvements, working with a number of partners to move projects forward. They remain committed to constructing navigation improvements and are working with the State of Alaska, and other entities to identify sources of funding for the feasibility phase of this study.

d. Factors Affecting the Scope and Level of Review. This section discusses factors affecting the risk informed decisions on the appropriate scope and level of review. Assumptions are as follows:

(1) Which parts of the study are likely to be challenging? There appears to be limited technical, institutional, and social challenges to this study. This project is well within the technical expertise demonstrated by U.S. Army Corps of Engineers (USACE). However, there is a relatively short summer field season available to collect site-specific information (e.g., geotechnical and bathymetry information) that is important for estimating dredge quantities, and Operation and Maintenance (O&M) costs (e.g., reoccurring maintenance dredging period estimates) after initial construction as discussed in the section below.

(2) Where are project risks likely to occur and what might the magnitude of those risks be (e.g., what are the uncertainties and how might they affect the success of the project)? Lack of geotechnical data (e.g., bathymetry and sediment type) and marine current data increases the uncertainty in siting, design, and construction and O&M costs. These data are needed to:

- Design a dredge depth and channel geometry to accommodate expected vessel draft, advance maintenance to ensure the channel is navigable at the start of the shipping season, and to provide stable channel side slopes.

- Estimate an appropriate maintenance dredging program/schedule.

The magnitude of these risks is difficult to determine but proposed channel depths at this time are ranging between 15 to 29 feet just to accommodate two potential vessel types that could use the facility. The dredge maintenance schedule is important to

understand the over dredging requirements beyond those depths at construction to ensure channel navigability during a short shipping season, allow adequate time to contract for maintenance that will not interfere with the shipping season.

Another uncertainty is lack of economic survey data. A DQC'd survey has been approved by District, Division, and Headquarters. We are now awaiting approval by Department of the Army, Department of Defense, and Office of Management and Budget (OMB). We will have incomplete benefits information until a survey is approved and completed. Partial benefits information has been obtained through discussions with a focus group comprising of less than ten interviewee's as allowed by ER 1165-2-503.

(3) Is the project likely to involve a significant threat to human life/safety? No. Improved navigation will decrease the threats to human life and safety by reducing the need to transfer goods and fuel from deep draft barges / ships to shallow draft barges before delivery to Kotzebue. This benefit also will reduce the risk of environmental damage from fuel spills. Deepening the entrance and improving GNF will likely reduce threats to human life/safety and improve efficiency of commercial, recreational, and subsistence-related navigation within the Northwest Arctic Borough. This statement has been reviewed by the Chief, Engineering Construction and Operations, Alaska District and has his concurrence.

(4) Are there significant environmental, economic, or social issues identified at this time? There are no significant negative environmental, economic, or social issues identified for this project. These will be improved with the completion of this project. Lasting benefits from this project are described below.

- GNF improvements have the potential to reduce threats to human health and the environment by allowing improvements, not currently available, that reduce the risk of spills associated with the delivery and handling of fuel and other hazardous goods.
- Deepening the entrance and improving GNF will provide beneficial economic effects by allowing deeper draft ships to utilize the channel, increasing the efficiency of delivery of goods to Kotzebue and the villages which rely on shipments from Kotzebue.
- There are positive social issues identified for this project in that Kotzebue locals are anticipating that the GNF improvements will retain residents by lowering costs associated with fuel, building materials, vehicles, boats, and other goods delivered to the community. Lower costs for these goods should encourage commercial enterprises and improve living conditions with updated and additional housing, and improve employment potential for residents.
- Positive subsistence benefits may be realized as well because of the anticipated lower costs for fuel and durable goods such as boats, snowmobiles, and ATVs.

(5) Will the project require an Environmental Impact Statement (EIS)? If so, is Independent External Peer Review (IEPR) required? There are no significant environmental issues identified at this time. It is anticipated that an Environmental Assessment will be sufficient to satisfy requirements of the NEPA.

(6) Is the project likely to have significant interagency interest? The project has interagency interest that will be actively engaged throughout the planning process, and will participate, as appropriate, in evaluation. The project has tribal interest through the Native Village of Kotzebue. The Native Village of Kotzebue has expressed support for this project and has worked with a number of partners to improve navigation in the area.

Due to a lack of significant environmental issues, the project is not likely to have significant interest by resource agencies such as the US Fish and Wildlife Service and the National Marine Fisheries Service.

The U.S. Environmental Protection Agency (EPA) maintains interest in the Corps' selection of this alternative Ocean Dredge Material Disposal Site (ODMDS) under Section 103 (b) of the Marine Protection, Research and Sanctuaries Act (MPRSA), as they ultimately must concur with the Corps' site selection analysis. It is probable that the Corps will have to petition EPA to designate this ODMDS or one in the immediate area under Section 102 of the MPRSA for long-term material disposal associated with O&M in the post-construction period of this project. Constant coordination with EPA for the duration of this project is anticipated.

(7) Is the project likely to contain influential scientific information or be a highly influential scientific assessment? No. The project report is not likely to contain influential scientific information or be a highly influential scientific assessment.

(8) Will information in the decision document be based on novel methods, involve the use of innovative material or techniques, present complex challenges for interpretation, contain precedent setting methods or models, or present conclusions that are likely to change prevailing practices? No. The information in the decision document will likely not be based on novel methods, involve the use of innovative material or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices. Design of navigation improvements at Kotzebue will be based upon previously developed and utilized methods.

(9) Is the final estimated cost for the project over $200 million? No. Recent cost analysis, as of December 2016, estimate total project costs from $62.7 million to $131 million (2016$). If costs approach the $200 million mark, the level of review could change.

(10) Is there a request by the Governor of Alaska or an affected state for peer review by independent experts? No. There is no request by the Governor of

Alaska or an affected state for peer review by independent experts and such a request is not anticipated.

(11) Is the project likely to involve significant public dispute as to the size, nature or effects of influence? The project is unlikely to involve significant public dispute as to the size, nature or effects of influence. This is an existing harbor, far from population centers and media.

(12) Is the project design anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule? No. The project is unlikely to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule? The relatively short construction season may require additional mobilizations to complete the dredging operations.

e. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR reviews. The in-kind products and analyses to be provided by the non-Federal sponsor will be integral to the study as defined by ER 1165-2-208, In-Kind Contribution Credit Provisions of Section 221 of the Flood Control Act of 1970, as amended. The expected in-kind contribution will likely support the following services:

- Geotechnical services including: geophysical survey and sediment sampling;
- Environmental data gathering services.

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). POA will manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of POA and POD.

a. Documentation of DQC. Review comments, evaluations (responses to comments), and response/action taken (for each comment) from the DQC of the Feasibility Study will be maintained in ProjNet (DrChecks) or some comparable tool. The DQC Lead will prepare a study report checklist confirming that all the required elements of the report/document are complete, consistent, and technically sufficient to support the findings and recommendations. DQC comment/response reports will be provided to the ATR team prior to initiation of ATR of the Draft and Final Reports.

b. Required DQC Expertise. The POA DQC process requires that the DQC team be composed of appropriate personnel, including technical chiefs and persons not directly associated with the Project Development Team (PDT) in the detailed

preparation of the document. The team will include the POA chiefs of Planning, Environmental, Geotechnical, and Hydraulics & Hydrology. DQC members should also include, as a minimum, the following members: plan formulator (with expertise in water resources and experience with small boat harbors), realty specialist (with experience in civil works studies, particularly in regards to navigational servitude), cost engineer (with expertise in estimating costs for breakwater projects), geotechnical specialist, hydraulic design engineer (with expertise in designing breakwaters), economist (with expertise in harbor data gathering and analysis) and an environmental specialist (with expertise in NEPA compliance and evaluation of impacts on marine species).

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. ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside POA that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. The ATR team will be identified by the DDNPCX; POA/POD will not nominate candidates for the ATR team. The ATR team lead will be from outside POD.

a. Products to Undergo ATR. ATR will be performed on the Draft and Final Integrated Feasibility and Environmental Assessment Report.

b. Required ATR Team Expertise. The purpose of the ATR is to ensure the work product is consistent with established guidance, procedures, criteria, and policy. Members of the ATR team will be from outside POA, with the ATR Lead from outside POD. Members of the ATR team will reflect expertise of PDT members. It is anticipated that the ATR team will consist of 5-8 persons, (depending upon actual availability of specific persons at the time of the review and how the Cost Engineering MCX handles the cost engineering review). One reviewer can serve on the ATR team to cover more than one discipline, provided they have the appropriate expertise in their background and are certified by that Community of Practice (CoP) or Sub-CoP.

The ATR team members' expertise required for this study is provided below.

ATR Team Members/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. The

	ATR lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc.).
Planning	The Planning reviewer should be a senior water resources planner with extensive experience in the Corps planning process and be knowledgeable of current Corps policies and guidance. Experience with navigation projects is required; experience with small boat harbor projects is desired.
Economics	The economics reviewer should be experienced in economic evaluation of civil works navigation projects; experience with small boat harbor projects is desired but not required.
Environmental Resources	The environmental reviewer should be experienced in coastal ecosystem, the influence of construction of breakwaters and other energy attenuation measures on aquatic plants and species and the NEPA process and analysis procedures. The reviewer should also be experienced in cultural and tribal aspects of Corps projects.
Hydraulic (Coastal) Engineering	The hydraulic engineering reviewer will be an expert in the field of coastal hydraulics and have a thorough understanding of analyses of winds, waves, currents, hydrodynamic-salinity, harbor design, and breakwater construction. Hydraulic modeling may include ADCIRC, STWAVE, STFate, and LTFate computer programs. A registered professional engineer is recommended with applicable model experience.
Geotechnical Engineering	The geotechnical engineering reviewer will be experienced in geotechnical investigation practices including soil classification, the design of breakwater foundations over fine-grained marine soils, and the classification of rip rap and core materials for suitability in breakwater construction. No modeling anticipated at this time. A registered professional engineer is recommended.
Cost Engineering	The cost engineering reviewer will be familiar with cost estimating using the Microcomputer Aided Cost Engineering System (MCACES) model and preparation of an MII Cost Estimate. The reviewer will be a Certified Cost Technician, Certified Cost Consultant, or Certified Cost Engineer. Coordination with the Cost Engineering MCX will be required for their approval of the selected cost engineering reviewer and to obtain Cost Engineering MCX certification of the cost estimate.

Real Estate	The real estate reviewer will be experienced in Federal civil works real estate law, policy, and guidance, development of Real Estate Plans for civil works studies, particularly in regards to application of navigational servitude.
Operations	The operations reviewer should have at least 3 years of experience with coastal dredging and associated maintenance dredging operations.

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 been 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 in order to then assess whether further specific concerns may exist.

The ATR documentation in DrChecks will include the text of each ATR concern, the Project Delivery Team (PDT) response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes POA, DDNPCX, POD, 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 1110-1-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can 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 will be 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 verbatim 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 final report. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

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, and as amended in WRRDA 2014, Section 1044 (a) 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:

- Type I IEPR. Type I IEPR reviews are managed outside the USACE and are 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 study. 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 study. 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. Type II IEPR, or Safety Assurance Review (SAR), are managed outside the USACE and are 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. At this point in the study, it appears that Type I IEPR on the decision document is not required because none of the 12 triggers discussed in Section 3d of this Review Plan are anticipated to be met. Prior to the Tentatively Selected Plan milestone meeting, a risk-informed decision requesting exclusion from Type I IEPR will be prepared and coordinated with the DDNPCX and POD for endorsement to HQUSACE.

The decision document does not meet the mandatory triggers for Type I IEPR described in Paragraph 11.d. (1) and Appendix D of EC 1165-2-214 and as amended in WRRDA 2014, Sec1044 (a), which amended the Mandatory Project Studies Subject to Peer Review by striking $45 million and inserting $200 million; these and other considerations included:

- The total project cost is estimated at from a low of $62.7 million to a high of $131 million (2016$), which is under the mandatory trigger of $200 million.

- The proposed project would neither increase risk of non-performance, nor potential consequences of non-performance on project economics, the environmental and social well-being (public safety and social justice).

- The project report will not likely contain influential scientific information nor will it be a highly influential scientific assessment.

- The decision document should meet the possible exclusions described in Paragraph 11.d. (3) and Appendix D of EC 1165-2-214:

    - The project does not include an Environmental Impact Statement, is not controversial, has no more than negligible adverse impacts on scarce or unique tribal, cultural, or historic resources, and has no substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures; and has, before implementation of mitigation measures, no more than a negligible adverse impact on a species listed as endangered or threatened species under the Endangered

Species Act of 1973 (16 U.S.C. 1531 et seq.) or the critical habitat of such species designated under such Act.

- There is ample experience within the USACE and industry to treat the activity as being routine since it is a typical channel deepening project using standard engineering design and construction methods and there is minimal life safety risk;

- There has been no request to conduct IEPR from a head of a Federal or state agency charged with reviewing the project.

Type II IEPR is not considered appropriate for the study/project. The risk informed decision regarding Type II IEPR was based upon the proposed project not meeting the criteria for conducting Type II IEPR described in Appendix E of EC 1165-2-214 as follows:

- The Federal action is not justified by life safety, and failure of the project will not pose a significant threat to human life.

- The project does not involve the use of innovative materials or techniques where the engineering is based on novel methods, it does not present complex challenges for interpretations, does not contain precedent-setting methods or models, and does not present conclusions that are likely to change prevailing practices.

- The project design does not require redundancy, resiliency, or robustness because of the same reasons noted in the two bullets above.

- The project does not have unique construction sequencing or a reduced or overlapping design construction schedule.

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 study 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 POD 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. CIVIL WORKS COST ENGINEERING AND AGENCY TECHNICAL REVIEW MANDATORY CENTER OF EXPERTISE REVIEW AND CERTIFICATION

All decision documents shall be coordinated with the Civil Works Cost Engineering MCX, located in the Walla Walla District. The MCX will assist in determining the expertise needed on the ATR team and Type I IEPR team (if required) and in the development of the review charge(s). The MCX will also provide the Cost Engineering 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 is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

a. Planning Models. For this project, the PM will coordinate with the DDNPCX in determining the appropriate technically and theoretically sound and functional single-use or study-specific economic tool that can be applied during the planning process by knowledgeable and trained staff for purposes consistent with the model's purpose and limitations, and is in accordance with EC 1105-2-412 Paragraph 5.c.

b. Engineering Models. 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 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).

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

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Approval Status
Micro-computer Aided Cost Engineering System (MCACES) 2nd Generation (MII)	The MCACES/MII construction cost estimating software, developed by Building Systems Design Inc., is a tool used by cost engineers to develop and prepare all Civil Works cost estimates. Using the features in this system, cost estimates are prepared uniformly allowing cost engineers throughout USACE to function as one virtual cost engineering team.	Cost Engineering MCX Required Model
STWAVE	STWAVE (Steady-state spectral WAVE) is a nearshore spectral wave model developed by the U.S. Army Engineer Research and Development Center (ERDC), Coastal and Hydraulics Laboratory (CHL). It will be used to simulate nearshore wave propagation and transformation including refraction, shoaling, breaking, and wind-wave generation.	Coastal Community of Practice (CoP) Preferred Model
ADCIRC	ADCIRC (ADvanced CIRCulation Model), developed by universities in cooperation with ERDC, is a system of computer programs for solving time dependent, free surface circulation and transport problems in two and three dimension. These programs utilize the finite element method in space allowing the use of highly flexible, unstructured grids. Typical ADCIRC applications include: (i) modeling tides and wind driven circulation, (ii) analysis of hurricane storm surge and flooding, (iii) dredging feasibility and material disposal studies, (iv) larval transport studies, (v) near shore operations.	Coastal Community of Practice CoP Preferred Model
STFate	The Short Term Fate model (STFate) is a computer program developed by the DOER (Dredging Operations and Environmental Research) Program of the U.S. Army Corps of Engineers. It simulates the movement of dredged material in open water as it is discharged from a barge or hopper for predicting deposition and water quality effects.	Allowed for use
LTFate	The Long-Term Fate and Stability (LTFate) computer model is a computer program for evaluating the long- and short-term stability of dredge material placed in open water.	Allowed for use

10. REVIEW SCHEDULE AND COSTS

a. ATR Schedule and Cost. It is currently estimated that ATR of the draft report will take place during the concurrent public, technical, legal, and policy review following the Tentatively Selected Plan milestone between April and July 2019. Draft report ATR costs are estimated at $5,000 per reviewer plus $3,000 for the ATR lead and $3,500 for the DDN-PCX. The ATR of the final report is scheduled for October 2019 with estimated costs of $3,000 to $5,000 per reviewer plus $3,000 for the ATR lead and $3,500 for the DDN-PCX. ATR Lead participation in milestone meetings is planned, and will be at an additional cost that is to be determined. This Review Plan will be updated when costs are known.

b. Type I IEPR Schedule and Cost. Not Applicable.

c. Model Certification/Approval Schedule and Cost. The PDT will work with DDNPCX on approval for a single-use spreadsheet model. The model review plan will be developed in accordance with policy provided by EC 1165-2-14. The model will be approved prior to use in identifying the tentatively selected plan. The estimated cost for certification or approval of planning models is estimated at $15,000 to $20,000. The schedule will be included in this section once it is determined.

11. PUBLIC PARTICIPATION

All future revisions to the Review Plan and any minor updates will be posted to the POA webpage. Public review of the draft decision document will be held concurrently with MSC review, ATR, and OWPR Policy Review. The public, including scientific or professional societies, will not be asked to nominate potential peer reviewers. If an EIS is required, the public comment period for the draft EIS will be no less than 45 days. Comments received during the public comment period for the draft report will not necessarily be available to the other review teams as part of their reviews, with exception of the IEPR panel (if applicable) which will receive a copy of any draft report public comments received. Public comments will be reviewed, addressed, and incorporated into the final draft report as appropriate. The final decision document, associated review reports, and USACE responses to IEPR comments (if applicable) will be made available to the public on the internet.

12. REVIEW PLAN APPROVAL AND UPDATES

The POD Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving POA, POD, RMO, and HQUSACE members) as to the appropriate scope and level of review for the decision document. Like the PMP, the Review Plan is a living document and may change as the study progresses. POA is responsible for keeping the Review Plan up to date. Minor changes to the Review Plan since the last POD Commander approval are documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) should be re-approved by the POD Commander following the

process used for initially approving the plan. The latest version of the Review Plan, along with the POD Commander's approval memorandum, will be posted on the POA webpage. The latest Review Plan should also be provided to the RMO and POD.

13. REVIEW PLAN POINTS OF CONTACT

Public questions and/or comments on this review plan can be directed to the following points of contact:

- PDT Plan Formulator (POA), (907) 753-5577.
- PDT Project Manager (POA) (907) 753-5621.
- POD Senior Economist, (808) 835-4625.
- SBH-PSCX Dep. Director (POA), (907) 753-5788.
- DDNPCX Review Manager, (251) 694-3842.

ATTACHMENT 1: TEAM ROSTERS

Kotzebue Small Boat Harbor, Kotzebue, Alaska Feasibility Report PDT. The Kotzebue Small Boat Harbor Feasibility Project Delivery Team is comprised of the following individuals:

Discipline	Name	Office Symbol
Project Manager	David Williams	CEPOA-PM-C
Plan Formulator	Jan Deick	CEPOA-PM-C-PL
Executive Director (Sponsor)	Nicole Stoops	Native Village of Kotzebue
Hydraulic Engineer	Dee Ginter	CEPOA-EN-CW-HH
Economist	Brent Andrews	CEPOA-PM-C-EC
NEPA specialist	Mike Rouse	CEPOA-EN-CW-ER
Cost Engineer	Al Arruda	CEPOA-EN-CE
Realty Specialist	Ron Green	CEPOA-RE-PC
Geotechnical Engineer	Inocencio Roman	CEPOA-EN-G-GM
Tribal Liaison	Amanda Andraschko	CEPOA-EN-CW-ER
Attorney	Phil Santerre	CEPOA-OC
Construction	To Be Determined (TBD)	CEPOA-CO-SA-AR
Survey	Tom Sloan	CEPOA-EN-ES
Value Engineering Officer	Don Tybus	CEPOA-EN-CE
Operations	Michael Tencza	CEPO-EC-O

Kotzebue Small Boat Harbor, Kotzebue, Alaska Feasibility Report DQC Team. The Kotzebue Small Boat Harbor Feasibility Project District Quality Control Team is comprised of the following individuals:

Discipline	Name	Team Member Office Symbol
Project Manager	Bruce Sexauer	CEPOA-PM-C
Planning	Cindy Upah	CEPOA-PM-C-PL
Economics	TBD	CEPOA-PM-C-PL
Hydraulics & Hydrology	Kenneth Eisses	CEPOA-EC-G-HH
Environmental Resources	Michael Noah	CEPOA-PM-C-ER
Cost Engineering	Karl Harvey	CEPOA-EC-CE
Reality Specialist	Michael Coy	CEPOA-PM-RE
Civil Works Editor	Diane Walters	CEPOA-PM-C-ER
Geotechnical Engineer	Douglas Bliss	CEPOA-EC-G-GM
Construction	TBD	CEPOA-EC-SA-AR
Survey	Douglass Bliss	CEPOA-EC-ES or GM
Operations	Julie Anderson	CEPO-EC-O
Tribal Administrator, Native Village of Kotzebue	Nicole Stoops	Executive Director
Local Sponsor, City of Kotzebue	Shawn Gilman	City Manager

Kotzebue Small Boat Harbor, Kotzebue, Alaska Feasibility Report ATR Team. The Kotzebue Small Boat Harbor Feasibility Project Delivery ATR Team is composed of the following individuals:

Discipline	Name	Team Member Office Symbol
ATR Lead	Byron Rupp	CENAE (US)
Planning	TBD	TBD
Economics	TBD	TBD
Environmental Resources	TBD	TBD
Hydraulics (Coastal) Engineering	TBD	TBD
Geotechnical Engineering	TBD	TBD
Cost Engineering	TBD	TBD
Real Estate	TBD	TBD
Survey	TBD	TBD
Operations	TBD	TBD

Kotzebue Small Boat Harbor, Kotzebue, Alaska Feasibility Report Vertical Team. The Kotzebue Small Boat Harbor Feasibility Project Delivery Vertical Team is composed of the following individuals:

Title	Name
POA, Project Manager	David Williams
POA, Technical Lead	Dee Ginter
POA, Chief Planning	Cindy Upah
POA, Chief Civil Project Management Branch	Bruce Sexauer
POD, Civil Works Planning Team Leader	Linda Hihara-Endo
POD, Senior Economist	Russell Iwamura
DDNPCX Director	Eric Bush
HQ POD RIT, Civil Deputy	Steve Kopecky
HQ POD RIT, Civil Works Planner	Angie Dunn

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The ATR has been completed for the <type of product> for the Kotzebue Small Boat Harbor Study, Kotzebue, Alaska. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-214. 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 materials used in the 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 USACE policy. The ATR also assessed the DQC documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks[sm].

SIGNATURE _____ _____

Name
ATR Team Leader
CENAE-EPP

Date

SIGNATURE _____ _____

Name
Project Manager
CEPOA-PM-C

Date

SIGNATURE _____ _____

Name
Architect Engineer Project Manager[1]
Company, location

Date

SIGNATURE _____ _____

Name
Review Management Office Representative
DDNPCX

Date

[1] Only needed if some portion of the ATR was contracted

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: *Describe the major technical concerns and their resolution.*

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

SIGNATURE _____ _____

James Jeffords
Chief, Engineering Division
CEPOA-EN

Date

SIGNATURE _____ _____

Bruce Sexauer
Chief, Civil Works Branch
CEPOA-PM-C

Date

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

Term	Definition	Term	Definition
ADM	Agency Decision Milestone	NEPA	National Environmental Policy Act
ATR	Agency Technical Review	O&M	Operation and maintenance
CEPOA	Civil Engineering Pacific Ocean, Alaska District	ODMDS	Ocean Dredged Material Disposal Site
CoP	Community of Practice	OMB	Office of Management and Budget
DDN	Deep Draft Navigation	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DQC	District Quality Control/Quality Assurance	PCX	Planning Center of Expertise
EA	Environmental Assessment	PDT	Project Delivery Team
EC	Engineer Circular	PMP	Project Management Plan
EIS	Environmental Impact Statement	QA	Quality Assurance
EPA	United States Environmental Protection Agency	QC	Quality Control
ER	Engineering Regulation	QMP	Quality Management Plan
GNF	General Navigation Features	RMC	Risk Management Center
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMO	Review Management Organization
IEPR	Independent External Peer Review	SAR	Safety Assurance Review
MPRSA	Marine Protection, Research and Sanctuaries Act	TBD	To Be Determined
MSC	Major Subordinate Command	USACE	U.S. Army Corps of Engineers
MCX	Civil Works Cost Engineering and Agency Technical Review Mandatory Center of Expertise	ODMDS	Ocean Dredged Material Disposal Site