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CEPOD-PDC

NOV 27 2017

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

SUBJECT: Approval of the Review Plan for the Whittier Navigation Improvements Feasibility Report

1. References:

- a. Engineering Circular 1165-2-214, Civil Works Review, 15 Dec 2012.
  - b. Review Plan for the Whittier Navigation Improvements Feasibility Report, Alaska District, U.S. Army Corps of Engineers. (Encl)
2. This memorandum constitutes approval of the Review Plan for the Whittier Navigation Improvements 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 Deep Draft Navigation Planning Center of Expertise in the Mobile District, U.S. Army Corps of Engineers, at 251-694-3842.
5. POC is Mr. Russell Iwamura, Senior Economist, Civil Works Integration Division, at 808-835-4625 or email [Russell.K.Iwamura@usace.army.mil](mailto:Russell.K.Iwamura@usace.army.mil).

Encl

A handwritten signature in black ink, appearing to read "T. Tickner".

THOMAS J. TICKNER, PMP  
Colonel, EN  
Commanding

# **REVIEW PLAN**

**Whittier Navigation Improvements  
Integrated Feasibility Report and Environmental  
Assessment  
Whittier, Alaska  
Alaska District**

**November 2017**

**MSC Approval Date: 27 November 2017  
Last Revision Date: None**



**US Army Corps  
of Engineers ®**

Encl

## REVIEW PLAN

### Whittier Navigation Improvements Integrated Feasibility Report and Environmental Assessment, Whittier, Alaska

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## 1. PURPOSE AND REQUIREMENTS

**a. Purpose.** This Review Plan defines the scope and level of peer review for the Whittier Navigation Improvements Integrated Feasibility Report and Environmental Assessment, Whittier, Alaska.

### **b. References.**

- (1) Planning Bulletin (PB) 2016-02, Civil Works Review, 4 Mar 2016.
- (2) Engineering Circular (EC) 1165-2-214, Civil Works Review Policy, 15 Dec 2012.
- (3) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011.
- (4) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006.
- (5) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007.
- (6) Whittier Navigation Improvements, Whittier, Alaska Project Management Plan.
- (7) Alaska District (POA) Quality Management Plan, CEPOA-QMP-001, Jan 2010.
- (8) Pacific Ocean Division (POD) Quality Management Plan, Dec 2010.
- (9) Project Management Business Process (PMBP) Reference 8023G and ER 11-1-321, Change 1.
- (10) Water Resources Reform and Development Act (WRRDA) Section 1044, Independent Peer Review, Jan 2014.

**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), planning model certification/approval (per EC 1105-2-412), and Value Management Plan requirements in the PMBP REF 8023G and the ER 11-1-321, Change 1.

## 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 PCX (DDNPCX) in Mobile, AL.

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 General Investigation study was conducted under authority granted by Section 204 of the Flood Control Act of 1948 which states in part:

*"The Secretary of the Army is hereby authorized and directed to cause preliminary examinations and surveys for flood controls and allied purposes...to be made under the direction of the Chief of Engineers, in drainage areas of the United States and Territorial possessions, which include the following named localities:...Harbors and Rivers in Alaska, with a view to determining the advisability of improvements in the interest of navigation, flood control, hydroelectric power, and related water uses."*

The project was authorized by Section 5007 of P.L. 119-114, the Water Resources Development Act of 2007. The authorizing language from this act is as follows.

*"Section 5007. Expedited Completion of Reports and Construction for Certain Projects.*

*The Secretary shall expedite completion of the reports and, if the Secretary determines that the project is feasible, shall expedite completion of construction for the following projects:*

*(1) Project for navigation, Whittier, Alaska."*

As the above authority includes construction authorization, no additional authorization is required for construction.

**b. Additional Study Guidelines.** Additional guidance was provided in a memorandum dated 19 December 2008 of subject Implementation Guidance for Section 5007 of the Water Resources Development Act of 2007 (WRDA 2007) – Expedited Completion of Reports and Construction of Certain Projects. The memorandum contained the following guidance specific to the feasibility study.

*"As study funds are available, the respective Districts should complete the feasibility report following report guidelines for projects authorized without a report*

*as specified in Appendix H of ER 1105-2-100. The Districts will review the schedule for the proposed project to identify all opportunities to expedite study completion.”*

Pursuant to this guidance, the final product of this study is a Director’s Report which differs from a Chief’s Report in that it doesn’t require signature by the Chief of Engineers.

**c. Decision Document.** The decision documents for this study will be an integrated feasibility report and associated National Environmental Policy Act (NEPA) document. The primary objective for the study is to determine the feasibility of constructing navigation improvements that would promote increased access to moorage at Whittier. Navigation improvements to be considered include construction of new harbor and associated facilities including launching facilities, mooring areas, maneuvering areas, entrance channels, and breakwaters. Optimum harbor dimensions and likely construction costs will be determined during the course of the study. Construction costs are not anticipated to exceed \$200 million.

Since construction is already authorized, the final report will be a Director’s Report that will be provided to Congress with a request for appropriation of construction funds for the plan recommended in the integrated feasibility report.

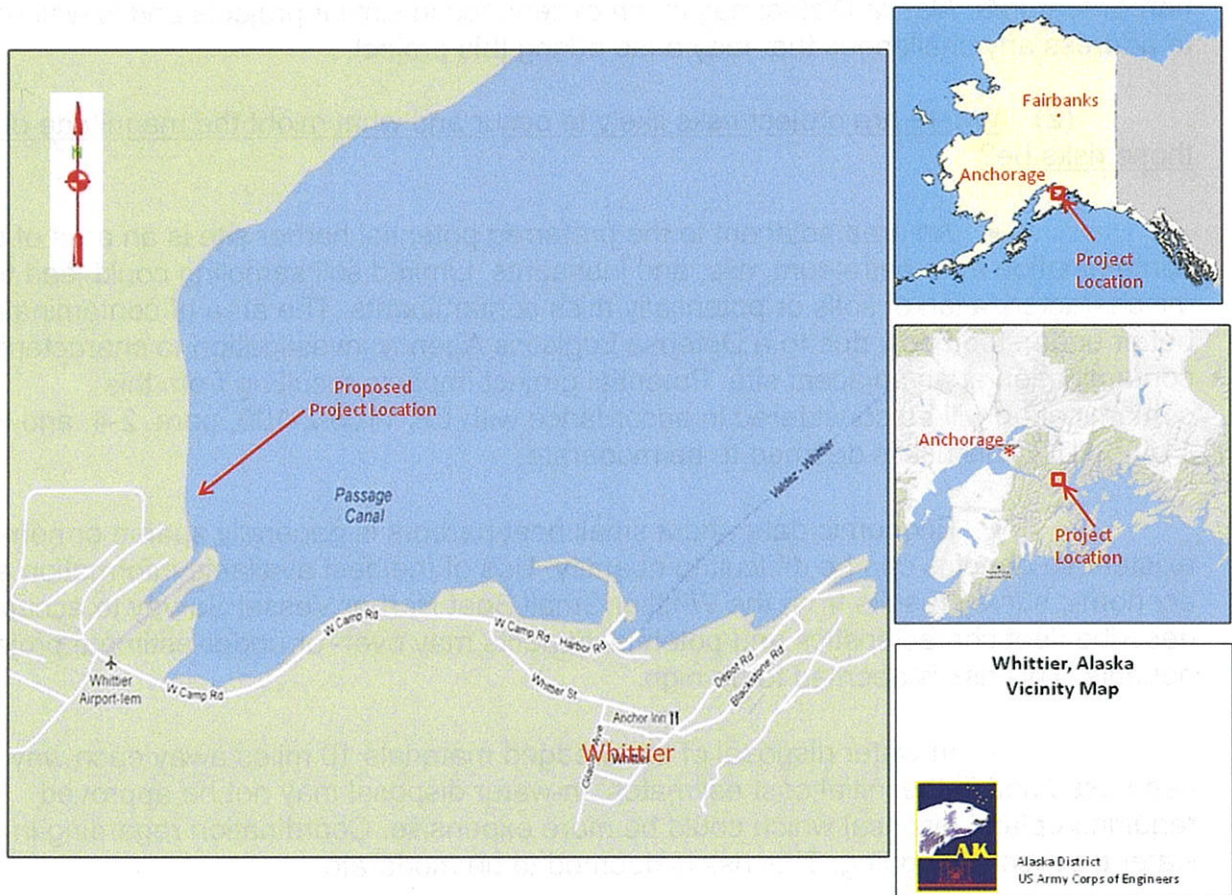
At this time, the District assumes an Environmental Assessment will be prepared with the feasibility report. If an Environmental Impact Statement (EIS) is required, the Alaska District will update the review plan accordingly.

The non-Federal sponsor for the study is the City of Whittier.

**d. Study/Project Description.** Whittier is on the northeast shore of the Kenai Peninsula, at the head of Passage Canal. It is on the west side of Prince William Sound, 60 miles southeast of Anchorage. The study area for this project is Passage Canal bounded to the west by Shotgun Cove and to the east at the terminus of Passage Canal at an area known as the Head of the Bay. See Figure 1. The Whittier Navigation Improvements Study is a single-purpose project for navigation improvements.

Whittier Harbor was originally constructed in 1970. The project was primarily funded by the State of Alaska. The harbor was designed with 100 berths and upon opening was immediately filled to capacity. A 225-foot sheet-pile breakwater extension and a 130-foot floating breakwater were added in 1972 and 1978, respectively. In 1980, the State of Alaska funded the expansion of the original harbor to contain 332 slips. This expansion also immediately filled to capacity upon opening. The harbor accommodated recreational and commercial vessels. Support facilities include a harbormaster’s office, a 30-ton boat lift and dock, two launching ramps, electric and water utilities, and marine fuel service facilities. In 1990 corroded pilings along the sheet-pile breakwater were replaced, and the concrete floating breakwater was replaced with rubble mound structure. A new float and access pier and ramp for loading passengers aboard day-tour excursion boats were completed in 1992. Space constraints limit dry storage, service areas, and parking adjacent to the harbor. These areas are used to capacity during the peak boating season.

Separate facilities adjacent to Whittier Harbor are maintained for cruise ship berthing and servicing, Alaska State ferry loading and unloading, and rail barge loading and unloading.



**Figure 1: Whittier, AK, Small Boat Harbor Project Vicinity**

A private harbor, the Cliffside Marina, was constructed in 2004 providing moorage for 103 vessels. The harbor is located to the west of the City Harbor and Whittier Creek. The harbor is approximately 100 feet deep at the entrance and 25 feet deep at the shallowest point. The harbor is protected by a combination of sheet pile and floating breakwaters. Slips are acquired from the marina under a lease – ownership. The few slips that are currently available are selling for \$150,000 - \$175,000.

The report will document the feasibility of navigation improvements at Whittier, Alaska and assess potential environmental effects associated with a range of alternatives that could be implemented to address existing navigation problems.

**e. Factors Affecting the Scope and Level of Review.** This section discusses the 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? Due to extremes in climate, logistics, etc., designing and constructing a project of this magnitude in Alaska

always poses challenges. This project, however, is not a particularly difficult navigation improvements project. The project site is rather accessible, by Alaskan standards, and the prevailing conditions at the site will allow for the design and construction of standard harbor features. Alaska District has much experience in similar projects and is well poised to address any challenges that may arise during this project.

(2) Where are project risks likely to occur and what might the magnitude of those risks be?

- An area adjacent to the preferred potential harbor site is an area of soil contamination from petroleum, oils, and lubricants. Limited soil sampling could lead to mischaracterization of soils or potentially miss contaminants. The area of contamination is better understood now due to a Defense Logistics Agency investigation to characterize contamination at an adjacent site. Potential project impacts resulting from this contamination will be considered in accordance with ER 1105-2-100, para. 2-4, and ER 1165-2-132. This risk is deemed to be moderate.
- Economic data about small boat harbors is generally sparse or non-existent so benefits can be difficult to quantify. Use of the best available information and economic survey results from the Whittier Small Boat Harbor Vessel Survey to accurately describe fleet characteristics and potential benefits may over- or under-estimate project benefits. This risk is deemed to be high.
- In-water disposal of the dredged materials 10 miles away each way has been assumed in the initial cost estimates. In-water disposal may not be approved requiring upland disposal which could be more expensive. Coordination regarding in-water disposal is ongoing. This risk is deemed to be moderate.
- Section 106 investigation is not to occur until the preferred alternative is selected. A positive cultural resource survey could cause a change to the project's schedule and budget. Identified cultural properties would need to be evaluated for their eligibility to the National Register of Historic Places (NRHP). This risk is deemed to be low.

(3) Will the project require an Environmental Impact Statement (EIS)? If so, is Independent External Peer Review (IEPR) required? Completion of an Environmental Assessment has been assumed to be sufficient for this project. Close coordination with agencies and stakeholders will be continued to help minimize this risk of having to conduct an Environmental Impact Statement. This project would develop a parcel of uninhabited land and is not anticipated to have any negative social well-being impacts. If an Environmental Impact Statement (EIS) is required, the Alaska District will update the review plan accordingly.

(4) Is the study likely to contain influential scientific information or be a highly influential scientific assessment? If so, is an IEPR required? There are no influential scientific information or assessments anticipated as part of this study. The project is a typical small boat harbor project, involving traditional methods of construction. As such, there is minimal risk involved with the project. The final Integrated Feasibility Report and



NEPA Document and supporting documentation will contain standard engineering, economic, and environmental analyses and information.

(5) Is the project likely to have significant economic, environmental, and social affects to the nation, such as (but not limited to):

- More than negligible adverse impacts on scarce or unique cultural, historic, or tribal resources? The project is not anticipated to cause more than negligible adverse impacts on scarce or unique tribal, cultural, or historic resources. This will be confirmed by our cultural resources specialist during the feasibility study.

- Substantial adverse impacts on fish and wildlife species or their habitat, prior to implementation of mitigation? Improvement of navigation facilities in Whittier is not anticipated to cause substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures. This will be confirmed during the feasibility study as part of the NEPA process.

- More than negligible adverse impact on species listed as endangered or threatened, or to the designated critical habitat of such species, under the Endangered Species Act, prior to implementation of mitigation? Likewise, before implementation of mitigation measures, improvement of navigation facilities in Whittier is anticipated to cause no more than a negligible adverse impact on a species listed as endangered or threatened species under the Endangered Species Act of 1973 or the critical habitat of such species designated under such Act

(6) Is the study likely to have significant interagency interest? The following agencies are being coordinated with throughout the planning process:

- Fish and Wildlife Service
- National Marine Fisheries Service
- Environmental Protection Agency
- Alaska Department of Game and Fish
- Alaska Department of Environmental Conservation
- Alaska Department of Natural Resources
- Alaska Department of Transportation and Public Facilities
- State Historic Preservation Office

The community of Whittier has been seeking Federal assistance for projects in the region for many years. As a result, the majority of the resource agencies mentioned above have been coordinated with on many occasions concerning congestion at Whittier Harbor. No

major interagency oppositions to the proposed project are anticipated.

(7) Will the project likely have significant threat to human life (safety assurance)? The most plausible mechanism of failure would be deterioration of the breakwater. Catastrophic failure is not likely, rather isolated portions of the breakwater may be compromised. Additionally, climatic conditions capable of causing such localized impacts would preclude nearly all use of the facility, resulting in a likely public free facility at that time. Navigation improvements at Whittier will provide some incidental safety benefits by providing safer launching conditions. It will also reduce congestion and crowding in the existing harbor at Whittier as well as in the upland areas. These improvements will provide safer marine access conditions in Whittier.

The Chief of Engineering and Construction-Operations Division has concurred with the PDT that the project likely does not involve a significant threat to human life/safety.

(8) Is the estimated cost likely to be greater than \$200 million requiring an IEPR? It is not likely that navigation improvements could exceed \$200 million. Initial estimates are less than \$30 million. This factor will require reassessment as the project proceeds.

(9) Is the project likely to be highly controversial, such as if there will be a significant public dispute as to the size, nature, or effects of the project or to the economic or environmental costs or benefits of the project? A concern expressed during public scoping meetings for previous transportation improvement projects in Whittier regarded the potential social and environmental impacts of increased access to Prince William Sound. These concerns were not solely in response to the potential expansion of harbor facilities in Whittier, however. In 2000, the Anton Anderson Memorial Tunnel was converted from a rail-only tunnel to a combined rail-vehicle tunnel. Prior to this expansion, Whittier was only vehicle accessible if the vehicle was transported via train. Similar cumulative impact concerns could be raised during public and agency review of the draft report of this study but are not anticipated to be significant.

(10) Will information be based upon novel methods, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices? No. Design of navigation improvements at Whittier will be based upon previously developed and utilized methods of analysis.

(11) Is there a request by the Governor of an affected state for a peer review by independent experts? Such a request has not been made and is not anticipated for this project.

(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. Design of navigation improvements at Whittier will be based upon previously developed and utilized construction techniques which do not require redundancy, resiliency, and/or robustness. There could be species specific environmental windows during which particular construction activities may be temporarily forbidden. Such restrictions are common in Alaska and do not pose any unforeseen difficulties to

completion of the project.

**f. In-Kind Contributions.** Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. The in-kind products and analyses to be provided by the non-Federal sponsor will be determined when we discuss study scope and budget with the City. It is anticipated that the in-kind contributions will consist of labor to gather and analyze needed data. In-kind contributions may also include:

- Surveys and geotechnical engineering services,
- Engineering services including modeling,
- Economic analyses, and
- Environmental resource surveys.

#### **4. DISTRICT QUALITY CONTROL (DQC)**

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.** Review comments, evaluations (responses to comments), and response/action taken (for each comment) from the DQC of the Feasibility Study will be developed in a spreadsheet format developed by POA, titled "POA Civil Works DQC Comments" or some comparable tool. That information will be provided to the ATR team prior to its review. 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.

**b. Required DQC Expertise.** The Alaska District DQC process requires that the DQC team be composed of appropriate personnel, including technical chiefs and persons not directly associated with the PDT in the detailed preparation of the document. The DQC team will include the following chiefs: Planning, Environmental, and Hydraulics & Hydrology. Additional DQC members shall include, as a minimum, the following members: cost engineer (with expertise in estimating costs for breakwater projects), geotechnical specialist, hydraulic design engineer (with expertise in designing breakwaters), economist (with expertise in small boat harbor data gathering and analysis), real estate specialist, and an environmental specialist (with expertise in NEPA compliance and evaluation of impacts on marine species). As there is no present or historical presence of tribes in the vicinity of the project area, Tribal Liaison review is not required.

**c. Products to Undergo DQC.** At a minimum, DQC of the draft and final

reports and associated appendices will be performed.

**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 the home district that is not involved in the day-to-day production of the project/product. The DDNPCX will identify the ATR team members; it is not anticipated that candidates will be nominated by POA or POD. ATR teams will be comprised of 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.** ATR will be performed on the Draft Report (including NEPA and supporting documentation) and Final Report (including NEPA and supporting documentation). Review of the draft and final reports are anticipated in July and September of 2017. If interim product reviews are required, the Review Plan will be updated, as appropriate, with relevant information.

**b. Required ATR Team Expertise.** Members of the ATR team will be from outside the Alaska District, 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 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. The ATR team members' expertise required for this study is provided below.

ATR Team	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. He/she should be familiar with navigation projects, in particular small boat harbor projects involving the use of breakwaters and other energy reduction measures.
Economics	The economics reviewer should be experienced in economic evaluation of civil works small boat harbor navigation projects.
Environmental Resources	The environmental reviewer should be experienced in coastal ecosystems.
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, small boat harbor design, and breakwater construction. A registered professional engineer is recommended.
Geotechnical Engineering	The geotechnical engineering reviewer will be experienced in geotechnical investigation practices including soil classification, the design of breakwater foundations, and the classification of rip rap and core materials for suitability in use of breakwater construction. 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 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	If the Hydraulic (Coastal) Engineering ATR member is not familiar with Operation and Maintenance requirements, an Operations ATR member will be assigned.

Once identified, the ATR team members for this study and a brief description of their

credentials will be included in Attachment 1.

**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 PDT response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes the district, RMO, 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 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, 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 will not be required because none of the triggers discussed in Section 3.e. are anticipated to be met.

In addition to not meeting any of the mandatory triggers for a Type I IEPR, the PDT considered the consequences of non-performance on the project economics, the environment, and social well-being (public safety and social justice) and determined that the risks do not warrant Type I IEPR.

As documented in Section 3.e., the PDT also determined that the product is not likely to contain influential scientific information or be a highly influential scientific assessment and is so limited in scope because of its remote location, population affected, and physical size that it would not significantly benefit from IEPR.

Prior to the Tentatively Selected Plan milestone, a risk-informed decision on conducting a Type I IEPR will be finalized and the District will begin preparation of the request for exclusion for endorsement by the DDNPCX and POD prior to submittal to HQ for approval. This Review Plan will be updated to incorporate the results of that coordination.

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 Paragraph 2 of 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;

and

- 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 ENGINEERING AND AGENCY TECHNICAL REVIEW MANDATORY CENTER OF EXPERTISE (MCX) REVIEW AND CERTIFICATION**

All decision documents shall be coordinated with the 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(s). The MCX will also provide the Cost Engineering MCX certification. The RMO is responsible for coordination with the 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).

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.

**a. Planning Models.** The following planning models are anticipated to be used in the development of the decision document: The PDT will work with DDN-PCX on approval for a single-use spreadsheet model that will quantify expected benefits gained from navigation improvements. The model will be approved for use prior to the Tentatively Selected Plan milestone meeting.

**b. Engineering Models.** The following engineering model are anticipated to be used in the development of the decision document:

<b>Model Name and Version</b>	<b>Brief Description of the Model and How It Will Be Applied in the Study</b>	<b>Approval Status</b>
Micro-Computer Aided Cost Engineering System (MCACES), 2 <sup>nd</sup> 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 engineering 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 Preferred Model
CEDEP	Excel add-on for Cost Engineering; used to estimate costs of alternatives and the recommended plan.	Cost Engineering MCX Required Model

## 10. REVIEW SCHEDULES AND COSTS

**a. ATR Schedule and Cost.** The ATR schedule and cost will be further identified after scoping with the sponsor, however, it is currently estimated that ATRs will be conducted on the draft and final reports. Review of the draft and final reports are anticipated in May and July of 2018. The total estimated cost for the ATRs is \$80,000.

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

**c. Model Certification/Approval Schedule and Cost.** The PDT will work with DDN-PCX on approval for a single-use spreadsheet model. The model will be approved prior to the Tentatively Selected Plan milestone meeting. The estimated schedule and cost for any necessary certification or approval of planning models will be included in this section once they are determined.

## 11. PUBLIC PARTICIPATION

All future revisions to the Review Plan and any minor updates will be posted to the

Alaska District webpage. Public review of the draft decision document will occur concurrently with ATR and vertical team review of the draft report. A public meeting will be conducted during the ATR review. Comments received during the public comment period for the draft report will not be available to the ATR team as part of their review. Public comments will be reviewed, addressed, and incorporated as appropriate into the final draft report. The public, including scientific or professional societies, will not be asked to nominate potential peer reviewers. The final decision document will be available to the public on the Alaska District webpage.

## **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 Commanders' approval memorandum, should be posted on POA's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

## **13. REVIEW PLAN POINTS OF CONTACT**

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

- Plan Formulator (POA), (907) 753-2594.
- PDT Project Manager (POA), (907) 753-2539.
- POD Senior Economist, (808) 835-4625.
- DDNPCX Review Manager, (251) 694-3842.