



DEPARTMENT OF THE ARMY
SOUTH PACIFIC DIVISION, US ARMY CORPS OF ENGINEERS
Phillip Burton Federal Building
Post Office Box 36023
450 Golden Gate Avenue
SAN FRANCISCO, CALIFORNIA 94102

FEB 27 2020

REPLY TO

CESPD-PDC

MEMORANDUM FOR Commander, Los Angeles District, ATTN: CESPL-PDW-S, Ms. Heather Schlosser

Subject: South Pacific Division (SPD) Approval of Review Plan (RP) update, including Independent External Peer Review (IEPR) Exclusion, for the Port of Long Beach Deep Draft Navigation Integrated Feasibility Report (IFR) and Environmental Impact Statement (EIS)

1. References:

a. Memorandum, CESAM-PD-D, 9 September 2019, subject: Endorsement of Review Plan (RP) Update, Port of Long Beach Deep Draft Navigation Integrated Feasibility Report (IFR) and Environmental Impact Statement (EIS)

b. Memorandum, CECW-CE, 5 April 2019, subject: Interim Guidance on Streamlining Independent External Peer Review for Improved Civil Works Product Delivery.

c. Memorandum, CECW-P, 7 June 2018, subject: Revised Delegation of Authority in Section 2034(a)(5)(A) of the Water Resources Development Act of 2007 (WRDA 2007), as amended (33 U.S.C. 2343).

d. Engineering Circular (EC) 1165-2-217, 20 February 2018, subject: Review Policies for Civil Works

2. Reference 1.a. provided Deep Draft Navigation Planning Center of Expertise (DDNPCX) endorsement of the Port of Long Beach Deep Draft Project IFR/EIS Review Plan, including exclusion from Type I IEPR.

3. SPD concurs with the level and scope of review identified and supported in the RP. The District's risk-informed assessment concluding that Type I IEPR is not required is documented in RP Sections 5 and 6.E, and meets the requirements detailed in Reference 1.b. Sections 6.b.(2) and (3) for project studies that would otherwise require independent peer review. This project may be excluded from IEPR because the project study is for an activity for which there is ample experience within USACE and the industry to treat the activity as routine, and the project has minimal life safety risk. No

CESPD-PDC

Approval of RP update, including IEPR Exclusion, for the Port of Long Beach Deep
Draft Navigation IFR/EIS

additional circumstances are identified that would warrant a determination that IEPR is needed. The District Support Team has reviewed the RP and DDNPCX endorsement. The enclosed RP, dated October 2019, is found to be sufficient and is hereby approved.

4. Point of contact for this action is Mr. Caleb Conn, District Support Team Lead, CESPD-PDC, (415) 503-6558, Caleb.B.Conn@usace.army.mil.

BUILDING STRONG!



KIMBERLY M. COLLOTON
Brigadier General, USA
Commanding

Encl



REPLY TO
ATTENTION OF

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

CESAM-PD-D

9 September 2019

MEMORANDUM FOR Ms. Heather Schlosser, CESPL-PDW-S, U.S. Army Corps of Engineers, Los Angeles District, 915 Wilshire Boulevard, Los Angeles, California 90017

SUBJECT: Endorsement of Review Plan (RP) Update, Port of Long Beach Deep Draft Navigation Integrated Feasibility Report (IFR) and Environmental Impact Statement (EIS)

1. References.

a. Memorandum, CESAM-PD-D, 11 June 2015, Subject: RP Approval, Port of Long Beach Deep Draft Navigation Project IFR / EIS

b. Director of Civil Works Memorandum, 5 April 2019, Interim Guidance on Streamlining Independent External Peer Review (IEPR) for Improved Civil Works Product Delivery

c. Engineer Circular 1165-2-217, 20 February 2018, Review Policy for Civil Works

2. Reference 1.a. provided Deep Draft Navigation Planning Center of Expertise (DDNPCX) endorsement of the Port of Long Beach Deep Draft Navigation Project IFR / EIS.

3. Due to a reduced project scope, impacts, and costs, the District has updated the RP (Enclosure 1) to incorporate Reference 1.b. and presented it to the DDNPCX for its review and endorsement in accordance with Reference 1.c. The study will still include an EIS due to air quality impacts anticipated to occur during construction; however, emissions, which will be similar to those that occur during project maintenance, will only occur during construction and will cease upon completion of project implementation.

4. The Port of Long Beach Deep Draft Navigation study will evaluate potential channel and basin deepening and access channel creation improvements. Dredged material will be placed in sites historically used - a nearshore site, two ocean dredged material disposal sites, or a combination of the two options. As stated, an EIS will be prepared.

5. The DDNPCX concurs with the level and scope of review identified and supported in the RP. Exclusion from Type I IEPR will be pursued by the District. The District's risk informed assessment leading to that conclusion is documented in RP Sections 5 and 6.E. Based upon the information presented, the study does not meet any of the

CESAM-PD-D

9 September 2019

SUBJECT: Endorsement of Review Plan (RP) Update, Port of Long Beach Deep Draft Navigation Integrated Feasibility Report (IFR) and Environmental Impact Statement (EIS)

mandatory triggers requiring Type I IEPR. Further, no other circumstances have been identified that would warrant determination from the Chief of Engineers that IEPR is needed. Accordingly, the DDNPCX supports the District's request for a waiver. Upon conclusion of the exclusion request process, the RP should be updated to reflect the results of that coordination.

6. The RP was reviewed for technical sufficiency and policy compliance by the undersigned. The RP checklist that documents that review is provided as Enclosure 2.

7. The DDNPCX recommends the RP for approval by the Major Subordinate Command (MSC) Commander. Following approval, please provide the DDNPCX with a copy of the MSC Commander's Approval Memorandum and a link to where the RP is posted on the District website. Prior to posting, the names of individuals identified in the RP should be removed (RP Attachment).

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

Digitally signed by
OTTO.KIMBERLY.PE OTTO.KIMBERLY.PERSONS.

Encls

KIMBERLY P. OTTO
Review Manager, DDNPCX

CF:
CESPL-PMN-C/Lee
CESAD-PDP/Bush, Small

REVIEW PLAN CHECKLIST For DECISION DOCUMENTS				
Date:	9 September 2019			
Originating District:	Los Angeles			
Project/Study Title:	Port of Long Beach Deep Draft Navigation Feasibility Study			
P2#	403268			
District POC:	Heather Schlosser			
PCX Reviewer:	Kim Otto			
Please fill out this checklist and submit with the draft Review Plan when coordinating with the DDNPCX. Unless otherwise noted, references are to paragraphs in Engineer Circular (EC) 1165-2-217.				
REQUIREMENT	REFERENCE	EVALUATION		
1. Is the Review Plan (RP) a standalone document?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it include a cover page identifying it as a RP and listing the project/study title, originating district or office, and date of the plan?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Is the purpose of the RP clearly stated and EC 1165-2-217 referenced?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does it reference the Project Management Plan (PMP) of which the RP is a component?	Paragraph 7.a.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d. Does it succinctly describe the three levels of peer review: District Quality Control (DQC), Agency Technical Review (ATR), and Independent External Peer Review (IEPR)?	Paragraphs 7.a.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e. Does it identify the subject and purpose of the decision document to be reviewed?	Paragraph 7.e.(1)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
f. Does it list the names and disciplines of the Project Delivery Team (PDT)?*			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
2. Is the RP detailed enough to assess the necessary level and focus of peer review?	Paragraph 7.a.(1)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it indicate which parts of the study will likely be challenging?	Paragraph 7.a.(1)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it provide a preliminary assessment of where the project risks are likely to occur and what the magnitude of those risks might be?	Paragraph 7.a.(1)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
3. Mandatory triggers requiring Type I IEPR include:				
a. Does project/study involve a significant threat to human life (safety assurance)?	Paragraph 11.d.(1)(a)		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>If yes, Type I IEPR that includes Safety Assurance Review is required.</i>				
b. Is the estimated total cost of the project including mitigation costs greater than \$200 million?	Paragraph 11.d.(1)(b)		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>If yes, IEPR may be required.</i>				
c. Has the Governor of an affected state requested peer review by independent experts?	Paragraph 11.d.(1)(c)		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>If yes, IEPR is required.</i>				
d. Is the project study controversial due to significant public dispute over the size, nature, or effects of the project or the economic or environmental costs or benefits of the project?	Paragraph 11.d.(1)(d)		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

<i>If yes, the Chief of Engineers would determine the project study to be controversial and IEPR is required.</i>				
4. A project study may be considered for exclusion from Type I IEPR in cases where none of the mandatory triggers are met and items 4 a-e are all answered 'no:'				
a. Will an environmental impact statement (EIS) be prepared?	Paragraph 11.d.(4)(a)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Is the project controversial?	Paragraph 11.d.(4)(a)		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
c. Will the project have more than negligible adverse impacts on scarce or unique cultural, historic, or tribal resources?	Paragraph 11.d.(4)(a)		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
d. Will the project have substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures?	Paragraph 11.d.(4)(a)		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
e. Will the project have, before implementation of mitigation measures, more than a negligible adverse impact on a species listed as endangered or threatened species under the Endangered Species Act of 1973 or the critical habitat of such species designated under such Act?	Paragraph 11.d.(4)(a)		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5. Does the RP address Safety Assurance Review (SAR) factors?	Paragraph 12.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Are design and construction activities justified by life safety?	Paragraph 12.h.		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
b. Will failure of the project pose a significant threat to human life?	Paragraph 12.h.		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>If yes to either 5 a. or b., Type II IEPR (SAR) is required.</i>				
<i>Other factors considered when determining whether to conduct Type II IEPR include whether the project/project design require:</i>				
c. The use of innovative materials or techniques and the engineering is based on novel methods\complexity\ precedent-setting models or methods, or presents conclusions that are likely to change prevailing practices?	Paragraph 12.i.(1)		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
d. Redundancy, resiliency, and robustness?	Paragraph 12.i.(2)		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
e. Unique construction sequencing or a reduced or overlapping design construction schedule?	Paragraph 12.i.(3)		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
6. Does the RP define the appropriate level of peer review for the project/study?	Paragraph 7.a.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it state that DQC will be managed by the home district in accordance with the Major Subordinate Command (MSC) and District Quality Management Plans?	Paragraph 8.a.(1)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it state that ATR will be conducted or managed by the lead PCX?	Paragraph 9.c.(1)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does it state whether IEPR will be performed?	Paragraph 7.a.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d. Will an IEPR be performed?			<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
e. Does it provide a defensible rationale for the decision on IEPR?	Paragraph 7.a.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

f. Does it state that IEPR will be managed by an Outside Eligible Organization, external to the Corps of Engineers?	Paragraph 11.c.	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
7. Does the RP present the tasks, timing and sequence (including deferrals), and costs of reviews?	Paragraph 7.e.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it provide a schedule for DQC of the draft and final reports and other supporting materials?	Paragraph 7.e.(2)(b)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it include interim DQC reviews for milestone submittals?	Planning Bulletin 2018-01 Feasibility Study Milestones		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does it provide a schedule for ATR of the draft and final reports and other supporting materials?	Paragraph 7.e.(2)(b)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d. Does it include interim (targeted) ATR for key technical products?	Paragraph 8.a.(1) and 9.i.(1)	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
e. Does it present the timing and sequencing for IEPR?	Paragraph 7.e.(2)(b)	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
f. Does it present the timing and sequencing for Policy and Legal reviews?	Paragraph 7.e.(2)(b)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
g. Does it include cost estimates for the peer reviews?	Paragraph 7.a.(2)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
8. Does the RP explain how ATR will be accomplished?	Paragraphs 7 and 9		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it identify the anticipated number of reviewers?	Paragraph 7.e.(6)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it provide a succinct description of the primary disciplines or expertise needed for the review (not simply a list of disciplines)?	Paragraph 7.e.(5)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does it indicate that ATR team members will be from outside the home district?	Paragraph 9.a.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
d. Does it indicate that the ATR team leader will be from outside the home MSC?	Paragraph 9.a.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
e. Does the RP state that the lead PCX is responsible for identifying the ATR team members?	Paragraph 9.h.(1)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
f. If the reviewers are listed by name, does the RP describe the qualifications and years of relevant experience of the ATR team members?		<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
9. Does the RP explain how IEPR will be accomplished?	Paragraphs 7 and 11	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it identify the anticipated number of reviewers?	Paragraph 7.e.(6)		<input type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it provide a succinct description of the primary disciplines or expertise needed for the review (not simply a list of disciplines)?	Paragraph 7.e.(5)		<input type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does it indicate that the IEPR reviewers will be selected by an Outside Eligible Organization?	Paragraph 11.g.(1)(a)		<input type="checkbox"/> Yes	<input type="checkbox"/> No
d. Does it indicate the IEPR will address all the underlying planning, safety assurance, engineering, economic, and environmental analyses, not just one aspect of the project?	Paragraph 11.g.		<input type="checkbox"/> Yes	<input type="checkbox"/> No
10. Does the RP address peer review of sponsor in-kind contributions?		<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

a. Does the RP list the expected in-kind contributions to be provided by the sponsor?	Paragraph 7.e.(9)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it explain how peer review will be accomplished for those in-kind contributions?	Paragraphs 7 and 9		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
11. Does the RP address how peer review will be documented?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does the RP address the requirement to document ATR comments using DrChecks?	Paragraph 9.i.(1)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does the RP explain how the IEPR will be documented in a Review Report?	Paragraphs 7.e.(15) and 11.i.	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does the RP document how written responses to the IEPR Review Report will be prepared?	Paragraph 7.e.(15)	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
d. Does the RP detail how the District/PCX will disseminate the final IEPR Review Report, USACE response, and all other materials related to the IEPR on the internet and include them in the applicable decision document?	Paragraphs 7.e.(15) and 11.i.	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
12. Does the RP address Policy Compliance and Legal Review?	Paragraph 14		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
13. Does the RP address model certification requirements?	EC 1105-2-412 and EC 1165-2-217 Paragraph 7.a.(1)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it list the models and data anticipated to be used in developing recommendations (including mitigation models)?	Paragraph 7.e.(8)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it indicate the certification/approval status of those models and if certification or approval of any model(s) will be needed?	Paragraph 7.e.(8)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c. If needed, does the RP propose the appropriate level of certification/approval for the model(s) and how it will be accomplished?	EC 1105-2-412 and EC 1165-2-217 Paragraph 7.e.	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
14. Does the RP address opportunities for public participation?	Paragraph 7.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it indicate whether there will be opportunity for the public to comment on the PCX endorsed and MSC approved RP?	Paragraph 7.g.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Does it indicate how and when there will be opportunities for public comment on the decision document?	EC 1105-2-410 and EC 1165-2-217 Paragraph 7.e.(3)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
c. Does it indicate when significant and relevant public comments will be provided to reviewers?	Paragraph 7.e.(4)	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
d. Does it address whether the public, including scientific or professional societies, will be asked to nominate potential external peer reviewers?	Paragraph 7.e.(7)	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
e. Does the RP list points of contact at the home District, the PCX and the MSC for inquiries about the RP?	Paragraph 7.e.(1)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
15. Does the RP address coordination with the appropriate Planning Center(s) of Expertise?	Paragraph 9.c.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Does it state if the project is single or multi-purpose? Single <input checked="" type="checkbox"/> Multi <input type="checkbox"/>	Paragraph 9.c.(1)(a)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

<i>List purpose(s): Deep Draft Navigation</i>				
b. Does it identify the lead PCX for peer review?	Paragraph 9.c.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<i>Identify PCX: DDNPCX</i>				
c. If multi-purpose, has the lead PCX coordinated the review of the RP with the other PCXs as appropriate?	Paragraph. 9.c.(1)(a)	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Yes	<input type="checkbox"/> No
16. Does the RP address coordination with the Cost Engineering Mandatory Center of Expertise (MCX) in Walla Walla District for ATR and certification of cost estimates?	Paragraph. 9.c.(1)(c)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Will the decision document require Congressional authorization?			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
17. Other Considerations: Were any of the following addressed in the RP:			<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a. Is the home district expecting to submit a request to exclude the project study from IEPR?	Paragraph 11		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b. Are there additional Peer Review requirements specific to the home MSC or District (as described in the Quality Management Plan)?			<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>If yes, describe:</i>				
c. Are there additional Peer Review needs unique to the project study?			<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>If yes, describe:</i>				

Port of Long Beach Deep Draft Navigation Feasibility Study

REVIEW PLAN

Updated: September 2019

1. OVERVIEW

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

- **Study Name:** Port of Long Beach (POLB) Deep Draft Navigation Feasibility Study
- **P2 Number:** 403268
- **Federal Project:** Los Angeles-Long Beach Harbors
- **Decision Document - Type:** Integrated Feasibility Report and Environmental Impact Statement (EIS)
- **Project Type:** Single Purpose Navigation (Deep-Draft)
- **Congressional Approval Required:** Yes
- **District:** Los Angeles District (SPL)
- **Major Subordinate Command (MSC):** South Pacific Division (SPD)
- **Review Management Organization (RMO):** Deep Draft Navigation Planning Center of Expertise (DDNPCX)
- **Review Plan Contacts:**
 - **District:** Project Manager, 213-452-3835
 - **MSC:** QA Lead, 415-503-6596
 - **RMO:** Review Manager, 251-694-3842

2. KEY REVIEW PLAN DATES

Action	Date - Actual ¹
RMO Endorsement of RP	06/11/15
MSC Approval of RP	08/17/15
Has RP changed since PCX endorsement?	yes
Last RP revision ²	9/6/19
RP posted on District Website	Pending
Congressional notification ³	Pending

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

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

³Date RIT notified Congress of IEPR decisions

3. MILESTONE SCHEDULE

Action	Date - Scheduled	Date – Actual	Status – Complete?
Feasibility Cost Sharing Agreement Signed		8/24/15, amended 5/31/19	Yes
Alternatives Milestone Meeting (AMM)	3/02/16	3/02/16	Yes
Tentatively Selected Plan (TSP)	8/07/19	8/07/19	Yes
Release Draft Report to Public	10/19		No
Agency Decision Milestone (ADM)	4/19		No
Final Report Transmittal	12/20		No
Senior Leaders Briefing	2/21		No
Chief's Report	9/21		No

4. BACKGROUND

- **Date of ‘Background’ Information:** July 2019
- **RP References:**
 - Engineer Circular (EC) 1165-2-217, Review Policy for Civil Works (CW), 20 February 2018
 - EC 1105-2-412, Assuring Quality of Planning Models, 31 March 2011
 - Engineer Regulation (ER) 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 November 2007
 - Chief’s Memorandum, Delegation of Authority in Section 2034(a)(5)(A) of the Water Resources Development Act of 2007 (WRDA 2007), as amended (33 U.S.C. 2343), 8 January 2018
 - Director’s Policy Memorandum (DPM) CW Programs 2018-05, Improving Efficiency and Effectiveness in U.S. Army Corps of Engineers (USACE) CW Project Delivery (Planning Phase and Planning Activities), 3 May 2018
 - Director of Civil Works (DCW) Memorandum, Delegation of Model Certification, 11 May 2018
 - DCW Memorandum, Revised Delegation of Authority in Section 2034(a)(5)(A) of WRDA 2007, as amended (33 U.S.C. 2343), 7 June 2018
 - Planning Bulletin (PB) 2018-01, Feasibility Study Milestones, 26 September 2018
 - DPM 2019-01, Policy & Legal Compliance Review, 9 January 2019
 - DCW Memorandum, Revised Implementation Guidance for Section 1001 of the Water Resources Reform and Development Act of 2014, Vertical Integration and Acceleration of Studies as Amended by Section 1330(b) of WRDA 2018, 25 March 2019
 - DCW Memorandum, Interim Guidance on Streamlining IEPR for Improved CW Product Delivery, 5 April 2019
 - Port of Long Beach Deep Draft Navigation Project, Project Management Plan, 3 August 2015; Revised August 2018
 - SPD Planning Quality Management Plan, May 2018
- **Authority:** The report serves as an interim response to the Resolution of the House Committee on Public works adopted on 10 July 1968, which reads as follows:

“That the Board of Engineers for Rivers and Harbors is hereby requested to review the reports on the Los Angeles and Long Beach Harbors, California, heretofore submitted to the Congress with a view to promoting and encouraging the efficient, economic, and logical development of the harbor complex. The scope will encompass investigation of current shipping problems, adequacy of facilities, delays in intermodal transfers, channel dimensions, storage locations, and capacities, and other physical aspects affecting waterborne commerce in the San Pedro Bay region, including the conduct of model studies as necessary to establish an efficient layout of the port complex and the design of navigation facilities.”

- **Sponsor:** Port of Long Beach
- **SMART Planning Status:** This study obtained a cost and schedule waiver on 31 October 2018. The study schedule was extended from a Chief's Report approval in August 2019 to September 2021 at a total cost of \$4.85M. The study is currently post- AMM in the alternatives evaluation and analysis phase.
- **Project Area:** The POLB is located in the city of Long Beach, on the coast of southern California in San Pedro Bay, approximately 20 miles south of downtown Los Angeles, California. To the west and northwest are the communities of San Pedro and Wilmington, respectively, and to the east is the community of Seal Beach. The POLB lies within two Congressional Districts: 47th District represented by Alan Lowenthal (D) and 44th District represented by Nannette Barragan (D).

The POLB is a deep-water port. Existing channels serving container movements have controlling depths of -46 to -48 feet mean lower low water (MLLW), which limits containerships to 44-49-foot drafts with tide riding. With tide-riding, vessels can draft 2-3 more feet depending on timing and pilot practices but can incur tidal delays. Light loading at the point of origin (typically Eastern Asia) also occurs. Due to limitations set by the bar pilots, larger liquid bulk vessels must wait several miles offshore until the main channel is cleared as the channel is restricted to one-way traffic and lacks a passing area near the port. This limitation has impacted 5-10% of crude oil imports, or 1-3 million tons per year, historically, and the impact has recently increased to 15%. Improvements would focus on areas along the Main Channel, the West Basin, a standby area adjacent to the Main Channel, the entrance to the Main Channel (the Approach Channel through Queen's Gate), and an Approach Channel to Pier J South (**Error! Reference source not found.**).



Figure 1: Study Area

- **Problem Statement:** The primary problem is the inefficient operation of deep draft vessels in the Federal (Main) and secondary channels in the Port complex, which increases the Nation's transportation costs of delivered goods. The following summarize these inefficiencies:
 - Due to depth limitations along channels accessing the Port's container terminals, existing container vessels cannot load to their maximum draft causing light-loading of vessels at the point of origin and tidal delays to an increasing number of container ships.
 - The dimensions of the worldwide fleet of container vessels have increased significantly, and this trend is anticipated to continue into the future. Delays and light-loading due to container vessel draft limits will increase as new, larger vessels are added to the fleet.
 - Due to channel width limitations liquid bulk vessels must enter and exit the two-mile-long Approach Channel one at a time resulting in increased delays.
 - Due to depth limitations along the Approach Channel, liquid bulk vessels must delay entry during certain wave swells and other conditions, or light-load at point of origin.
 - Ship simulation indicates issues with bend (transition point) widths of the Main Channel, in certain areas, for the design vessels.
 - Due to vessel traffic, liquid bulk vessels must wait outside of the Port (seaward side of the breakwaters), resulting in inefficiencies.
- **Study/Project Goals and Objectives:** Based on the analysis of the identified problems and opportunities and the existing conditions of the study area, planning objectives

were identified to direct formulation and evaluation of alternative plans. These were established as objectives for the proposed action.

- Increase transportation efficiencies, during the period of analysis, for container and liquid bulk vessels operating in the POLB, for both the current and future fleet.
 - Improve conditions, during the period of analysis, for vessel operation and safety, including reducing constraints of harbor pilot operating practices.
- **Description of Action:** Alternatives being considered include a combination of channel and basin deepening and access channel creation measures. Evaluation of dredged material placement options will include placement in a nearshore site (that has previously been used as a borrow site for a nearby beach nourishment project and this will restore the site's bathymetry), two ocean dredged material disposal sites (ODMDSs), or a combination of the two options. The estimated total project cost for implementation of the tentatively recommended plan is about \$150M, including contingency.
- **Federal Interest:** The primary Federal interest is contribution to National Economic Development (NED) through modifications to the existing navigation system in the POLB by addressing the physical constraints and associated inefficiencies that limit the system's ability to safely and efficiently serve the forecasted vessel fleet and process the forecasted cargo volume.
- **Risk Identification:** This project is not expected to pose any significant threat to human life now or in the future. Any environmental impact will be avoided, reduced, or mitigated. Table 1 provides current risks and uncertainties.

Table 1 Risk Summary

Functional Group	Risk/Concern	Mitigation/Contingency	Risk Level (H,M,L)
Geotechnical	Limited data available for sediment chemistry and physical qualities of proposed dredged material.	Sediment chemistry and physical qualities are not known precisely since only portions of the proposed project area have been sampled to date. Bulk sediment chemistry and bio toxicity (bio assay) testing has been performed on the sediments in the project site limits as part of past dredge investigations. The testing was done to evaluate the suitability of dredged sediments for placement in the vicinity of the project area and at the USEPA offshore disposal area of LA-2. Data from 1994, 2012, 2013 and 2018 is being used to make the assumption during feasibility that the dredged material will be suitable for the placement sites identified. Additional physical, chemistry and/or biotoxicity sampling and testing and sediment suitability analysis will be required as part of pre-dredge investigations prior to project implementation.	M
Plan Formulation	Establishing future with and without project conditions is complicated because the Port is updating their Port Master Plan. This may impact the expected use of the various piers within the Port and the physical configuration of the Port.	The feasibility study schedule and the Port's Master Plan schedule have been aligned. Continued close coordination with Port management to identify any potential changes as soon as possible to manage the impact to scope and schedule. The Master Plan update will inform the FWOP of the study.	L

5. FACTORS AFFECTING THE LEVELS OF REVIEW

- A. Is it likely that part(s) of the study will be challenging (EC 1165-2-217, paragraph 7.a.(1))? It is not likely that this study will be challenging as it is a single purpose deep-draft navigation project to evaluate improvements to an existing Federal project and associated placement of dredged material. The District has a high level of expertise in this type of project. Four action alternatives were carried forward to meet the Project's needs and objectives. Numerous scenarios were explored to determine the most prudent and practicable designs. Container terminal improvements include constructing a new Pier J approach channel and deepening the West Basin. Liquid bulk terminal improvements include deepening the Approach Channel (extending seaward from the Queens Gate) in conjunction with easing the bends/transition areas of the Main Channel, deepening the added width to the authorized depth of -76 ft MLLW. The project has modest technical challenges because of the scale of the study and complexity of operations at the port.

- B. Provide a preliminary assessment of where the project risks are likely to occur and assess the magnitude of those risks (EC 1165-2-217, paragraph 7.a.(1)). This project has a relatively low risk as the majority of the implementation would only modify elements of an existing Federal navigation channel to meet changing vessel fleet requirements. An additional approach channel to an existing Pier is the only new element in the proposed project. There is uncertainty, as in any feasibility study, whether modifications of existing general navigation features are economically justified, environmentally acceptable, and engineeringly feasible. These potential risks are similar to those inherent in any deep draft navigation study and are not expected to inhibit successful project implementation. A key assumption of the study is that sediments to be dredged would be suitable for open ocean placement. This is based on past dredging within the POLB (including a dredging program in the West Basin to remove and sequester contaminated sediments), but would have to be confirmed by sediment testing immediately prior to the start of construction. Nearly all of the sediments proposed for dredging have never been dredged before as the project entails deepening of existing or creating a new federal channel beyond historical dredging limits. These sediments were laid down prior to the start of the industrial age and were never exposed to anthropogenic sources of contamination. If sediments prove to be unsuitable for open ocean placement in the ODMDS sites, alternative options would have to be identified that could be considerably costlier than those currently identified in the study. The risk to the project cost and schedule during construction has been considered in the abbreviated risk analysis and will carry over into the final Cost and Schedule Risk Assessment that will be completed on the final Recommended Plan.
- C. Is there a significant threat to human life associated with aspects of the study or with failure of the project or proposed project (Type I IEPR - EC 1165-2-217, paragraph 11.d(1)(a) and SAR - paragraph 12.h.)? No, channel improvements will be justified through a savings in transportation costs and increased operational flexibility and will not be justified by life safety. There are no significant threats to human life associated with either construction of the proposed improvements, operation and maintenance of the proposed project, or with project failure. Should the project not perform as expected, the impact would be a lower than expected benefit to NED, which does not impact human life and/or safety. Non-performance of the project would not affect the well-being of the general public and/or environment, but may negatively affect transportation cost for commodities coming in through area facilities. There is no residual risk to account for in this project due to the fact that the project purpose does not address or directly affect human health and safety. Climate and sea level change would not be a risk to this project and would instead likely improve the function of the project by providing a deeper channel as sea level increases. This life safety assessment has been reviewed by the SPL Chief of Engineering and has his concurrence.
- D. Is the estimated total cost of the project greater than \$200 million (EC 1165-2-217, paragraph 11.d(1)(b))? No, the TSP is anticipated to cost about \$150 million. Therefore,

the project cost would not exceed the \$200 million threshold for IEPR defined by the Water Resources Reform and Development Act of 2014.

- E. Will the study/project require an environmental impact statement (EC 1165-2-217, paragraph 11.d(1)(b))? Yes, significant impacts to air quality during construction have been identified in preliminary air emissions estimates. Preliminary estimates of daily construction emissions show that significance criteria for NO_x (established by the Southern California Air Quality Management District and adopted by the Corps as significance criteria for purposes of environmental impact assessment under NEPA) would be exceeded for all action alternatives. These emissions would only occur during project construction and would cease upon project completion. These emissions would only take place in the outer harbor and would not result in the exposure of any sensitive receptors to elevated levels of air pollutants. Impacts would be similar to maintenance dredging activities that occur routinely within the POLB, but differ in having more equipment operating over a longer duration. This type of emissions do not directly impact members of the public, do not result in public concern, and are seen as the price for operating a large, commercial port. Once completed, the project would result in fewer, larger vessels arriving at the POLB resulting in a decrease of vessel emissions per unit of cargo. In addition, emissions from ships idling while waiting for favorable tidal conditions or while lightering would be reduced, if not completely eliminated.
- F. Has the Governor of an affected state requested a peer review by independent experts (EC 1165-2-217, paragraph 11.d(1)(c))? No, the Governor of California has not requested peer review by independent experts, nor is such a request expected.
- G. Has the Chief of Engineers determined that the project study is controversial due to significant public dispute over the size, nature, or effects of the project or the economic or environmental costs or benefits of the project (EC 1165-2-217, paragraph 11.d(1)(d))? No. The study is not likely to involve significant public dispute as to the size, nature or effects of the project. This study involves modifications to an existing Federal project and potential addition of a new Federal channel. Public participation and comment following issuance of the Notice of Intent (NOI) and during public scoping meetings has been minimal.
- H. Is the study/project likely to involve significant public dispute as to the project's size, nature, or effects (EC 1165-2-217, paragraph 11.d(1)(e))? In general the feasibility study is not expected to be controversial because potential construction would occur along existing vessel channels and dredged material would be placed at existing, approved sites or used for beneficial purposes. There could be public dispute or expressions of concern about air emissions during project construction and from on-going operations. However, as stated above, public participation and comment following issuance of the NOI and during public scoping meetings has been minimal.

- I. Is the study/project likely to involve significant public dispute as to the economic or environmental cost or benefit of the project (EC 1165-2-217, paragraph 11.d(1)(f))? No, it is not likely that there will be significant public dispute as to the economic and/or environmental costs and benefits. Through NEPA, public comments will be taken into consideration. Based on prior project efforts, the new project is unlikely to involve significant public dispute as to environmental benefits/costs.
- J. Is the information in the decision document or anticipated project design likely to contain influential scientific information or be a highly influential scientific assessment – i.e., be based on novel methods, involve innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices (Type I IEPR - EC 1165-2-217, paragraph 11.d(1)(g); SAR paragraph 12.i.(1); and paragraph 15.d)? No, the project is a typical channel improvement project and will not involve influential scientific information or be a highly influential scientific project that would change prevailing practices. The project will involve traditional methods of dredging and placement of dredged material. This project would be for an activity (dredging and placement) for which there is ample experience within USACE. Overall, it is anticipated that there will be low risk associated with the project. Standard engineering, economic and environmental analyses and information will be included in the final feasibility report and supporting documentation. Novel methods will not be utilized. If this decision is changed, the RP will be updated and re-coordinated.
- K. Does/will the study/project have significant interagency interest (EC 1165-2-217, paragraph 7.f(1))? Based on discussions with resource agencies, the study is not likely to have significant interagency interest that will require close coordination. Public scoping meetings that have been held by USACE and the Port have not drawn interest from either the public or other agencies.
- L. Are there any other circumstances that would lead the Chief of Engineers to determine Type I IEPR is warranted (EC 1165-2-217, paragraph 11.d(1)(h))? No, there are no known circumstances that would lead the Chief of Engineers to determine the review by an independent panel of external experts is warranted.
- M. Is the project expected to have more than negligible adverse impacts on scarce or unique tribal, cultural, or historic resources (EC 1165-2-217, paragraph 11.d(4)(a))? The project is not expected to have more than negligible adverse impacts on scarce or unique tribal, cultural or historic resources. Analysis of current databases have not identified resources of concern within the footprint of the deepening project however a Programmatic Agreement will be coordinated with the State Historic Preservation Office (SHPO) to minimize risk should cultural resources become evident in the project area during PED. Coordination with the SHPO is underway. The POLB is essentially a man-made port built up over time on channels that have been repeatedly dredged and

terminals built on fast lands. Any tribal, cultural, or historic resources have long since been removed.

- N. Is the project expected to have substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures (EC 1165-2-217, paragraph 11.d(4)(a))? The study may consist of constructing an access channel and basin dredging not authorized in the current Federal project. Preliminary analysis indicates that impacts to fish and wildlife, including threatened and endangered species, are expected to be less than significant. The fish and wildlife resources present in the study area are not anticipated to substantially affect what measures can be implemented but may be considerations for how measures are implemented (e.g., timing). Mobile fish and marine mammals would be anticipated to avoid work areas, which would be a small portion of the bay environment. The major issues are anticipated to be the loss of immobile, benthic organisms resulting from any dredging or in-water construction, either by removal or burial. In addition, negative effects to fish and wildlife resources resulting from project implementation are not expected as increased vessel efficiencies are anticipated to result in a lowering of annual ship traffic, particularly in container terminal vessels. To the extent practicable, environmental concerns can be addressed through measures of avoidance, minimization, or through public education and outreach efforts.
- O. Is the project expected to have, before mitigation measures, more than a negligible adverse impact on an endangered or threatened species or their designated critical habitat (EC 1165-2-217, paragraph 11.d(4)(a))? The only species listed under the Federal Endangered Species Act present in the area is the California least tern (listed as endangered), which, based on timing and distance, should not be adversely affected by the measures under consideration. The California least tern is known to forage in the study area, only during its nesting season defined as April 15-September 15. The tern does not nest in the study area, and the closest nesting location is a site on Pier 400 in the Port of Los Angeles. Dredging in the areas identified and placement operations are not expected to effect this species and a no effect determination is anticipated.
- P. Does the project study pertain to an activity for which there is ample experience within the USACE and industry to treat the activity as being routine (EC 1165-2-217, paragraph 11.d(4)(b))? Yes, navigation improvement studies and implementation of those projects (channel deepening/dredging and placement) are activities for which there is ample experience within USACE and industry to treat those activities as routine.
- Q. Does the project study have minimal life safety risk (EC 1165-2-217, paragraph 11.d(4)(b))? This project is considered a standard navigation improvement project with minimal life safety risk.
- R. Does the project design require redundancy, resiliency, and/or robustness (EC 1165-2-217, paragraph 12.i.(2))? No, the project design will follow standard dredging and

placement methodologies typically performed by the District. As such, the project design will not require redundancy, resiliency, and/or robustness.

- S. Will the project have unique construction sequencing or a reduced or overlapping design construction schedule (e.g., significant project features will be accomplished using the Design-Build or Early Contractor Involvement delivery systems) (EC 1165-2-217, paragraph 12.i.(3))? No, the project design will follow standard dredging and placement methodologies typically performed by the District. As such the project design is not anticipated to require unique construction sequencing or a reduced or overlapping design construction schedule. Annual placement limitations at the two ODMDS were factored into the construction schedule, but are not considered to result in significant effects to the proposed schedule.

6. REVIEW EXECUTION PLAN

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

A. Types of Review

- 1) **District Quality Control (DQC)**. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements of the project management plan. All decision documents (including data, analyses, environmental compliance documents, etc.) undergo DQC review. Additionally, DQC of milestone submittals is required (PB 2018-01).
- 2) **Agency Technical Review (ATR)**. ATR is performed to assess whether study/project analyses are technically correct and comply with USACE guidance and whether documentation explains the analyses and results in a clear manner. Further, the ATR team will ensure that proper and effective DQC has been performed (as assessment of which will be documented in the ATR report) and will ensure that the product is consistent with established criteria, guidance, procedures, and policy. If significant life safety issues are involved in a study or project, a safety assurance review should be conducted during ATR. At a minimum, ATR of the draft and final decision documents and supporting analyses is required (EC 1165-2-217, paragraph 9.i.(3)); however, targeted reviews may be scheduled as needed.
- 3) **Independent External Peer Review**. Type I IEPR may be required for decision documents under certain circumstances. IEPR is the most independent level of review and is applied in cases that meet criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. A risk-informed decision is made as to whether Type I IEPR is appropriate. If the District determines the study meets the justification for exclusion from Type I IEPR (if none of the triggers are met), this review plan should fully document and justify that decision. The MSC Commander will approve the review plan and determine if an IEPR is

required based on this justification and the PCX endorsement per the interim guidance on streamlining IEPR dated 05 April 2019. However, should IEPR be required, the RMO should be contacted at least three months in advance of the anticipated start of the concurrent review period to allow sufficient time to obtain contract services. If required, Type I IEPR will be managed by an Outside Eligible Organization, external to USACE. Neither the public nor scientific or professional societies would be asked to nominate potential external peer reviewers. ***Justification for exclusion from IEPR is included in Section 6.E. of this RP.***

- 4) **Cost Engineering Review.** All decision documents will be coordinated with the Cost Engineering Mandatory Center of Expertise (MCX). The MCX will provide the cost engineering expertise needed on the ATR team and will provide certification of cost estimates. The RMO is responsible for coordinating with the MCX for cost reviews. Cost reviews may occur as part of the draft/final report ATRs but the schedule for specific reviews may also vary. Accordingly, the PDT should coordinate closely review related needs with both the MCX and RMO.
- 5) **Model Review and Approval/Certification.** EC 1105-2-412 established the process and requirements for ensuring the quality of planning models. The EC mandates use of certified or approved planning models for all planning activities to ensure that planning products are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions regarding the availability of data, transparent, and described in sufficient detail to address any limitations of the model or its use.
- 6) **Policy and Legal Compliance Reviews (P&LCR).** All decision documents will be reviewed throughout the study process for compliance with law and policy. ER 1105-2-100 (Appendix H) and DPM CW/DCW memos, provide guidance on P&LCRs. These reviews culminate in determination whether report recommendations, supporting analyses, and coordination comply with law and policy and whether the decision document warrants approval or further recommendation to higher authority by the home MSC Commander.
- 7) **Public Review.** The home District will post the RMO endorsed/MSC approved RP on the District's public website. Internet posting of the RP provides opportunity for the public to comment on that document. It is not considered a formal comment period, and there is no set timeframe for public comment. The PDT should consider any comments received and determine if RP revisions are necessary. During the public comment period, the public will also be provided with the opportunity to review and comment on the draft and final reports. Should IEPR be required, public comments will be provided to the IEPR panel for consideration.

B. Anticipated Project Reviews and Estimated Costs

Table 2 provides the estimated schedule and cost for reviews anticipated for this study.

Table 2: Port of Long Beach Deep Draft Navigation Study – Anticipated Reviews

Product to Undergo Review	Review	Start Date	End Date	Cost	Complete
TSP Milestone Submittals	DQC	7/1/19	7/29/19	\$2K	Yes
DIFR-EIS	DQC ¹	8/29/19	9/9/19	\$18K	No
	ATR ²	10/18/19	12/3/19	\$50K	No
	P&LCR	10/18/19	12/3/19	N/A	No
ADM Milestone Submittals	DQC	3/9/20	3/12/20	\$3K	No
FIFR-EIS	DQC ¹	8/26/20	10/6/20	\$18K	No
	ATR ³	8/26/20	10/6/20	\$45K	No
	P&LCR	12/23/20	2/17/21	N/A	No
Air Quality and Traffic Analysis for Draft IFR [In-kind products or services ⁴]	DQC & ATR	<i>See footnote</i>			No

¹ Estimated as \$3K/reviewer

² Estimated as \$6K for DDNPCX RMO, \$4K ATR Lead, and 40 hours labor for each of the review team members

³ Estimated as \$6K for DDNPCX RMO, \$4K ATR Lead, and 32-40 hours for each of the review team members

⁴ Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. In-kind products or analyses will be for the Draft IFR and will be reviewed by the PDT initially and subsequently included in DQC and ATR review processes, the schedule and costs of which are included in feasibility review efforts shown above.

C. District Quality Control

The home district shall manage DQC and will appoint a DQC Lead to manage that review (see EC 1165-2-217, paragraph 8.a.1).

1) Review Team Expertise. Table 3 identifies the required expertise for the DQC team.

Table 3: Required DQC Expertise

DQC Team Disciplines	Expertise Required
DQC Lead	A senior professional with extensive experience preparing CW decision documents and conducting DQC. The lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc.).
Plan Formulation	A senior water resources planner with experience in leading a team through a deep draft navigation study and familiarity with the SMART Planning process.
Economics ¹	The economics reviewer should be a senior economist with experience in deep draft navigation studies and familiarity with economic models identified in Table 5.
Environmental Resources/	The environmental reviewer should have expertise in evaluating the impacts associated with deep draft navigation improvements / dredging projects and dredged material placement requirements. The reviewer should have extensive knowledge of biology in the vicinity of the study area, specifically knowledge of endangered coastal species and experience with coastal projects. Knowledge of Federal regulations, California Environmental Quality Act (CEQA), and National Environmental Policy Act (NEPA) is also required.
Cultural Resources	Cultural resources reviewer should have expertise in evaluating the impacts associated with deep draft navigation channel improvement and dredging projects as well as extensive knowledge of underwater archaeology. The reviewer should also be familiar with environmental coordination and NEPA/National Historic Preservation Act (NHPA) requirements for coastal deep draft navigation projects and be able to assess the adequacy of mitigation planning documents.
Hydrology, Hydraulics, & Coastal (HH&C) Engineer	The HH&C engineering reviewer should be knowledgeable in the field of hydraulics, have a thorough understanding of channel dynamics, and have experience in deep draft navigation studies/projects. The reviewer should also be familiar with computer modeling techniques that will be used in the study (as identified in Table 6).
Geotechnical Engineer/ Geologist	The reviewer will have experience performing geotechnical evaluations for deep draft navigation channel improvement projects, including experience in sediment characterization, suitability determinations, evaluating the behavior of soils, site characterization, material management, slope stability, HTRW considerations, and the analysis and placement of dredged material (including beneficial use).
Cost Engineer	The cost engineering reviewer should have experience in evaluating cost requirements for a deep draft navigation channel improvement projects and experience with the cost engineering models identified in Table 6.

Operations	The operations reviewer should have experience in the O&M of deep draft navigation projects to include channel maintenance dredging, placement, and beneficial use.
Real Estate	The real estate reviewer should have expertise in the real estate requirements of deep draft navigation improvement projects and experience in verification of considerations of utility relocations, staging, and dredged material placement.

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

- 2) Documentation of DQC.** Quality Control should be performed continuously throughout the study. A specific certification of DQC completion is required at the draft and final report stages. Documentation of DQC should follow the District Quality Manual and the MSC Quality Management Plan. An example DQC Certification statement is provided in EC 1165-2-217 (Figure F). **DrChecks software will be used to document DQC review comments, responses, and issue resolution for the Draft and Final reports.**

Documentation of completed DQC will be provided to the MSC, RMO and ATR Team leader prior to initiating an ATR. The ATR team will assess the quality of the DQC performed and provide a summary of that assessment in the ATR report. Missing or inadequate DQC documentation can result in delays to the start of other reviews (EC 1165-2-217, paragraph 9).

D. Agency Technical Review

ATR will be performed on the draft and final decision documents and supporting analyses (EC 1165-2-217, paragraph 9.i.(3)). The RMO will manage the ATR. ATR will be performed by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. ***ATR will be performed by a team whose members are certified or approved by their respective Communities of Practice (CoPs) to perform reviews.*** The RMO will identify an ATR lead and ATR team members. Neither the home District nor the MSC will nominate review team members. The ATR team lead will be from outside the home MSC. The ATR team lead is expected to participate in the study's milestone meetings (PB 2018-01), the cost of which is not included in the estimates provided in Table 2.

- 1) Review Team Expertise.** Table 4 identifies the anticipated disciplines and ATR team expertise required for study efforts.

Table 4: Required ATR Team Expertise

ATR Team Disciplines	Expertise Required
ATR Lead	The ATR lead will be a senior professional with extensive experience preparing CW decision documents and conducting ATR. The lead should have the skills to manage a virtual team through an ATR. The lead may serve as a reviewer for a specific discipline (e.g., plan formulation, economics, etc.).
Plan Formulation	The plan formulation reviewer should be a senior water resources planner with experience in leading a team through a deep draft navigation channel improvement study and analysis of dredged material placement requirements.
Economics	The economics reviewer should be a senior deep draft navigation economist with experience in performing economic evaluations for channel deepening. Experience with evaluating containerized and liquid bulk trade is required. Typically, two economic reviewers will be necessary, one to review the economics appendix and the other to review inputs/outputs of economic models used (as identified in Table 5).
Environmental Resources	The environmental reviewer should have expertise in evaluating the impacts associated with deep draft navigation improvements / dredging projects and dredged material placement requirements. The reviewer should have extensive knowledge of biology in the vicinity of the study area, specifically knowledge of endangered coastal species and experience with coastal projects, particularly the Pacific coast of the continental US. Knowledge of Federal regulations, CEQA and NEPA is also required.
Cultural Resources	Cultural resources reviewer should have expertise in evaluating the impacts associated with deep draft navigation channel improvement projects (dredging and placement) as well as extensive knowledge of underwater archaeology. The cultural resources reviewer should have a general background in cultural resources management and specialized experience with built environment and historic structures. Experience with Corps navigation and coastal projects is preferred. Knowledge of NHPA and NEPA is also required.
HH&C Engineer	The HH&C engineering reviewer should have experience designing deep-draft navigation channels, evaluating channel maintenance and placement requirements (including BU), and a thorough understanding channel dynamics. The reviewer should also be familiar with computer modeling techniques identified in Table 6.
Geotechnical Engineer / Geologist	The reviewer will have experience performing geotechnical evaluations for deep draft navigation channel improvement projects, including experience in sediment characterization, suitability determinations, evaluating the behavior of soils, site characterization, material management, slope stability, HTRW considerations, and the analysis and placement of dredged material (including BU).
Cost Engineer	The cost engineering reviewer will be identified by the Cost MCX and will have experience evaluating cost requirements for a deep draft navigation channel improvement project (dredging and placement). Cost engineering models to be used are identified in Table 6.
Operations	The operations reviewer should have experience in the O&M of deep-draft navigation projects to include channel maintenance dredging, placement, and BU.
Real Estate	The real estate reviewer should have expertise in the real estate requirements of deep draft navigation improvement projects and experience in verification of considerations of utility relocations, staging, and dredged material placement.

ATR Team Disciplines	Expertise Required
Climate Preparedness and Resilience/HH&C Climate	A member of the Climate Preparedness and Resiliency CoP or a HH&C Climate reviewer will participate on the ATR team. Another reviewer can fulfill this requirement as long as that reviewer has the required expertise.

- 2) Documentation of ATR.** DrChecks will be used to document ATR comments, responses, and issue resolution. Comments should be limited to those needed to ensure product adequacy. All members of the ATR team should use the four part comment structure (EC 1165-2-217, paragraph 9(k)(1)). If a concern cannot be resolved by the ATR team and PDT, it will be elevated to the vertical team for resolution using the issue resolution process identified in EC 1165-2-217. The comment(s) can then be closed in DrChecks by noting the concern has been elevated for resolution. The ATR Lead will prepare a Statement of Technical Review Report (EC 1165-2-217, paragraph 9), for both draft and final decision documents. Any unresolved issues will be documented in the ATR report prior to certification. The Statement of Technical Review (ATR completion) should always include signatures from the ATR Lead, Project Manager, and RMO, and the Certification of ATR should always include signatures from the District’s Chiefs of Engineering and Planning Divisions.

E. Independent External Peer Review

- 1) Decision on Type I IEPR.** Type I IEPR is managed outside of USACE and is typically conducted on studies of high risk/public involvement. 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. Based upon the criteria identified in EC 1165-2-217 and the scope of the study, *the PDT’s risk informed assessment is that the study does not require Type I IEPR.*

The PDT’s risk informed decision that Type I IEPR is not warranted was based on consideration of the following:

The decision document does not meet any of the mandatory triggers for Type I IEPR (paragraph 11.D.(1) of EC 1165-2-217 and the 5 April 2019 DCW memorandum) as described in detail in Section 5 of this Review Plan: there is no significant threat to human life, the estimated total cost of the project is approximately \$150M, which is less than the \$200M trigger; the Governor of California has not requested peer review by independent experts; and the Chief of Engineer’s has not determined that the project study is controversial due to significant public dispute over either the size, nature, or effects of the project or the economic or environmental costs or benefits of the project.

Additionally, the following were considered:

- *The consequences of non-performance on project economics, the environmental and social well-being (public safety and social justice).* This project will promote economic efficiency for commercial navigation interests. Should the project not perform as expected, the impact would be a lower than expected benefit to NED, which does not impact human life and/or safety. Non-performance of the project would not affect the well-being of the general public and/or environment, but may negatively affect transportation cost for commercial vessels/commerce.
- *The project is not likely to contain influential scientific information or be highly influential scientific assessment.* The project is a typical channel improvement project involving traditional methods of dredging and placement of sediments. The final report and supporting documentation will contain standard engineering, economic, and environmental analyses and information.
- *The decision document also meets exclusion (b) as described on page 37 of EC 1165-2-217 and discussed in detail in Section 5 of this RP:* The project is for an activity for which there is ample experience within USACE and industry to treat the activity as being routine and the project study has minimal life safety risk.

2) Decision on Type II IEPR.

A Type II IEPR, Safety Assurance Review (SAR), shall be conducted on design and construction activities for any project where: a) the Federal action is justified by life safety; b) potential hazards pose a significant threat to human life (public safety); or c) the failure of the project would pose a significant threat to human life. This applies to new projects and to the major repair, rehabilitation, replacement, or modification of existing facilities. Any project where the Federal action would pose a significant threat to human life (public safety) requires a Type II review.

The District Chief of Engineering, as the Engineer-In-Responsible-Charge, needs to assess whether the threat is significant and document that in the Review Plan. A recommendation to not conduct a SAR shall (like any Review Plan recommendation) have the endorsement of the RMO prior to approval of the Review Plan.

When a Type II review is included in the project's approved Review Plan, the District Chief of Engineering, as the Engineer-In-Responsible-Charge, is responsible for ensuring the Type II review is conducted in accordance with EC 1165-2-217, and will fully coordinate with the Chief of Construction, the Chief of Operations, and the project manager through the Pre-Construction, Engineering, and Design (PED) and construction phases.

a) Other Factors

Other factors to consider for conducting a Type II IEPR (SAR) of a project or components of a project are:

- I. The project involves the use of innovative materials or techniques where the engineering is based on novel methods, presents complex challenges for interpretations, contains precedent-setting methods or models, or presents conclusions that are likely to change prevailing practices;
- II. The project design requires redundancy, resiliency, and robustness.
 - a. Redundancy. Redundancy is the duplication of critical components of a system with the intention of increasing reliability of the system, usually in the case of a backup or fail-safe.
 - b. Resiliency. Resiliency is the ability to avoid, minimize, withstand, and recover from the effects of adversity, whether natural or manmade, under all circumstances of use.
 - c. Robustness. Robustness is the ability of a system to continue to operate correctly across a wide range of operational conditions (the wider the range of conditions, the more robust the system), with minimal damage, alteration or loss of functionality, and to fail gracefully outside of that range.
- III. The project has unique construction sequencing or a reduced or overlapping design construction schedule; for example, significant project features accomplished using the D-B or Early Contractor Involvement (ECI) delivery systems.

b) Risk Informed Assessment

In accordance with EC 1165-2-217, the PDT assessed whether the proposed deep draft navigation study poses a significant threat to human life (public safety). The key factors considered are:

- The Federal action will not be justified by life safety, and failure of the project would not pose a significant threat to human life as the project will be for an activity (dredging and placement of dredged material) for which there is ample experience within the USACE.
- This project does not protect life essential public facilities.
- 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; it does not contain precedent-setting methods or models; and it does not present conclusions that are likely to change prevailing practices. Proposed improvements are to an existing Federal navigation project. Construction and maintenance techniques have been standardized and no new techniques are expected to be utilized for design and construction activities.
- The project design does not require redundancy, resiliency, or robustness as the design of navigation improvements at the POLB will be based upon previously developed and utilized construction techniques which do not require redundancy, resiliency, and/or robustness.

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

c) Chief of Engineering Life Safety Assessment

The Los Angeles District Chief of Engineering has determined that:

- I. The Federal action is not justified by life safety;
- II. Potential hazards do not pose a significant threat to human life (public safety);
- III. The failure of the project would not pose a significant threat to human life;
- IV. The Federal action would not pose a significant threat to human life (public safety); and
- V. The “Other Factors”, cited above, to consider for conducting a Type II IEPR (SAR) of a project are not applicable to this project.

Therefore, it is recommended that a Type II IEPR, or SAR, not be conducted on the design and construction activities for this project.

F. Model Certification or Approval

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models are any models and analytical tools used to define water resources management problems and opportunities; to formulate potential alternatives to address study area problems and take advantage of opportunities; to evaluate potential effects of alternatives; and to support decision making. The use of a certified/approved planning model does not constitute technical review of a planning product. The selection and application of the model and assessment of input and output data is the responsibility of the users and is subject to DQC, ATR, and IEPR (if required). Table 5 provides the models that may be used to develop the decision document.

Table 5: Planning Models

Model Name and Version	Brief Model Description and How It Will Be Used in the Study	Model Certification / Approval Status
HarborSym 1.5.8.3 (Economics)	HarborSym is a discrete event Monte-Carlo simulation model designed to facilitate economic analyses of proposed navigation improvement projects in coastal harbors. Incorporating risk and uncertainty, the model will be used to estimate transportation cost savings (benefits) attributable to fleet and loading changes under future with project conditions.	Certified

Regional Economic System (RECONS) (Economics)	RECONS is a regional economic impact modeling tool that estimates jobs, income, and sales associated with Corps CW spending and additional economic activities. The model will be used to estimate the regional economic impacts of project implementation.	Certified
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EC 1105-2-412 does not address engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue. The professional practice of documenting the application of the software and modeling results will be followed. The USACE Scientific and Engineering Technology Initiative has identified many engineering models as preferred or acceptable for use in studies. These models should be used when appropriate. The selection and application of the model and the input and output data is the responsibility of the user and is subject to DQC, ATR, and IEPR (if required). The following engineering models may be used to develop the decision document.

Table 6: Engineering Models

Model Name and Version	Brief Model Description and How It Will Be Used in the Study	Model Certification / Acceptance Status
Multiple Placement Fate of Dredged Material (MPFATE/MPFATE) (HH&C Engineer)	MPFATE was developed under the USACE Dredging Research Program (DRP) (Hales 1995) and was formerly known as Open Water Disposal Area Management Simulation (ODAMS) program (Moritz and Randall 1995). MPFATE is a site management tool that bridges the gap between the Short Term FATE of dredged material (STFATE) model and the Long Term FATE of dredged material (LTFATE). It will be used to simulate open water placement of dredged material considered suitable for open water placement at the nearshore placement site.	Allowed
Delft 3D (HH&C Engineer)	Delft 3D is a multi-dimensional suite of hydrodynamic, sediment transport, and morphologic modules for estuarine and coastal environments. The FLOW module of Delft3D is a multi-dimensional hydrodynamic and transport simulation program which calculates non-steady flow and transport phenomena resulting from tidal and meteorological forcing on a curvilinear, boundary fitted grid or spherical coordinates. The MOR module computes sediment transport (both suspended and bed total load) and morphological changes for an arbitrary number of cohesive and non-cohesive fractions. Both currents and waves act as driving forces. An essential feature of the MOR module is the dynamic feedback with the FLOW and WAVE modules, which allow the flows and waves to adjust themselves to the local bathymetry and allows for simulations on any time	Allowed

Model Name and Version	Brief Model Description and How It Will Be Used in the Study	Model Certification / Acceptance Status
	scale from days (storm impact) to centuries (system dynamics). It will be used to simulate currents, sediment transport, and salinity excursions in the estuary.	
ArcGIS	Will be used to visually represent alternatives.	Enterprise
Automated Risk Assessment Modeling System	Will be used to visually represent risks of alternatives	Enterprise
ERDC Ship/Tow Simulator (HH&C Engineer)	The Ship/Tow Simulator features two bridges set up for real-time ship maneuvering, and were specifically developed for evaluating navigation channel designs, modifications, and safety issues. Located at ERDC, Coastal and Hydraulics Laboratory, the model portrays currents, wind and wave conditions, shallow water effects, bank forces, ship handling, ship to ship interaction, fender forces, anchor forces, and tug assistance.	Allowed
Microcomputer Aided Cost Engineering System (MCACES), MII (Cost Engineer)	Microcomputer Aided Cost Engineering System (MCACES) is the cost estimating software program tools used by cost engineering to develop and prepare Class 3 CW cost estimates.	CW Cost Engineering MCX mandatory
Cost Schedule Risk Analysis (Cost Engineer)	Cost risk analyses identify the amount of contingency that must be added to a project cost estimate and define the high risk drivers. The analyses will include a narrative identifying the risks or uncertainties. During the alternatives evaluation, the PDT will assist the cost engineer in defining confidence/risk levels associated with the project features within the abbreviated risk analysis. For the Class 3 estimate, an evaluation of risks will be performed using Crystal Ball Cost Schedule Risk Analysis for construction costs over \$40 million.	
Total Project Cost Summary (TPCS) (Cost Engineer)	The TPCS is the required cost estimate document that will be submitted for either division or HQUSACE approval. The Total Project Cost for each CW project includes all Federal and authorized non-Federal costs represented by the CW Work Breakdown Structure features and respective estimates and schedules, including the lands and damages, relocations, project construction costs, construction schedules, construction contingencies, planning and engineering costs, design contingencies, construction management costs, and management contingencies.	

Model Name and Version	Brief Model Description and How It Will Be Used in the Study	Model Certification / Acceptance Status
Corps of Engineers Dredge Estimating Program (CEDEP) (Cost Engineer)	CEDEP is the required software program that will be used for dredging estimates using floating plants. CEDEP contains a narrative documenting reasons for decisions and selections made by the cost engineer. Software distribution is restricted as it is considered proprietary to the Government.	

G. Policy and Legal Compliance Review

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

With input from MSC and HQUSACE functional leaders and through collaboration with the Chief of Office of Water Project Review (OWPR), the MSC Chief of Planning and Policy is responsible for establishing a competent interdisciplinary P&LCR team (DPM 2019-01). The composition of the policy review team will be drawn from HQUSACE, the MSC, the Planning Center of Expertise (PCX), and other review resources as needed. The identification of Counsel members will follow the procedures set forth by the HQUSACE Chief Counsel, as coordinated by HQUSACE and MSC Counsel functional leaders. The MSC Chief of Planning and Policy and the Chief of OWPR will collaborate to identify and endorse a P&LCR Manager from among the P&LCR team identified for the study. The manager may be a MSC, PCX, or HQUSACE employee. The team is identified in Attachment 1 of this RP.

The P&LCR team will:

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

ATTACHMENT 1: TEAM ROSTERS

PROJECT DELIVERY TEAM			
Name	Office	Position	Phone
Chris Lee	CESPL-PMN-C	Project Manager	(213) 452-3835
Heather Schlosser	CESPL-PDW-S	Lead Planner	(213) 452-3810
Arden Sansom	CESWF-PER-E	Economist	(409) 466-3841
Todd Nettles	CESAM-PD-FE	Economist	(251) 694-3841
John Goertz	CESPL-EDD-C	Coastal Engineer	(213) 452-3423
Larry Smith	CESPL-PDR-Q	Biologist	(213) 452-3846
Frank Crossley	CENWS-EN-DB-SS	Geotechnical Engineer	(206) 316-3097
Jeffrey Devine	CESPL-EDG-G	Geologist	(213) 452-3579
Julia Yang	CESPL-EDG-D	Soils Engineer	(213) 452-3468
Taylor Canfield	CELRL-ED-M-C	Cost Engineer	(502) 315-6268
Santos Macias	CESPL-AM-DOD-R	Real Estate Specialist	(213) 452-3120
Travis Bone	CESPL-PDR-L	Cultural Resource Specialist	(602) 230-6969
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Arnecia Williams	CESPL-EDD	Value Engineer	(213) 452-3747
Joe Merrion	CESPL-OC	Counsel	(602) 230-6984

DISTRICT QUALITY CONTROL TEAM			
Name	Office	Position	Phone Number
Mike Hallisy	CESPL-PDE	DQC Lead	(213) 452-3815
Mike Hallisy	CESPL-PDE	Plan Formulation	(213) 452-3815
Jennifer Purcell	CESWF-PEC-PE	Economics	(817) 886-1663
Chris Solek	CESPL-RDL	Environmental Resources	(213) 452-3867
Jodi Clifford	CESPL-RD	Cultural Resources	(213) 452-3840
Chris Hayward	CESPL-EDD-C	HH&C Engineer	(213) 452-3675
Mark Russell	CESPL-EDG-D	Geotechnical Engineer/Geologist	(213) 452-4014
Jay Thomas	CELRL-EDM-C	Cost Engineer	(502) 315-6294
Lisa Sandoval	CESPL-AM	Real Estate	(213) 452-3147

AGENCY TECHNICAL REVIEW TEAM			
Name	Office	Position	Phone Number
Rachel Mesko	CEMVP-PD	ATR Lead	(651) 323-7178
TBD		Plan Formulation	
TBD		Economics (Appendix)	
TBD		Economics (HarborSym)	
TBD		Environmental Resources	
TBD		Cultural Resources	
TBD		HH&C Engineer (Coastal)	
TBD		Geotechnical Engineer/Geologist	
TBD		Cost Engineer	
TBD		Operations	
TBD		Real Estate	
TBD		Climate Preparedness & Resilience/HH&C Climate	

VERTICAL TEAM			
Name	Office	Position	Phone Number
Josephine Axt	CESPD-DD-P	Chief, Planning and Policy	415-503-6590
Judy McCrea	CECW-PB	SPD Planner	

POLICY AND LEGAL COMPLIANCE REVIEW TEAM			
Name	Office	Position	Phone Number
Scott Nicholson	HQ-OWPR	Review Manager	(202) 761-7770
Scott Nicholson	HQ-OWPR	Plan Formulation	(202) 761-7770
Kurt Keilman	SPD	Economics	(415) 503-6596
Evie Haberer	HQ-OWPR	Environmental	(202) 684-5370
Sean Smith	HQ	Engineering and Construction	(202) 761-0301
Rod Moritz	NWP	Climate Change	(503) 808-4864
John Cline	HQ	Real Estate	(202) 761-8635
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