



Port of
LONG BEACH
The Green Port

May 13, 2014

Michael Lyons
Regional Water Quality Control Board
320 West 4th Street, Suite 200
Los Angeles, California 90013

Subject: Application for Renewal of Waste Discharge Requirements for the Middle Harbor Redevelopment Project

Dear Mr. Lyons,

In February 2010, the Los Angeles Regional Water Quality Control Board issued Waste Discharge Requirements (WDR), Order No. R4-2010-0020, to the Port of Long Beach (POLB) for the Middle Harbor Redevelopment Project (Project). The current WDR was issued as a 5-year permit and will expire on February 3, 2015. The Project commenced in May 2011 and will take approximately 10 years to complete. It is estimated that the Project will be completed in 2021. Accordingly, the POLB is filing an application to renew the Waste Discharge Requirements (WDRs) for Project construction, dredging, and fill activities for another 5-year period.

The POLB has prepared an informational document (attached) which discusses Project activity updates, work completed, potential fill sources for the next sections of the fill, and best management practices (BMPs) likely to be employed. This informational document will be used to update the Middle Harbor Sediment Management Plan that was prepared for the Project in 2009, and will serve as a guide for sediment management issues throughout the duration of this Project.

Please find enclosed a hard copy of the Master Dredging Permit Application and the application information document. Per the Water Board's guidelines, since this is a renewal of an existing permit, no application fee is required.

Also enclosed is a disc with electronic versions of support documents related to this project:

- Application information document containing relevant information for renewal of the WDRs
- 2009 Middle Harbor Sediment Management Plan

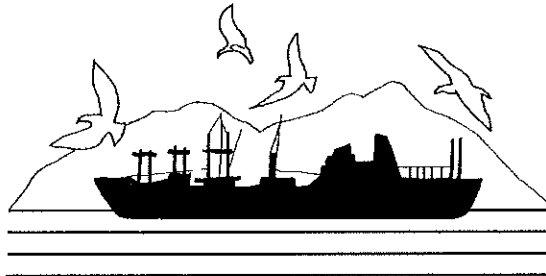
If you have any questions, please contact Janna Watanabe at (562) 283-7100.

Sincerely,

A handwritten signature in black ink, appearing to read 'Heather Tomley', written over a faint, larger version of the same signature.

Heather A. Tomley
Director of Environmental Planning

Attachments: Master Dredging Permit Application
Application Information Document
CD



Los Angeles Region
**CONTAMINATED
SEDIMENTS
TASK FORCE**

MASTER DREDGING PERMIT APPLICATION

Form Number REG4-DREDGE-001

PLEASE INDICATE WHICH OF THE FOLLOWING THIS FORM APPLIES TO:

- Section 404 and/or Section 10 dredging permits by the Los Angeles District of the Corps of Engineers
- California Regional Water Quality Control Board, Los Angeles Region, Report of Waste Discharge, pursuant to Sections 13260, 13374, and 13377 of Article 4, Chapter 4, of the Porter-Cologne Water Quality Control Act*
- Port of Long Beach Harbor Development Permit
- Port of Los Angeles Coastal Development Permit
- California Coastal Commission Coastal Development Permit
- California Coastal Commission Federal Consistency Certification/Determination

(New 04/02)

*This application shall serve as, and be functionally equivalent to, a Report of Waste Discharge, pursuant to Sections 13260, 13374, and 13377 of Article 4, Chapter 4 of the Porter-Cologne Water Quality Control Act.



LOS ANGELES REGION CONTAMINATED SEDIMENTS TASK FORCE

(Please complete all sections and follow instructions provided with application.)

SECTION 1 - GENERAL INFORMATION

1. APPLICANT INFORMATION (see instructions)

Applicant Name The Port of Long Beach		Contact Name (if different) Heather A. Tomley, Director of Environmental Planning	
Mailing Address 4801 Airport Plaza Drive		City Long Beach	
State CA	Zip 90815	Business Phone (562) 283-7100	Residence Phone N/A

2. LEGAL INTEREST (see instructions)

<input type="checkbox"/> Individual <input type="checkbox"/> Legal Entity <input checked="" type="checkbox"/> Government <input type="checkbox"/> Non-profit	
<input type="checkbox"/> Other (Please provide description): <u>Legal Interest: Tidelands Trust Act of 1911</u>	
Note: You will need to provide a copy of legal interest with this application (e.g., title, lease, deed, and easement).	

3. REPRESENTATIVE INFORMATION (see instructions)

Applicant's authorized agent, point of contact, and/or representative <input type="checkbox"/> None		
Name/Title		Organization
Mailing Address		City
State	Zip	Business Phone
		Residence Phone
Who should receive correspondence relevant to this application? <input type="checkbox"/> Applicant <input type="checkbox"/> Representative <input type="checkbox"/> Both		
I hereby authorize the above named to act as my representative and bind me in all matters concerning this application.		
_____ Signature of Applicant		_____ Date

THIS BOX IS FOR OFFICIAL USE ONLY:		Data Base Entry <input type="checkbox"/> Yes <input type="checkbox"/> No
Date received: _____	ACOE No. _____	
Date completed: _____	CCC No. _____	
SAP Approved: _____	RWQCB No. _____	
Data Submitted: _____	POLA CDP No. _____	
Date Approved: _____	POLB HDP No. _____	

SECTION II - PROJECT INFORMATION

4. GENERAL PROJECT INFORMATION (see instructions)

Project Name or Title Middle Harbor Redevelopment Project - Renewal of WDRs		
Type of Dredging Project: <input type="checkbox"/> Maintenance <input checked="" type="checkbox"/> New Work	Timing of Project: <input type="checkbox"/> Single Episode <input checked="" type="checkbox"/> Multi-Episode	
Project description (attach additional sheets if necessary): Project includes: dredging to deepen & widen existing slip, filling an adjacent slip & portion of the East Basin, extending & reconstructing an existing wharf, & other structural modifications. See attachment.		
Project need and/or purpose: Improve terminal efficiency & container storage area; navigational safety for larger container vessels		
Month and year work is proposed to begin Construction started in May 2011	Estimated completion date Estimated completion 2021	Estimated total project cost \$1.3 Billion

5. DREDGING INFORMATION (see instructions)

Dredge Site Slip 3, East Basin, borrow sites	County Los Angeles	Nearest City Long Beach
Latitude(s) Various	Longitude(s) Various	Waterway Long Beach Harbor
Type and composition of dredged material (Please give percentages if available) <input checked="" type="checkbox"/> Sand _____ <input checked="" type="checkbox"/> Silt/Clay _____		
Is the material appropriate for beach replenishment? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Proposed type of equipment/construction methods to be used: Dredging: Hydraulic dredge and clamshell and barge operation.		
Will a temporary rehandling area or storage site be used for the dredged material? If Yes, for what length of time? <u>TBD</u> Site address? <u>TBD</u> Type of containment? <u>TBD</u> Approximate size of area? <u>TBD</u> acres or ft ²		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No * A temporary rehandling area/ storage site may be used if material will be disposed of upland.
Will the project result in the construction of temporary or permanent structures? If Yes, please indicate: <input checked="" type="checkbox"/> Temporary <input checked="" type="checkbox"/> Permanent Please provide a description:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Permanent: dike to contain dredge and fill materials, concrete pile-supported wharf, steel sheet pile bulkheads, landfill. Temporary: BMPs & containment area to dry material for upland disposal.		
Will the proposed dredging affect existing public access or public recreational facilities? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, please describe location and nature of impact: Please describe how the impacts would be mitigated:		
Will the proposed dredging affect a historic/cultural resource? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, please describe location and nature of impact: Please describe how the impacts would be mitigated:		

BOX 5 (CONTINUED)

Depth of dredging based on Mean Lower Low Water (MLLW) datum *Varies based on location
 Existing depth: Varies * Over/depth tolerance: -2'
 Proposed design depth: Varies * Proposed total depth: Varies *

Volume of material to be dredged: TBD cy, area of dredging: TBD acres

Type(s) of substrate being dredged:
 Sub-tidal Bottom Mudflat Wetlands Estuary Other: _____

Please list agency and identification numbers of any previous permits for this activity:

Agency	Permit/Approval	Permit No.	Issue Date
USACE	Permit	2004-1053-AOA	2/23/2010
Port of Long Beach	Permit	HDP# 03-121	5/27/2009
LA Regional Water Board	WDR Permit	Order No. R4-2010-0020	2/4/2010

If applicable, please give the Assessor's Parcel Number: _____

6. DISPOSAL SITE INFORMATION

AQUATIC DISPOSAL (see instructions)

Does the project involve aquatic disposal? Yes No

Site: (please check all that apply) LA-2 LA-3 CAD In-Harbor RCDS Other: Middle Harbor CDF

Total volume of dredged material designated for aquatic disposal: TBD cy

Will the proposed disposal affect a historic/cultural resource? Yes No
 If Yes, please describe location and nature of impact:

SITE INFORMATION (Please attach the following information for additional sites):

LA-2 LA-3 CAD In-Harbor RCDS Other: Middle Harbor CDF

Volume of dredged material designated for this aquatic disposal site: TBD cy
 Is the site an existing site that regularly receives dredged material? Yes No
 Year site was last used for dredged material disposal: 2014
 Proposed type of equipment/construction methods to be used:
 Various - bottom dump scow, hydraulic placement, clamshell

PROPOSED UPLAND, WETLAND, REUSE, OR FILL DISPOSAL (see instructions)

Does the project involve upland, wetland, reuse, or fill disposal? Yes No
 If the project will involve upland, wetland, or fill disposal, but will not involve reuse, please explain why reuse has not been considered:

Will the proposed disposal affect a historic/cultural resource? Yes No
 If Yes, please describe location and nature of impact:

Site(s): (please check all that apply)
 Upland Federal Wetland State Wetland Reuse Fill

Total volume of dredged material designated for upland, wetland, reuse, and fill disposal: TBD cy

SITE INFORMATION (Please attach the following information for additional sites):
 (Check only one) Upland Federal Wetland State Wetland Reuse Fill

Site Name:
Middle Harbor

BOX 6 (CONTINUED)

Site Description (see instructions): Middle Harbor - Slip 1 and portion of East Basin			
Site Address Middle Harbor - the Port of Long Beach	City Long Beach	State CA	Zip 90802
Latitude(s) 33.756 to 33.763	Longitude(s) 118.214 to 118.215	Zoning Port Use	
Owner's Name Port of Long Beach		Phone Number (562) 283-7100	
Address 4801 Airport Plaza Drive	City Long Beach	State CA	Zip 90815
Does this site include jurisdictional wetlands? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, give name and permit number of approved wetlands project where material will be placed:			
Is the site an existing site that regularly receives dredged material? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Year site was last used for dredged material disposal: <u>2014</u> Volume of dredged material designated for this disposal site: _____**_____ cy Proposed type of equipment to be used:** Entire fill site will accept up to approx. 4.8 million cy of material and is open for placement of material from other dredge projects. See attached document for more information.			
Will disposal result in the construction of temporary or permanent structures? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, please describe: Dikes and fill for new terminal.			
Will the proposed disposal affect existing public access or public recreational facilities? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, please describe how the impacts would be mitigated:			
Will the proposed disposal involve the transportation of dredged material by trucks? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, please describe the number of truck trips and the route to be used: Program dependent			
(Attach the above information for additional sites)			

7. SENSITIVE AREAS (see instructions)

Does the project have the potential to affect a sensitive area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Type of Habitat:	<input type="checkbox"/> Inter-Tidal	<input checked="" type="checkbox"/> Sub-Tidal	<input type="checkbox"/> Coastal Wetlands
<input type="checkbox"/> Sandy Beach	<input type="checkbox"/> Eelgrass	<input type="checkbox"/> Kelp Forest	<input type="checkbox"/> Riparian
Habitat Name: marine habitat/water column and benthic			
Habitat Size: <u>54.6</u> acres or ft ²		Size of area impacted: <u>54.6</u> acres or ft ²	
Estimated Dates of Impact: From <u>2011</u> To <u>2021</u>			
Have you contacted the following agencies? (see instructions):			
1. U.S. Environmental Protection Agency	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	
2. U.S. Fish and Wildlife	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	
3. U.S. Army Corps of Engineers	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	
4. National Marine Fisheries Service	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	
5. U.S. Bureau of Land Management	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	
6. Nat'l Oceanic & Atmospheric Association	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	
7. CA Environmental Protection Agency	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	
8. CA Department of Fish & Game	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	
9. CA State Lands Commission	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	
10. S. Coast Air Quality Mgmt. District	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	
11. California Coastal Commission	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	
12. Regional Water Quality Control Board	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	

(BOX 7 CONTINUED)

If Yes to any of the above, please give the following information for each agency: If more than can be entered here, please attach a supplemental list.	
Name of Agency:	Refer to Middle Harbor EIR/EIS
Name of Contact:	
Permit required?: <input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, please give number:
Special Condition(s) required?: <input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, please describe:
Name of Agency:	
Name of Contact:	
Permit required?: <input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, please give number:
Special Condition(s) required?: <input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, please describe:
Name of Agency:	
Name of Contact:	
Permit required?: <input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, please give number:
Special Condition(s) required?: <input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, please describe:
Name of Agency:	
Name of Contact:	
Permit required?: <input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, please give number:
Special Condition(s) required?: <input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, please describe:

8. THREATENED OR ENDANGERED SPECIES (see instructions)

Does the project have the potential to affect any federal or state threatened or endangered species? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, please indicate: <input type="checkbox"/> Federal <input type="checkbox"/> State	
<i>Note: If more than one, please attach a supplemental list.</i>	
Name of species:	
Location of species in relation to project:	
Estimated Dates of Impact: From _____ To _____	
Do these dates coincide with the breeding season?:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Has a Section 7 consultation been initiated?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Have you prepared a mitigation plan?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, please attach; if No, please give the expected submission date: _____	
Does this project have the potential to affect any marine fisheries or marine mammals?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, have you consulted National Marine Fisheries Service?:	<input type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, please give the following information:	
Name of Contact:	
Permit required?: <input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, please give number:
Special Condition(s) required?: <input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, please describe:

(BOX 8 CONTINUED)

Have you consulted CA Department of Fish & Game?: <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, please give the following information:
Name of Contact:
Permit required?: <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, please give number:
Special Condition(s) required?: <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, please describe:

9. ESSENTIAL FISH HABITAT (see instructions)

Does the project have the potential to affect any essential fish habitat? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Fishery Type: <input checked="" type="checkbox"/> Coastal Pelagic Species <input type="checkbox"/> Salmon <input checked="" type="checkbox"/> Pacific Coast Groundfish
<i>Note: If more than one, please attach a supplemental list.</i>
Affected Species : Refer to Middle Harbor EIR/EIS
Has an analysis of the effect of the project on managed species been conducted ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, please attach; if No, please give the expected submission date: Refer to Middle Harbor EIR/EIS
Have you contacted National Marine Fisheries Service? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, please give the following information:
Name of Contact: Bryant Chesney
Permit required?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, please give number:
Special Condition(s) required?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, please describe:

SECTION III - OTHER REQUIRED INFORMATION

10. ENVIRONMENTAL APPROVALS (see instructions)

<i>Note: Please provide a copy of the project's environmental documentation with your application.</i>
CEQA Lead Agency: The Port of Long Beach
Type of Environmental Documentation: <input type="checkbox"/> CE <input type="checkbox"/> ND <input checked="" type="checkbox"/> EIR
Date of Approval: April 13, 2009 or Approximate date of completion: _____
NEPA Lead Agency: U.S. Army Corps of Engineers
Type of Environmental Documentation: <input type="checkbox"/> CE <input type="checkbox"/> EA <input checked="" type="checkbox"/> EIS
Date of Approval: February 2010 or Approximate date of completion: _____

11. OTHER APPROVALS (see instructions)

CA DEPARTMENT OF FISH & GAME - 1601 & 1603 Approval Number _____ Date of Application _____ <input checked="" type="checkbox"/> None Required Date of Issuance _____
LOCAL GOVERNMENT APPROVALS
Approving Agency: Los Angeles RWQCB Approval Type: Renewal of WDRs
Approval Date: _____ Local Contact & Phone: Michael Lyons (213) 576-6718
Approving Agency: Port of Long Beach Approval Type: Harbor Development Permit
Approval Date: 5/27/2009 Local Contact & Phone: Alex Holford (562) 283-7100
Approving Agency: _____ Approval Type: _____
Approval Date: _____ Local Contact & Phone: _____

12. ADJOINING PROPERTY OWNERS (see instructions)

Please provide names and addresses of property owners, lessees, etc., whose property adjoins either the project or the disposal site (disposal site information is not required for the designated aquatic sites). If more than can be entered here, please attach a supplemental list.

Name Long Beach Container Terminal			
Address 1171 Pier F Avenue	City Long Beach	State CA	Zip 90802
Property adjoins: <input checked="" type="checkbox"/> Dredging Site <input checked="" type="checkbox"/> Disposal Site Party given is: <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Lessee <input type="checkbox"/> Other (explain):			
Name Cemex USA			
Address 601 Pier D Avenue	City Long Beach	State CA	Zip 90802
Property adjoins: <input checked="" type="checkbox"/> Dredging Site <input type="checkbox"/> Disposal Site Party given is: <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Lessee <input type="checkbox"/> Other (explain):			
Name Foss Maritime Company (Pier D)			
Address P.O. Box 1940	City Long Beach	State CA	Zip 90801
Property adjoins: <input checked="" type="checkbox"/> Dredging Site <input type="checkbox"/> Disposal Site Party given is: <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Lessee <input type="checkbox"/> Other (explain):			
Name			
Address	City	State	Zip
Property adjoins: <input type="checkbox"/> Dredging Site <input type="checkbox"/> Disposal Site Party given is: <input type="checkbox"/> Owner <input type="checkbox"/> Lessee <input type="checkbox"/> Other (explain):			

13. CHECKLIST OF ADDITIONAL INFORMATION TO BE SUBMITTED (see instructions)

This box identifies other information that is required before your dredging application can be accepted as complete and processing of the application initiated. Please indicate whether the material is attached or in-progress. If the material is in-progress, please give the expected submission date.

	Attached	OR	In-Progress	Expected Submittal Date
Sampling & Analysis Plan (SAP):	<input type="checkbox"/>		<input type="checkbox"/>	TBD
Testing Data:	<input type="checkbox"/>		<input type="checkbox"/>	TBD
Environmental Documentation:	<input type="checkbox"/>		<input type="checkbox"/>	Submitted previously
Dredging & Disposal Plan:	<input type="checkbox"/>		<input type="checkbox"/>	30 days before dredging
Proof of Legal Interest:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Federal Consistency Determination or Certification	<input type="checkbox"/>		<input type="checkbox"/>	
Fees:	<input type="checkbox"/> USACE		<input type="checkbox"/> CCC	<input type="checkbox"/> RWQCB

14. COASTAL DEVELOPMENT PERMIT

Use of this application for a California Coastal Commission Coastal Development Permit (CDP) requires certain additional information. If you plan to use this form to apply for a CDP please provide the following:

- Stamped envelopes addressed to each property owner and occupant of property situated within 100' of property lines of the project site.
- Stamped envelopes addressed to all other parties known to the applicant to be interested in the project.
- Verification of all other permits, permissions, or approvals granted by public agencies such as CA Dept. of Fish and Game, CA State Lands Commission, US Army Corps of Engineers, US Coast Guard, etc.

(BOX 14 CONTINUED)

- Declaration of campaign contributions (see attached form Appendix A).
- Declaration of posting (see attached form Appendix B).

If you have any questions concerning these requirements, please contact the California Coastal Commission South Coast District office in Long Beach.

NOTICE TO APPLICANTS

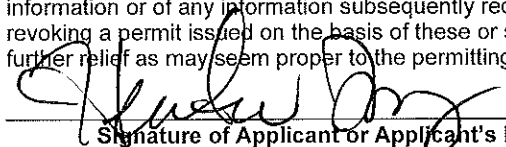
The California Coastal Commission may adopt or amend regulations affecting the issuance of coastal development permits. If you would like notice of such proposals during the pendency of this application, if such proposals are reasonably related to this application, please indicate that desire: Yes No

COMMUNICATION WITH COMMISSIONERS

Decisions of the California Coastal Commission must be made on the basis of information available to all commissioners and the public. Therefore, permit applicants and interested parties and their representatives are advised not to discuss with commissioners any matters relating to a permit outside the public hearing. Such contacts may jeopardize the fairness of the hearing and result in invalidation of the Commission's decision by court. Any written material sent to a commissioner should also be sent to the commission office for inclusion in the public record and distribution to other Commissioners.

15. CERTIFICATION OF ACCURACY OF INFORMATION

I hereby certify under penalty of perjury that to the best of my knowledge, the information in this application and all attached exhibits is full, complete, and correct, and I understand that any misstatement or omission of the requested information or of any information subsequently requested shall be grounds for denying the permit, for suspending or revoking a permit issued on the basis of these or subsequent representation, or for the seeking of such other and further relief as may seem proper to the permitting agencies.



Signature of Applicant or Applicant's Representative

5/12/14

Date

APPENDIX A – DECLARATION OF CAMPAIGN CONTRIBUTIONS

Please read and fill out the following if you are using this form to apply for a Coastal Development Permit (CDP) from the California Coastal Commission.

Government Code Section 84308 prohibits any Commissioner from voting on a project if he or she has received campaign contributions in excess of \$250 within the past year from project proponents or opponents, their agents, employees or family, or any person with a financial interest in the project.

In the event of such contributions, a Commissioner must disqualify himself or herself from voting on the project.

Each applicant must declare below whether any such contributions have been made to any of the listed Commissioners or Alternates (see attached list – Roster of Commissioners).

Check One

- The applicants, their agents, employees, family and/or any person with a financial interest in the project **have not contributed** over \$250 to any Commissioner(s) or Alternate(s) within the past year.
- The applicants, their agents, employees, family and/or any person with a financial interest in the project **have contributed** over \$250 to any Commissioner(s) or Alternate(s) within the past year.

Commissioner or Alternate _____

Commissioner or Alternate _____

Commissioner or Alternate _____

Signature of Applicant or Authorized Agent

Date

Please print your name _____

APPENDIX B - DECLARATION OF POSTING

Please read and fill out the following if you are using this form to apply for a Coastal Development Permit (CDP) from the California Coastal Commission.

TO: Applicant

Pursuant to the requirements of California Administrative Code 13054(b), this certifies that I/we have posted the "Public Notice" of application to obtain Coastal Commission Permit No. _____

for:

located:

The public notice was posted at a conspicuous place, easily read by the public and as close as possible to the site of the proposed development.

(Signature)

(Date)

NOTE: YOUR APPLICATION CANNOT BE PROCESSED UNTIL THIS "DECLARATION OF POSTING" IS RETURNED TO THE CALIFORNIA COASTAL COMMISSION OFFICE. If the site is not posted at least eight days prior to the meeting at which the application is scheduled for hearing, or the Declaration of Posting is not received in our office prior to the hearing, your application will be removed from its scheduled agenda and will not be rescheduled for Commission action until the Declaration of Posting has been received by this office.

Box 2 – Legal Interest

Pursuant to the Tidelands Trust Act, the Port's lands, both submerged and dry are held in trust by the City of Long Beach for the State. The Trust allows the City to use all tidelands and submerged lands within the City's Harbor District as a port. The land was originally granted to the City of Long Beach through State of California Chapter 676, Statutes of 1911. The responsibility for the promotion and management of the Port is granted to the City's Harbor Department through Article XII of the City's Charter. The Charter, in turn, grants the control and management of the Harbor Department to the Board of Harbor Commissioners.

Box 6 – Disposal Site Information

The proposed disposal sites include:

- (1) Port landfill project
- (2) Port upland disposal site

The Port's first priority is to beneficially reuse the material in a Port landfill project. However, dredge material may be disposed of at an upland landfill if found unsuitable for reuse as fill material within the Port. Additional information on each of the proposed constructed fill/upland disposal sites for the dredged material is listed below:

1. **Middle Harbor Redevelopment Slip and Basin Fill** - The Middle Harbor Redevelopment Project involves the fill of the Pier E Slip No.1 and a portion of the East Basin. A rock containment dike was constructed at the southern boundary of Slip No. 1 and a second containment dike will be constructed from Pier E, Berth E24 to Pier F, Berth F10. The containment dikes are designed to effectively contain chemically impacted materials and to control runoff of decant water from the settling of dredged material at the site. Any contaminated sediments placed at this site will be capped and sequestered by the placement of uncontaminated materials on top and a sand filter layer behind the containment dike in accordance with regulatory requirements and permits. Accordingly, disposal of dredged material at this disposal site will not pose any significant environmental concerns. The landfill has been analyzed in the Middle Harbor Terminal Redevelopment EIR/EIS.
2. **Port Upland Processing Area** - Dredged material may also be placed upland on Port property temporarily for sorting and drying of the material prior to disposal at an approved upland disposal facility. Port upland processing areas may include Pier S and other various upland sites throughout the Harbor District. All processing sites will be designed with the proper BMPs. Material would be placed within a retention berm for sorting and drying and a discharge weir would help to regulate the flow of decant water from the confined area. Once the material has been dried and sorted, scrap steel will be recycled and rock will be crushed into miscellaneous road base. Non-recyclable debris and materials will be disposed of at upland disposal facilities appropriate for the type of debris generated and in accordance with federal and state regulations.

Proposed Upland, Wetland, Reuse, or Fill Disposal

Site Information: Upland

Total volume: TBD

Site Name/Description/Address: TBD

Owner's Name: Port of Long Beach, 4801 Airport Plaza Drive, Long Beach, CA 90815

Site includes jurisdictional wetlands? No

Existing site that receives dredged material? Varies depending on site.

Will disposal result in the construction of temporary or permanent structures? Temporary BMPs and containment area to sort and dry material before disposing at approved upland facility.

Will the proposed disposal involve the transportation of dredged material by trucks? Yes

APPLICATION FOR RENEWAL OF WASTE DISCHARGE
REQUIREMENTS FOR THE
MIDDLE HARBOR REDEVELOPMENT PROJECT

Submitted to

Los Angeles Regional Water Quality Control Board

Submitted by

Port of Long Beach

Environmental Planning



May 2014

1 PROJECT BACKGROUND

The Port of Long Beach (Port) Middle Harbor Redevelopment Project (Project) includes the expansion and modernization of existing marine terminals and other Port land and water areas to accommodate a portion of the forecasted increase in containerized cargo. The Project comprises a number of activities at existing terminal facilities within the Middle Harbor area (Figures 1 and 2), including consolidating terminals on Piers E and F; upgrading and modernizing Port facilities; implementing Green Port policies and the Clean Air Action Plan (CAAP); improving terminal traffic flow and cargo handling operations; and increasing intermodal railyard facilities. The Project will take about 10 years (estimated completion in the year 2021) and will be completed in several phases, each with multiple stages. The construction elements that are relevant to water quality include: 1) excavation and dredging, 2) wharf construction and demolition; 3) rock dike construction; and 5) filling of Slip 1 and the East Basin to create new land.

The Project is covered under Department of the Army Permit No. SPL-2004-01053-AOA, which has an expiration date of February 28, 2020. In February 2010, the Los Angeles Regional Water Quality Control Board issued Waste Discharge Requirements (WDR), Order No. R4-2010-0020, to the Port for the Project. The current WDR was issued as a five-year permit which will expire on February 3, 2015. Accordingly, the Port is respectfully submitting this application to renew the Project WDRs for another 5-year period.

2 PERMIT COMPLIANCE HISTORY

Construction activities commenced in May 2011 and included the following Phase 1 activities:

- Dredging Slip 3 and dredging/excavating material from Piers D and E. The material generated from the Project dredging/excavation activities were beneficially reused as fill in the Middle Harbor fill site.
- Wharf demolition has been completed on Pier E and portions of Pier D and F.
- A new wharf has been construction on Pier E.
- The Pier E extension fill site has been completed.
- The Slip 1 closure dike is completed and a portion of the Slip 1 fill site is out of the water and is in the final completion stage of being surcharged.

Per the Project WDRs, receiving water quality monitoring was performed during construction activities. Water quality monitoring began on 5/21/2011 and has been conducted on a weekly basis during construction activities. To date, no exceedances have been observed. Weekly water quality monitoring surveys are posted to the Regional Water Quality Control Board GeoTracker database.

This Project provided an opportunity to develop a management strategy and methodology for the beneficial reuse of 2.5 million cubic yards of contaminated sediments from within the Port and around the region. Through the early establishment of a comprehensive and transparent selection process, the Port was able to successfully identify candidate projects interested in and qualified for contributing dredged material to the Middle Harbor fill site. To that end, the Port developed a Middle Harbor Sediment Management Plan that describes the Port's decision process for acceptance of contaminated sediments into the fill as well as detailing the logistical, technical, and legal requirements for acceptance.

Dredge material from 11 individual projects throughout the region were evaluated for compatibility with the Project construction schedule and material characteristics requirements. The projects found compatible by the Port were reviewed by the CSTF for concurrence. To date, the Port has accepted over 1 million cy of contaminated material from third parties for beneficial use in the Slip 1 fill site. Individual projects and approximate volumes placed in the fill include:

- Marina del Rey Federal Channel – 760,000 cy (LA Beaches and Harbors)
- Rhine Channel – 150,000 (City of Newport Beach)
- Lower Newport Bay Federal Channel – 130,000 (City of Newport Beach)
- Colorado Lagoon – 72,000 cy (City of Long Beach)
- Alamitos Marina – 64,000 cy (City of Long Beach)
- Harborlight Marina – 5,000 cy (City of Long Beach)
- Los Angeles River Estuary – 149,000 cy (U.S. Army Corps of Engineers)
- Rainbow Harbor – 30,000 (City of Long Beach)
- Long Beach Pier D, Berth 44 – 6,000 cy (Eagle Rock Aggregates)

The fill site has been engineered to safely contain chemically impacted materials using a containment berm of monolithic dike design along with a sand filter layer behind the rock. In addition, the material will be covered with up to 24 feet of clean fill from other sources and paved with asphalt.

3 ONGOING AND FUTURE CONSTRUCTION ACTIVITIES

The following summarizes the activities that are ongoing and the remaining activities that will be completed in later stages/phases of the Project.

Dredging/Excavation

- Minor dredging of Slip 3 to final grade.
- Minor dredging/excavation of Pier D.
- Minor dredging in Slip 1 and the East Basin to prepare the sites and create the toe for the containment dikes for the next section(s) of the Middle Harbor fill site.

- Dredging at approved borrow sites to provide fill material.
- Dredging/excavation of Berth F210 to remove small land area needed for final wharf configuration.

Dredged/excavated material will be beneficially used as fill in the Middle Harbor Fill Site.

Wharf Demolition/Construction

- Final completion of the new Pier E wharf.
- Demolition of remaining wharf structures (e.g., concrete pilings, sheet pile and concrete retaining structures, and rock dikes) on Pier F.
- Construction of new wharf connecting the Pier E extension to Pier F.
- Re-construction of new shorelines.

Construction of the new wharves and improvements to portions of existing wharves will include placement of quarry-run rock dikes with armor rock revetments or armor stone; installation of concrete piles, a steel-reinforced concrete wharf deck, sheet piles, tiebacks, anchors; and installation of shore-to-ship infrastructure.

Rock Dike Construction

- Construction of rock closure dike(s) in Slip 1 and the East Basin to prevent the movement of newly placed material and contain the final fill. New dikes will consist of quarry-run rock with armor-rock revetments.
- Rock will be placed in Slip 3 and the East Basin to support new wharves and re-construct new shorelines.

Slip 1 and the East Basin Fill

- Complete Slip 1 fill site and surcharge.
- Construct East Basin fill and surcharge.

When completed, the Middle Harbor fill site, located in the Slip 1 and East Basin fill areas (Figure 2), will contain approximately 4.8 million cy of material and create approximately 65 acres of new land. Material would be placed at the fill site by bottom dump scow, mechanical or hydraulic placement methods, or brought to the fill site by trucks.

Import of Non-project Sources of Fill

The Middle Harbor fill site will include material from the Project and other Port dredging projects. Other dredge projects from the region may be considered for beneficial use in the fill areas; however, if the size, schedule, and material characteristics (either chemically or geotechnical) is not compatible

with the construction schedule and the geotechnical requirements of the fill, suitable material will be borrowed from within the Harbor District. The Port will follow the guidance as described in the Middle Harbor Sediment Management Plan when evaluating and ranking each potential import fill source for the Middle Harbor fill site. Potential import sources may include:

- Port Projects – This includes other Port dredging projects such as maintenance dredging projects and capital dredge projects that have approvals to dispose of material at the Middle Harbor fill site. Placement of POLB maintenance dredge material within the final Middle Harbor fill site footprint, prior to the completion of a closure dike, may be possible if consistent with permits and agency approvals.
- Borrow Sites - Dredging at approved borrow sites within the Harbor District will be needed to provide clean, geotechnically suitable fill material for each section of the fill. Approved borrow sites include, but are not limited to, the Pier T and West Basin borrow area and the Western Anchorage Temporary Sediment Storage Site.
- Third Parties - The POLB recognizes that the Middle Harbor Development Project can provide benefits to the region by accepting and beneficially reusing dredged material. It is the POLB's intent to accommodate as much dredged material from third-party projects (i.e., projects undertaken by entities other than POLB) as possible within the constraints of the Project's schedule, capacity of the fill site, and sediment quality suitability. Unlike most typical dredge disposal locations, the Middle Harbor fill site is a key component of a much larger, time critical POLB redevelopment project. The timing of the placement of material is critical and is dependent on the timing of terminal construction activities. Placement of third-party material within the final Middle Harbor fill site footprint, prior to the completion of a closure dike may be possible if consistent with permits and agency approvals.

For each section of the fill, the POLB will evaluate if there is additional capacity available for third parties. If additional capacity is available, the Port will evaluate potential third party fill sources in accordance with the priority protocol established in the Middle Harbor Sediment Management Plan which outlines the decision process that POLB will use to accept material for fill, as well as the logistical, technical and legal requirements that must be met. The final decision as to whether a given material can be accepted will be made on a case-by-case basis but will be based upon four criteria:

- *Schedule.* The timing of its delivery relative to the progress of fill construction.
- *Fill Composition.* The nature of the fill material, both chemical and geotechnical.
- *Documentation.* The required permits, insurance, licenses, and agreements.
- *Fill Source.* The geographic source of the material.

The interplay of those four factors will determine the priority of each potential third party

opportunity. In each case, the Port will document the decision-making process.

The third party material to be used as fill must meet minimum chemical criteria and have certain structural characteristics, depending upon its destination in the fill. The Port will *NOT* accept material that: 1) constitutes “hazardous waste” as termed by the USEPA or the California Department of Toxic Substances Control (DTSC); 2) is deemed unsuitable for confined aquatic disposal by the USEPA; or 3) has land use restrictions or other long-term operations and maintenance requirements imposed by California DTSC or other regulatory agency. Therefore, contaminated sediments from river and harbor dredging are, in general, chemically acceptable, but very heavily contaminated sediments that would be subject to long-term monitoring and land-use restrictions once it is placed in a disposal facility would not be acceptable.

POLB can accommodate a certain amount of fine-grained material, regardless of its chemical composition, in its fills, but that amount is limited by the needs to ensure that the fill is structurally sound and to avoid compromising the construction schedule. Fine-grained material is structurally poor, and its incorporation into the fill generally increases costs and takes more time to dewater than the use of sandy material. Generally speaking, fine-grained material may be placed in the bottom and inner layers of the fill, but the higher the material is in the fill, the higher the sand content must be. Only a limited amount of fine-grained material can be accepted at a given point in fill construction and that amount decreases as the elevation of the fill rises. Accordingly, the Port will evaluate proposed third party material to determine, based on a geotechnical analysis, if the material can be incorporated into the fill and, if so, where it must be placed.

4 POTENTIAL PROJECT BEST MANAGEMENT PRACTICES (BMPs)

The activities that may adversely affect water quality include wharf demolition/construction, dredging/excavation, construction of rock dikes, and construction of new land via fills. The following BMPs may be implemented to minimize the impacts of these activities.

Dredging/Excavation Best Management Practices

- A Water Quality Monitoring Plan (approved by the RWQCB) will be implemented by the Port during dredging/excavation. This plan will describe methods and documentation for the monitoring of turbidity, pH, and dissolved oxygen during dredging.
- The contractor will be required to ensure that no overflow will be permitted from scows.
- If petroleum hydrocarbon impacted soil is encountered during dredging/excavation, the contractor will implement appropriate Best Management Practices (BMPs) to ensure that

water quality impacts are negligible. BMPs will be implemented to treat the material or amend the material to reduce the presence of or bind the oily material. If the material is found to be unsuitable for fill material, the Port will dispose of the material at an approved upland landfill. Unsuitable dredge material will be placed upland on POLB property temporarily for sorting and drying of the material prior to disposal at an approved upland disposal facility. Port upland processing areas may include Pier S or various other upland sites throughout the port. All processing sites will be designed with proper BMPs designed to contain dredged materials on site. Dredged material would be placed within a retention berm for sorting and drying and a discharge weir would help to regulate the flow of decant water from the confined area. Management guidelines and potential BMPs that may be implemented are being prepared by the Port and will be included as an appendix to the Middle Harbor sediment management plan once finalized.

- In order to ensure compliance with permit conditions, the following specific BMPs (Table 1) may be implemented when water quality monitoring indicates that an exceedance of water quality standards and permit limits is either likely or has already occurred.

Table 1
Best Management Practices that May Be Used to Reduce Resuspension
and Contaminant Loss During Dredging

	Equipment Selection	Operational Controls	Site Containment
Mechanical	<ul style="list-style-type: none"> • Closed bucket or sealed environmental bucket • Real-time positioning • Bucket size/type (digging vs. re-handling) 	<ul style="list-style-type: none"> • Use experienced operator • Avoid tidal (current) extremes • Increase cycle time/slow down production • Slow bucket at bottom and at water surface • Eliminate multiple cuts and bottom stockpiling • Avoid sweeping with bucket • Do not use bucket or derrick to reposition dredge • Eliminate scow washing and overflow 	<ul style="list-style-type: none"> • Silt curtain or Gunderboom¹ • Oil containment boom¹
Hydraulic	<ul style="list-style-type: none"> • Type of hydraulic (cutterhead, suction, etc.) • Real-time positioning • Dredge size and pump capacity 	<ul style="list-style-type: none"> • Use experienced operator • Avoid tidal (current) extremes • Reduce impeller rotation speed • Reduce up swing speed • Adjust cut thickness • Eliminate the process of bank undercutting 	<ul style="list-style-type: none"> • Silt curtain of Gunderboom¹ • Oil containment boom¹

Notes:

1 Minimal benefits provided when dredge site is located in deep water or dynamic site conditions

A brief description of BMPs listed in Table 1 is provided below:

- Equipment BMPs to reduce sediment resuspension and contaminant loss when using a mechanical dredge include:

- *Environmental bucket.* A sealed bucket designed to reduce water loss and suspended sediments, which is typically effective in loose unconsolidated sediment.
- *Sealed Bucket.* A standard clamshell dredge bucket sealed by plates welded to the top of each clam.
- *Real-time positioning.* Real-time positioning data allows the operator to better control the dredge cut and bucket depth.
- *Bucket size/type.* Selection of the appropriate bucket can reduce overflow and excessive water in the bucket and reduce the need to take multiple bites.
- Equipment BMPs to reduce sediment resuspension and contaminant loss when using a hydraulic dredge include:
 - *Type of hydraulic dredge (cutterhead, suction, etc.).* Using the appropriate type of hydraulic dredge will minimize sediment loss.
 - *Real-time positioning.* Real-time positioning data allows the operator to better control the dredge cut and bucket depth.
 - *Dredge size and pump capacity.* Adjusting the pump rate can have an impact on reducing suspended solids and both the dredging and disposal location.
- Specific operational BMPs that could be used to reduce turbidity outside the allowable mixing zone at the dredge site when using a mechanical dredge include:
 - *Use experienced operator.* Experienced operators can better reduce sediment resuspension while maintaining production.
 - *Avoid tidal extremes.* Tidal extremes may limit the distance that suspended sediments travel.
 - *Increase cycle time.* To control turbidity, a longer cycle time could be used to reduce the velocity of the ascending loaded bucket through the water column, which reduces the potential to wash sediment from the bucket. Limiting the velocity of the descending bucket reduces the volume of sediment that is picked up and requires more total bites to remove the project material. For a clamshell bucket, the majority of the sediment resuspension occurs when the bucket hits the bottom.
 - *Slow bucket at bottom and at water surface.* Slowing the bucket at the bottom will reduce sediment resuspension when the bucket hits the bottom. Slowing the bucket at the water surface will reduce drainage at the surface.
 - *Eliminate multiple cuts.* If a turbidity exceedance is observed, the contractor should not be allowed to use multiple bites of the clamshell bucket to achieve the target dredge depth. When the bucket hits the bottom, an impact wave of suspended sediment travels along the bottom away from the dredge bucket. When the clamshell bucket takes multiple bites, the bucket loses sediment as it is reopened for subsequent bites. Sediment is

also released higher in the water column as the bucket is raised, opened, and lowered. If this occurs, the bucket type and size should be altered.

- *Eliminate bottom stockpiling.* The contractor should be prohibited to use bottom stockpiling to increase the efficiency of the dredging operation. Bottom stockpiling of dredged material in silty sediment has a similar effect as multiple dredging bites; an increased volume of sediment is released into the water column from the operation.
- *Avoid sweeping with bucket.* Single bites of the sediment should be taken, and using the bucket to sweep or smooth out high spots should be avoided when working with contaminated sediments.
- *Eliminate overflow or washing from scows.* The contractor should be prohibited from overloading scows to increase the efficiency of the dredging operation or from washing excess material from scows.
- *Avoid using bucket or derrick to reposition barge.* The barge should be repositioned using a second vessel and not the bucket, as to reduce sediment resuspension during relocating.
- Specific operational BMPs to reduce turbidity outside the allowable mixing zone at the dredge site when using a hydraulic dredge include:
 - *Use experienced operator.* Experienced operators can better reduce sediment resuspension while maintaining production.
 - *Avoid tidal extremes.* Tidal extremes may limit the distance that suspended sediments travel.
 - *Reduce impeller rotation speed.* Reducing cutterhead rotation speed reduces the potential for side casting the excavated sediment away from the suction entrance and resuspending sediment. This measure is typically effective only on maintenance or relatively loose, fine-grained sediment.
 - *Reduce swing speed.* Reducing the swing speed ensures that the dredge head does not move through the cut faster than it can hydraulically pump the sediment and reduces the volume of resuspended sediment. The goal is to swing the dredge head at a speed that allows as much of the disturbed sediment as possible to be removed with the hydraulic flow. Typical swing speeds are 1.5 to 9 meters (5 to 30 feet) per minute.
 - *Eliminate the process of bank undercutting.* Dredge operators should remove the sediment in lifts equal to 80 percent or less of the cutterhead diameter.
- Specific site containment BMPs to use if operational measures prove inadequate include:
 - *Silt curtain.* A silt curtain could be deployed around the dredge area, creating a physical barrier that contains the suspended sediments and allows them to settle out.
 - *Gunderboom.* A gunderboom is similar to the silt curtain; however, it is made of a permeable material. It filters out the sediment and allows the water to pass through. It

also extends all the way from the water surface to the sediment where the silt curtain only extends partially down the water column.

- *Oil containment boom* – If an oil sheen is encountered, an oil containment boom should be added to the silt curtain to contain and remove surficial petroleum material.

Barge Transport and Material Placement within Fill Site

Releases of dredged material outside of the approved disposal location (e.g. fill site) could occur during transport of material from the source area or during placement at the disposal location. Possible barge disposal practices could include both bottom dumping of material or clamshell re-handling over an already constructed containment dike. BMPs that could be implemented to minimize loss of sediment during transport and/or from the fill site are listed in Table 2 and discussed below. These BMPs should be employed at all times to ensure that no exceedance of water quality standards will occur and to ensure compliance with permit conditions with minimal impact on both the environment and the construction schedule and budget.

**Table 2
Best Management Practices that May Be Used to Minimize Sediment Loss
During Discharge into Fill Site**

	Equipment Selection	Operational Controls	Site Containment
Mechanical	<ul style="list-style-type: none"> • Barge type • Re-handling equipment type 	<ul style="list-style-type: none"> • Use experienced operator • Reduce rate of discharge • Reduce barge movement during discharge • Place material further away from dike/weir • Eliminate barge overflow/spilling 	<ul style="list-style-type: none"> • Silt curtain or Gunderboom¹
Direct hydraulic placement or offloader ²	<ul style="list-style-type: none"> • Diffuser pipes • Adjustable pump rates 	<ul style="list-style-type: none"> • Adjust flow rate • Adjust solids concentration at point of discharge • Move discharge point to allow for maximize retention time • Closely monitor and adjust weir level 	<ul style="list-style-type: none"> • Silt curtain or Gunderboom¹ • Discharge site control: <ul style="list-style-type: none"> - Install overflow weir - Install baffles or other flow diversion device

Notes:

1 Effectiveness dependent on dynamic site conditions and water depth

2 Occasionally, a fill site elevation will require the use of a hydraulic offloader to place material behind the containment dike.

A brief description of the BMPs listed in Table 2 is provided below:

- Equipment BMPs to reduce sediment loss when using a mechanical offloader to transfer sediments into a fill site or upland for placement include:

- *Barge type.* The contractor should use the appropriate type of barge (e.g., flat-deck barge with containment structures) to minimize sediment loss during offloading. For bottom dump scows, the barges must have fully sealed doors.
- *Handling equipment type.* The contractor should use the appropriate type of re-handling equipment (e.g., long-reach excavator) and spill aprons to reduce sediment loss.
- Equipment BMPs to reduce sediment loss when using direct hydraulic placement or a hydraulic offloader include:
 - *Diffuser pipes.* A diffuser can be used to slow the rate of discharge; therefore, reducing sediment resuspension in the fill and increasing the settling rates which will assist in controlling the loss of fines from the fill site.
 - *Adjustable pump rates.* In some instances, adjusting the pump rate or using a smaller dredge may be required to control the loss of fines from the fill site.
- Operational changes if using a mechanical offloader include:
 - *Use experienced operator.* Experienced operators can better reduce sediment resuspension while maintaining production.
 - *Reduce rate of discharge.* Disposing of sediment at a slower rate will have less impact on bottom and, therefore, reducing sediment resuspension.
 - *Minimize barge movement during offloading.* Moving the barge during offloading may increase the potential for losses during offloading.
 - *Place sediment farther away from dike or weir.* Position bottom-dump barges at a sufficient distance inside the slip to minimize the chance that excessive turbidity is released beyond the slip fill limits and that light transmittance requirements are exceeded outside the dike. Placing sediment farther away from dike or weir will increase retention time and allow more suspended sediment to settle.
- Operational changes if using a hydraulic dredge or offloader include:
 - *Adjust flow rate.* Placing material at a slower rate will reduce the amount of sediment being discharged and increase the retention time in the settling basin.
 - *Adjust solids concentration at point of discharge.* In a settling basin, higher solids concentration may result in higher settling rates and less suspended sediment at the effluent discharge.
 - *Move discharge point to maximize retention time.* Moving the discharge point to a place in the settling basin that will increase retention time will allow more suspended sediment to settle.

- *Closely monitor and adjust weir level.* The weir level should be adjusted as the settling basin is filled to maximize the settlement of fine material and minimize the amount of sediment that escapes in the return water.
- Specific site containment BMPs if using a mechanical offloader include:
 - *Silt curtain.* A silt curtain could be deployed around the discharge area, creating a physical barrier that contains the suspended sediments and allows them to settle out.
 - *Gunderboom.* A gunderboom is similar to the silt curtain; however, it is made of a permeable material. It filters out the sediment and allows the water to pass through. It also extends all the way from the water surface to the sediment where the silt curtain only extends partially down the water column.
- Specific site containment BMPs if using a hydraulic offloader include:
 - *Install an overflow weir.* Include a weir system designed to maximize the settlement of fine material into the fill and minimize the amount of sediment that escapes in the return water. The specific design of the weir will vary with the fill geometry and fill height.
 - *Silt curtain.* When the dike is completed to full height, with a temporary drainage weir, a filter fabric barrier or continuous floating silt curtain should be install across, or just outside of, the weir outflow point to prevent the passage of suspended sediments out into the adjacent water area, if necessary.
 - *Dredging (sweeping) outside of discharge point or weir at the end of fill operations.* Include an additional final dredge pass over the area immediately adjacent to the containment berm in order to remove any escaped dredged material and place it back within the fill. This determination would be subject to results of observations via surveys and on water quality monitoring during the filling process.

Wharf Demolition/Construction Best Management Practices

- Demolition debris will be removed from waters of the state/United States daily and stockpiled until disposal.
- A solid debris or silt curtain will be maintained in place during demolition activities and slope stabilization activities to isolate the active construction area from the surrounding waters.

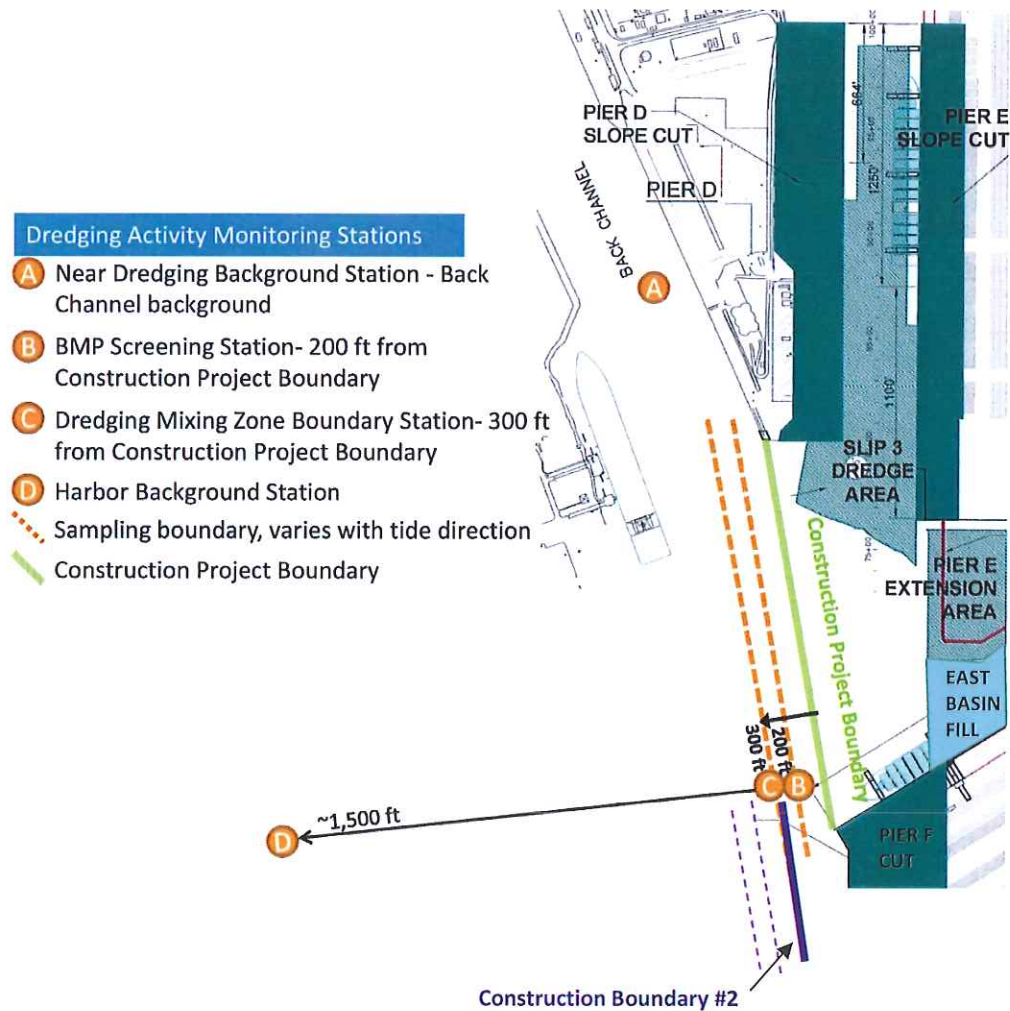
5 WATER QUALITY MONITORING APPROACH

The Port has designated construction project boundaries that define the area in which temporary water quality impacts may occur (Figure A-1). In the later stages of the Middle Harbor project, a portion of Pier F will be cut/excavated to remove a small land area needed for final wharf configuration. Since this activity is very close to the existing project construction boundary, the Port proposes to add a second project construction boundary that will be used for compliance during the

Pier F cut activities. Construction project boundary #2 will be located 300 feet from the Pier F cut area (figure below). Monitoring stations will be located the same distances, as described below, from construction project boundary #2. BMPs will be used as needed to limit the escape of suspended particulates beyond the mixing zone boundary, located 300 feet beyond the construction project boundary. Water quality monitoring will be conducted at four locations (Stations A, B, C, and D) during each sampling event, as described below:

Station	Description
A	1,000 feet up-current (on a flooding tide) of the designated construction project boundary. This station defines the near-dredging background and is used to determine whether water quality impacts are related to dredging activities or an up current source.
B	200 feet beyond the designated construction project boundary. This station represents an early-warning screening station to determine if Best Management Practices may need to be implemented.
C	300 feet from the designated construction project boundary. This station defines the dredging mixing zone boundary, beyond which temporary water quality impacts related to dredging activities are not to occur.
D	Control site (area not affected by dredging operations) located 1,500 feet from the construction project boundary. This station defines the harbor background and provides a baseline for comparison to determine if temporary water quality impacts are present at Station C.

Figure A-1. Construction Project Boundaries for Middle Harbor Water Quality Monitoring



For dredging activities that are not located within or adjacent to the Middle Harbor project site (e.g. Project borrow sites), the Port will base the water monitoring station locations off of the dredge operations, safety permitting.

WATER QUALITY MONITORING PROCEDURES

Water quality monitoring will be conducted at least once a week during dredging operations, beginning 1 week prior to dredging and ending 1 week after dredging is complete. Figure A-2 describes the field monitoring program. Water quality conditions will be measured at each station at the three monitoring depths:

- Near surface: 3 feet below the water surface
- Mid-water: 6-foot increments averaged throughout the water column, between the near

surface and bottom

- Bottom: 3 feet above the sediment surface

In the event that light transmittance at Station B is at least 30% lower than that measured at Stations A and D, indicating that elevated suspended particulates in the area may be due to dredging activities, the dredge contractor will be notified immediately and Best Management Practices (BMPs) to improve water quality will be implemented. Sampling at Station C will resume within 2 hours of the BMP implementation.

If light transmittance at Station C is at least 30% lower than Station D (for the near surface or mid-water or bottom), the Port shall notify the contractor and implement additional BMPs. Station C shall be resampled after BMPs have been in place for at least two hours. If after resampling, light transmittance values still exceed the 30% trigger, then water samples shall be collected from mid-depth (or the depth at which the maximum turbidity occurs) and analyzed for trace metals, DDTs, polychlorinated biphenyls (PCBs), and polycyclic aromatic hydrocarbons (PAHs). The Port shall conduct light transmittance monitoring described above daily until two consecutive days with no exceedances have been demonstrated. A maximum of one chemistry sample will be collected each week (chemical analyses do not need to be performed on the second or third day following an exceedance). At a minimum, one set of water samples shall be collected and analyzed for these chemical constituents during the first month of the dredging operation, even if no exceedances of the light transmittance criteria occur.

The Port shall notify the Regional Board, the California Coastal Commission, the United States Environmental Protection Agency, and the United States Army Corps of Engineers within 24 hours following observance of a transmissivity exceedance. The Port shall investigate whether the exceedance is due to obvious dredging operational problems and can be corrected easily and quickly. However, if the turbidity problem persists or recurs, the Port shall look for other causes of the problem and evaluate whether additional, more aggressive best management practices are required to eliminate the exceedances; this evaluation shall be performed in consultation with the four regulatory agencies listed above.

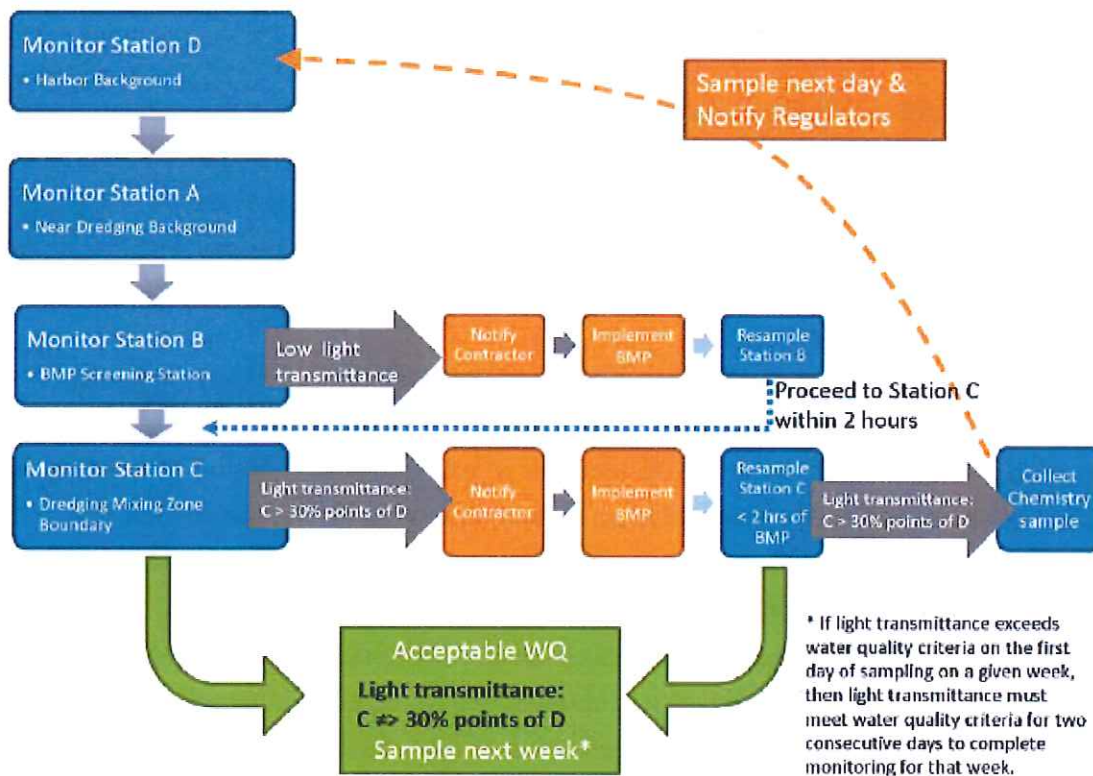


Figure A-2. Water Quality Monitoring Program During Dredging Activities

Water Quality Measurements

Water quality will be monitored for light transmittance, dissolved oxygen (DO), pH, and total suspended solids (TSS). In general, water quality parameters will be collected with field probes to monitor short-term water quality impacts from dredging activities. Monitoring equipment will include light transmittance, DO, and pH probes. Field probes will provide “real-time” monitoring data where the results can be evaluated during dredging activities. A grab sample from the mid-water depth will be collected and analyzed for TSS. Table A-1 lists specific criteria for water quality monitoring. Additional water chemistry grab samples may be collected as required based on the presence of decreased light transmittance. Equipment will be maintained in good-working order and in safe working condition at all times. Survey equipment will be maintained and calibrated in accordance with manufacturer specifications.

Table A-1
Water Quality Monitoring

Parameter	Units	Station	Frequency
Light transmittance ¹	% transmittance	A through D	Bi-weekly for first two weeks of dredging then weekly
DO ¹	mg/L		
pH ¹	pH units		
TSS	mg/L		
Water chemistry: metals, DDTs, PCBs, and PAHs	µg/L or ng/L	C	At least once during program or as required with decreased light transmittance at Station C

Notes:

- 1 Measurements shall be taken throughout the water column (at minimum, 2-meter increments).
- µg/L = microgram per liter
 mg/L = milligram per liter
 ng/L = nanogram per liter
 PAH = polycyclic aromatic hydrocarbon
 PCB = polychlorinated biphenyl

Visual observations and relevant information will be recorded and photographed in the field, including:

- Field observations during sample collection, such as date, time, weather conditions, and tide
- Evidence of floatable and suspended materials, such as trash, oily slick, and grease
- Evidence of discoloration and turbidity, such as description of color, source, and size of affected area
- Evidence of odors

Water Quality Criteria for Dredging Activities

Water column light transmittance at each of the three depth intervals at Station C will be compared to the same depth interval at Station D. Values at Station C that are at least 30 percentage points less than at Station D at any of the three depth intervals would be an indication that water quality may be temporarily impacted by dredging activities. Dredging-related BMPs will be employed as needed (see next section). If BMPs are not able to reduce turbidity after 2 hours, a water chemistry grab sample will be collected at Station C. The water chemistry grab sample will be collected at the depth with the least light transmittance (i.e., greatest turbidity) and will be analyzed for trace metals, DDTs, PCBs, and PAHs. If light transmittance exceeds water quality criteria on the first day of sampling on a given week, then light transmittance must meet water quality criteria for two consecutive days to complete monitoring for that week, as described in Figure A-2.

1.1 Potential Project Best Management Practices

BMPs will be implemented to minimize potential water quality impacts if elevated turbidity (i.e., light transmittance at least 30 percentage points lower than the harbor background) is observed at Station B. Dredging related BMPs are summarized in Section 4.

1.2 Executive Officer Oversight

The Executive Officer of the Regional Water Quality Control Board (RWQCB) has the authority to amend the sampling procedures should the available information support the changes that will add efficiencies to the water quality sampling program. If the results of three consecutive water chemistry samples demonstrate that there are no contaminants of concern associated with the increased turbidity, then further chemistry sampling may not be required at the discretion of the Executive Officer. In addition, if the decreased light transmittance at Station C appears to be due to other, non-dredge related activities, then further chemistry sampling may not be required at the discretion of the Executive Officer.

1.3 Reporting and Record Keeping

Monitoring reports will be submitted to the Regional Water Quality Control Board within 10 business days following each weekly sampling period or receipt of water chemistry, when conducted. Reports will be posted to the RWQCB Geotracker database system. The Port or its contractor will maintain daily records of all water quality monitoring results. In addition, the Port or its contractor shall maintain information for equipment used, including calibration and maintenance records.

Appendix A: Figures

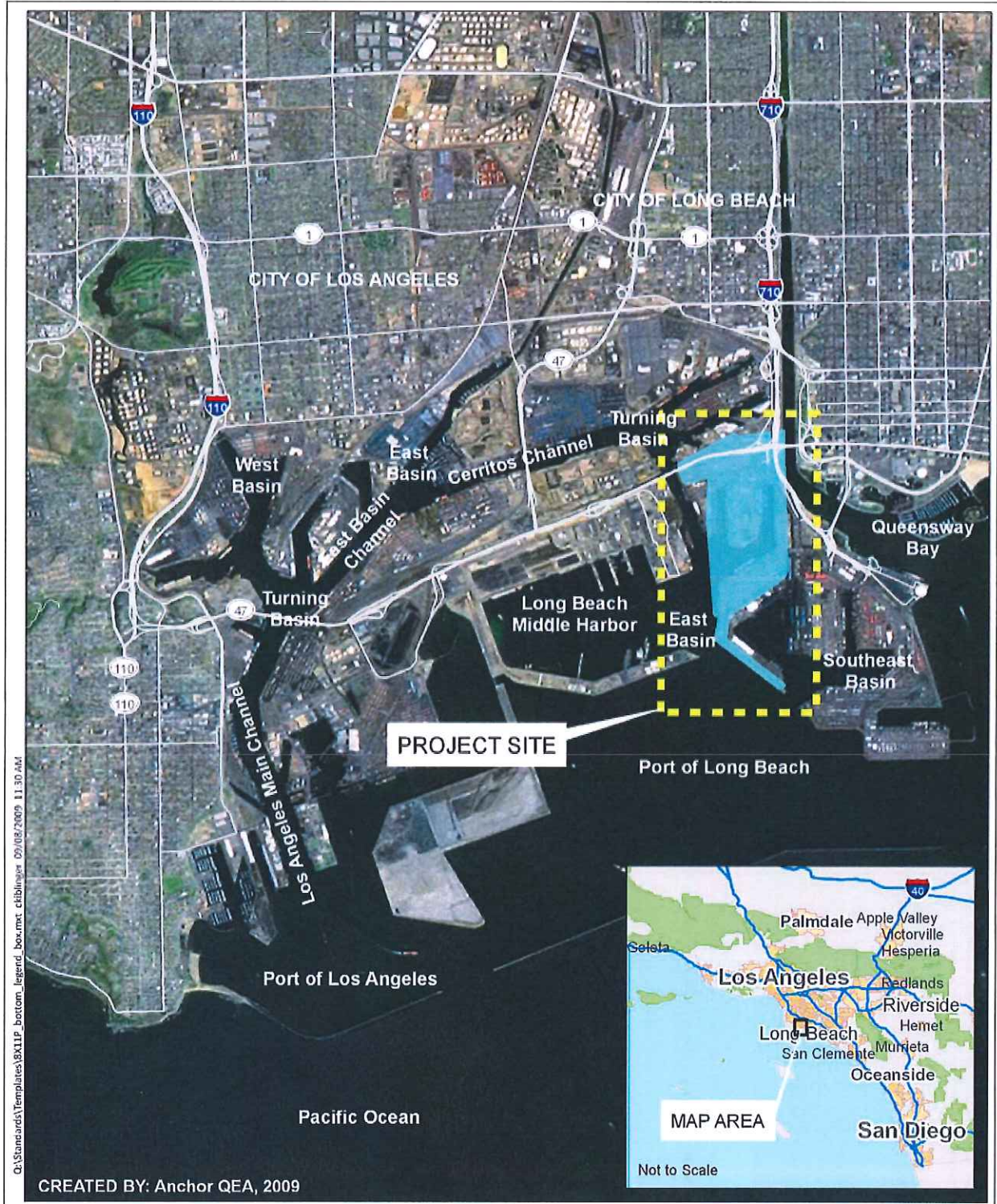
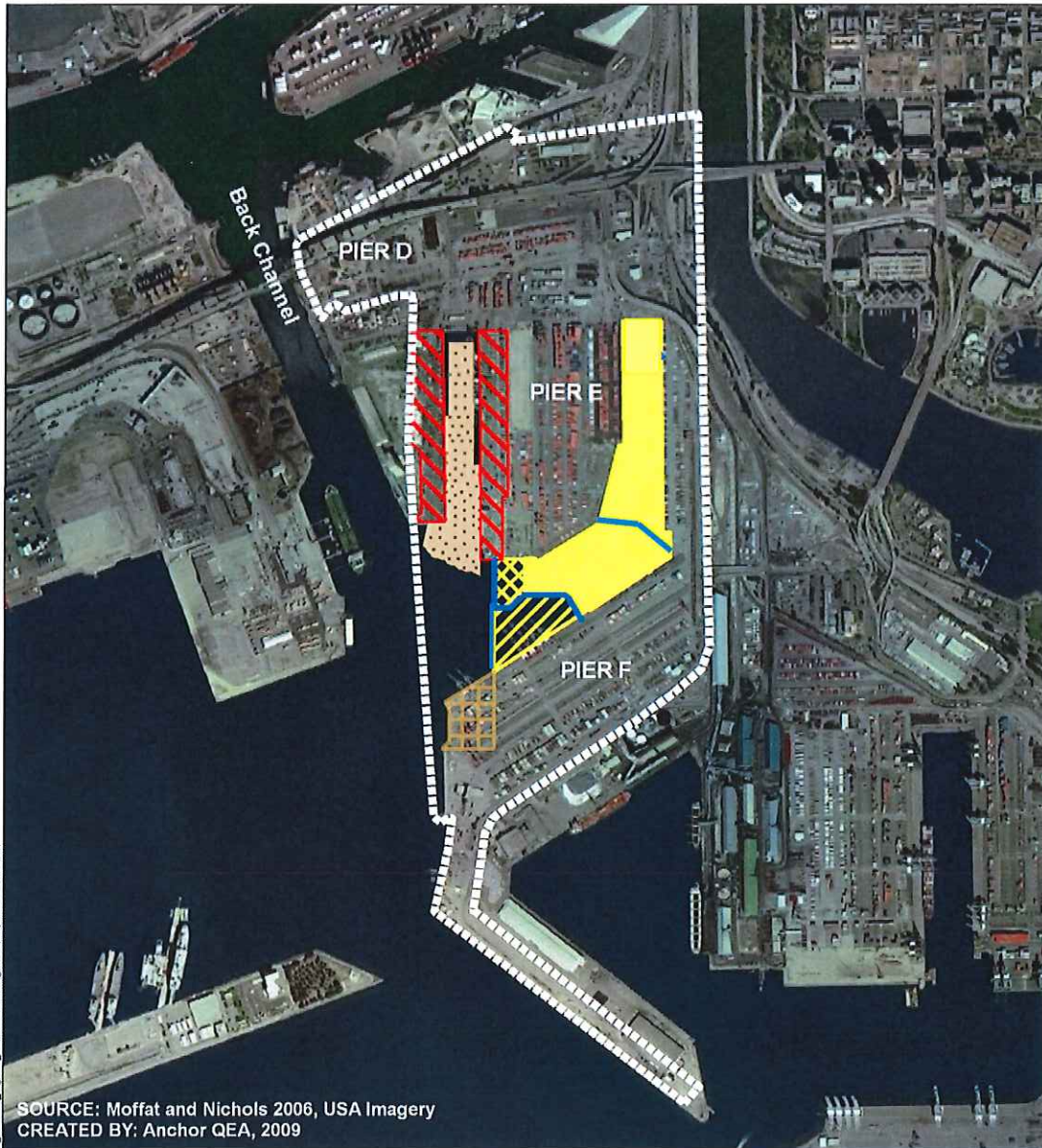


Figure 1. Site Location



SOURCE: Moffat and Nichols 2006, USA Imagery
 CREATED BY: Anchor QEA, 2009

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LEGEND







-  Project Boundary
-  Rock Dike
-  Slip 1 Fill Area
-  East Basin Fill
-  Pier E Extension Area
-  Pier F Cut Area
-  Slip 3 Dredging Area
-  Piers E and D Construction Area

Figure 2 Construction Elements, Cut & Fill

