

MIDDLE HARBOR REDEVELOPMENT: REGIONAL BENEFICIAL USE OF CONTAMINATED SEDIMENTS



Port of
LONG BEACH
The Green Port



WEDA Meeting
October 29, 2010

Existing Middle Harbor Terminals



- Pier E: 170-acre break-bulk/container terminal at Piers D and E on the north
- Pier F: 101-acre container terminal at Pier F on the south

Proposed Middle Harbor Terminals



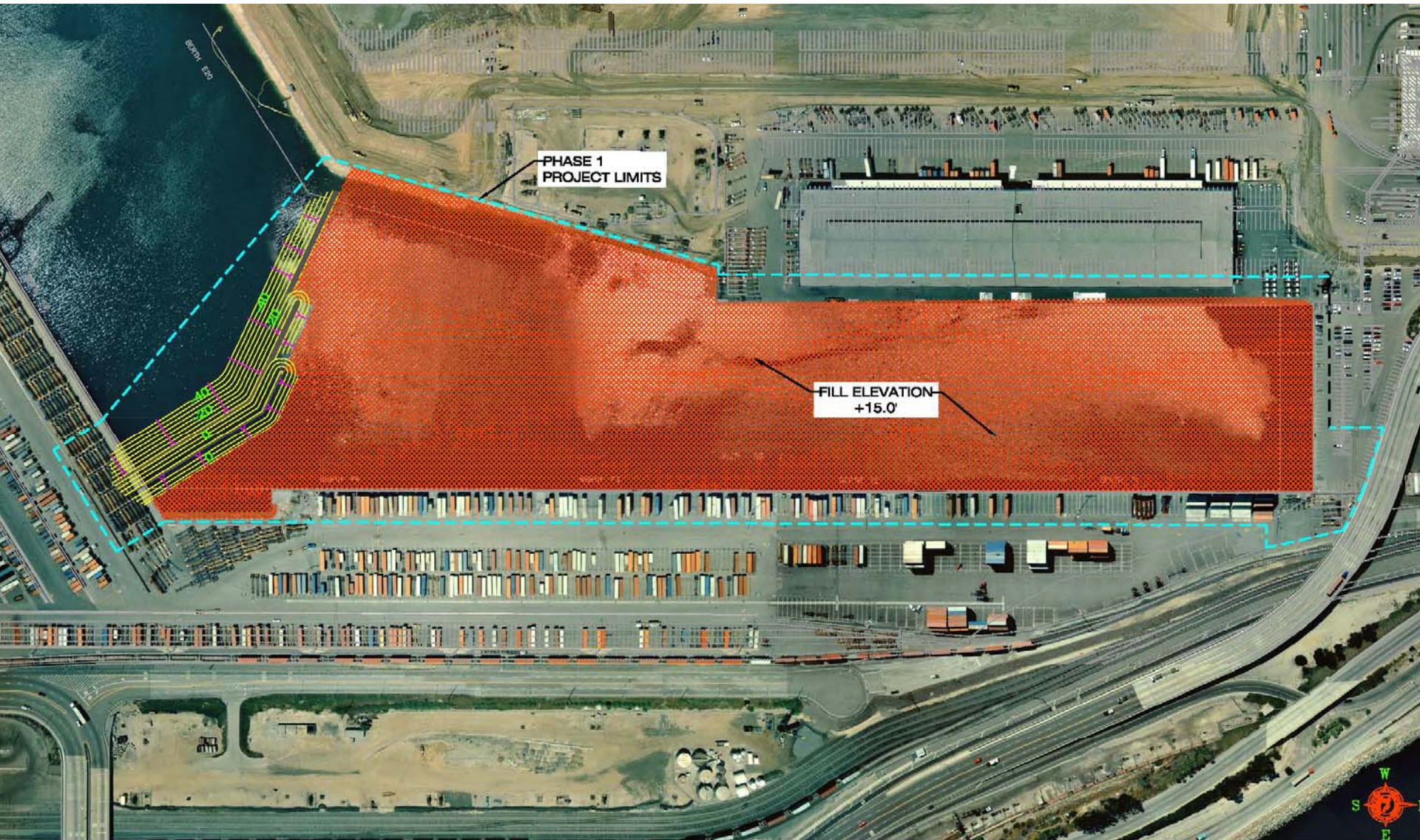
- \$750 million construction cost
- Consolidate two older facilities into one efficient, 345-acre rectangular-shaped terminal
- Construction will occur in two phases, each with multiple stages, over a 10-year period

Middle Harbor Fill Site

- Fill Pier E Extension, and portion of Slip 1
- Complete fill of Slip 1 and portion of East Basin
- Connect Pier E terminal to Pier F terminal with a fill



Phased Fill- Phase 1



Phased Fill- Phase 2



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- Require approximately 5,400,000 cy of fill material
- Project will generate 2,200,000 cy
- Fills will accommodate an additional 3,200,000 cy from other Port and outside sources
- Phase I can accommodate up to 2,000,000 cy of third-party material

Project Timing

- Phase I fill has begun with material from LARE (USACE) and Rainbow Harbor (City of Long Beach)
- Rock dike could start in July 2011
- Fill site will start accepting material in July 2011
- Surcharge to be placed at end of 2012
- Complete Phase 1 First Quarter 2013

Preparing for Third Parties

- Sediment management plan
 - Illustrates decision process for prioritizing and acceptance of third-party material
- MOA template
- Project specific fill plan template
- Presented the opportunity at multiple CSTF meetings and WEDA 2010




Geographic Prioritization

1. Middle Harbor Project
2. Other POLB dredging projects
3. City of Long Beach dredging projects
4. POLA remedial dredging projects
5. Western Anchorage Sediment Storage
6. Los Angeles County dredging projects
7. Outside Los Angeles County dredging projects
8. Sand borrow from within the Port of Long Beach

Application process

- Solicited applications (May -Jun)
- Evaluated and ranked applications (July – Oct)
- Present applications to CSTF (Nov 17)
- Port will finalize decision (Dec)
- Prepare fill plans (Dec – Jan)
- Execute MOAs (> Feb 2011)

Print Form

 Port of
LONG BEACH
The Green Port
Tel: (562) 590-4160 Fax: (562) 901-1728

FOR OFFICIAL USE ONLY
Date Received: _____
Application Number: _____

**Application for Placement of Dredge Material
Port of Long Beach Middle Harbor Fill Site**

Please Print or Type All Responses

1. APPLICANT INFORMATION

Applicant Name: _____
Mailing Address: _____
City: _____ State: _____ Zip: _____
Contact Person: _____ Phone: _____
Fax: _____ Email Address: _____

2. REPRESENTATIVE INFORMATION (if applicable)

Authorized Agent's Name/Title: _____
Organization: _____
Mailing Address: _____ City: _____
State: _____ Zip: _____ Phone: _____ Email Address: _____

Who should receive correspondence relevant to this application? ☐ Applicant ☐ Representative ☐ Both

I hereby authorize the above named agent to act as my representative and bind me in all matters concerning this application.

Signature of Applicant Date

3. GENERAL PROJECT INFORMATION

Project Name or Title: _____

Type of Dredging Project: ☐ Maintenance ☐ New Work ☐ Remediation Dredging

Timing of Project: ☐ Single Episode ☐ Multi-Episode

Has the project been designed to a minimum of 30% engineered design? Yes ☐ No ☐

Month and Year Dredging is Proposed to Begin: _____

Estimated Completion Date: _____

POLB Middle Harbor Fill Site Application
5/2010

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Applications Received

Applicant	Project Name	Est. Volume (cubic yards)
Eagle Rock Aggregates	Long Beach Berth D44 Redevelopment Project Dredging	6,000
City of Long Beach	Alamitos Bay Marina	41,000
City of Long Beach	Colorado Lagoon Restoration Project	72,000
City of Los Angeles	Machado Lake Ecosystem Rehabilitation Project	187,000
City of Newport Beach	Rhine Channel Contaminated Sediment Cleanup	150,000
City of Newport Beach	Lower Newport Bay Maintenance Dredging	700,000
County of Los Angeles	Marina del Rey Maintenance Dredging	571,000
Port of Los Angeles	Anchorage Road Soil Storage Site Removal	1,000,000
Port of Los Angeles	Berth 240 Slip Remediation Dredging Project	235,000
Port of Los Angeles	Consolidated Slip Remediation Project	500,000
Port of Los Angeles	Main Channel Deepening Project	630,000
TOTAL		4,092,000

Application Review Process

- Determined environmental suitability
- Determined geotechnical suitability
- Applicants were provided an opportunity to
 - submit additional information
 - revise project volumes/plans to eliminate hazardous material
- Developed a tentative fill plan to accommodate the greatest number of projects
- Ensured geographic prioritization met

Environmental criteria

- No material at hazardous waste levels (CFR 40) in previous investigations
- No material with land use restrictions or other requirements imposed by regulatory agencies

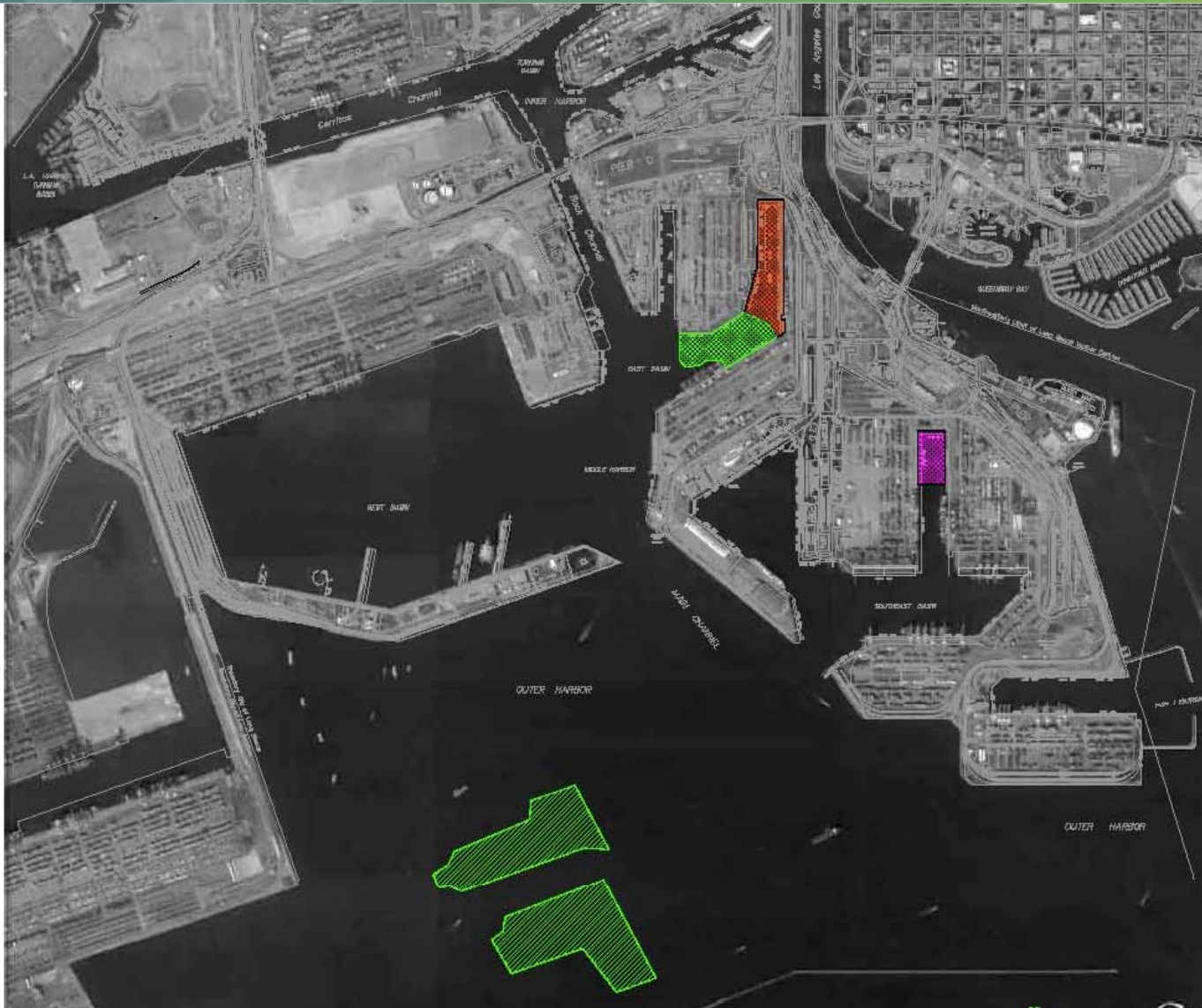
Geotechnical criteria

- Short and long term settlement
- Seismic performance
- Bearing capacity for container stacks

Geotechnical criteria



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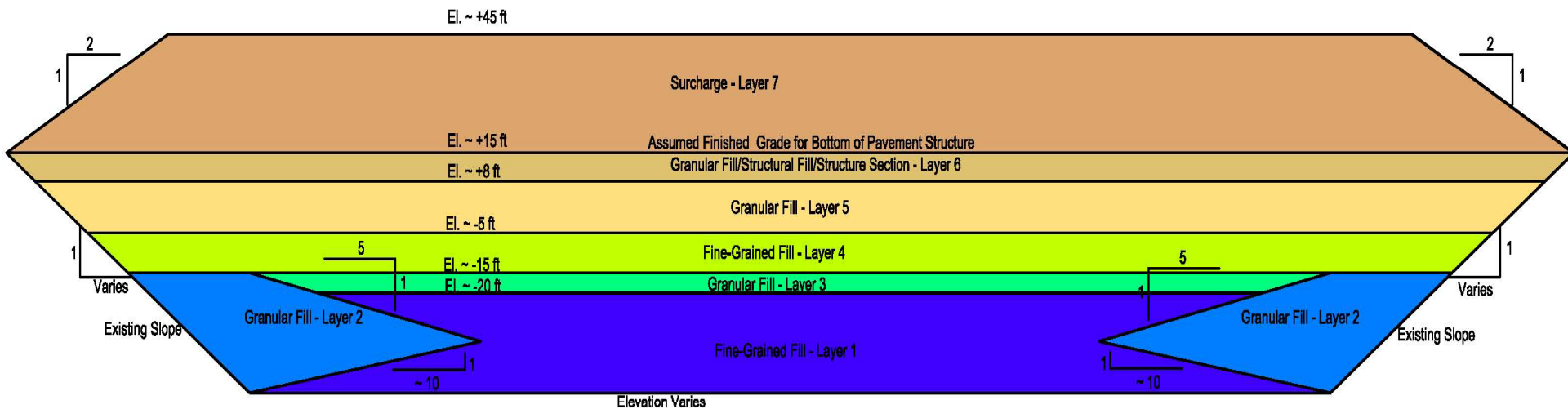
Optimizing the Fill Plan

- General philosophy:
 - Silts, clays and compressible soils lower in fill
 - Separate larger layers of silts/clays with sand for drainage
 - Provide a non-compressible area above existing rock slopes
 - Surcharge and wick drains for settlement management








Fill Plan (E-W Section)



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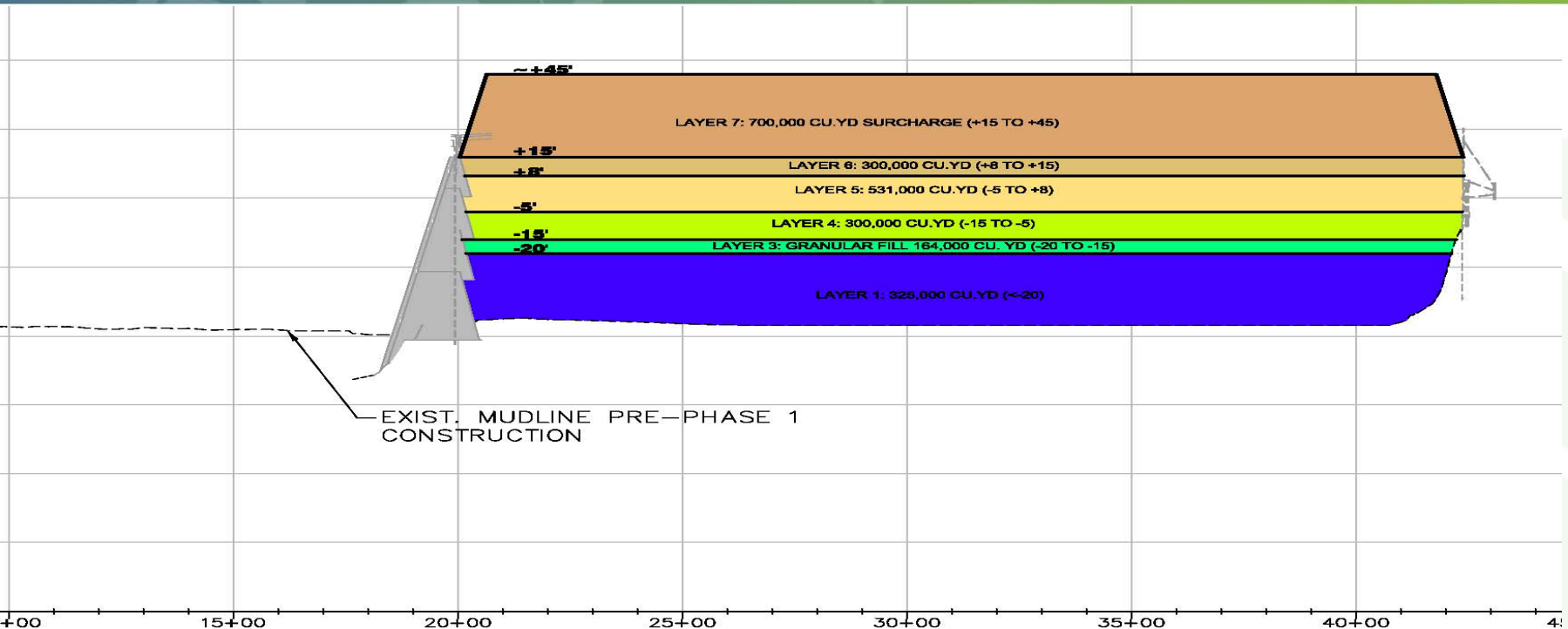
VOLUME

	LAYER 1: 325,000 CU.YD (<-20)
	LAYER 2: 100,000 CU. YD (<-20 GRANULAR BERM)
	LAYER 3: GRANULAR FILL 164,000 CU. YD (-20 TO -15)
	LAYER 4: 300,000 CU.YD (-15 TO -5)
	LAYER 5: 531,000 CU.YD (-5 TO 8)
	LAYER 6: 300,000 CU.YD (+8 TO +15)
	LAYER 7: 700,000 CU.YD SURCHARGE (+15 TO +45)







Fill Plan- N-S Section



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LEGEND

	LAYER 1: 325,000 CU.YD (<-20)
	LAYER 3: GRANULAR FILL 164,000 CU. YD (-20 TO -15)
	LAYER 4: 300,000 CU.YD (-15 TO -5)
	LAYER 5: 531,000 CU.YD (-5 TO +8)
	LAYER 6: 300,000 CU.YD (+8 TO +15)
	LAYER 7: 700,000 CU.YD SURCHARGE (+15 TO +45)

Tentative Fill Plan: Phase 1

Approximate Elevation (ft)	Fill Layer	Tentative Projects for Each Layer	Estimated Source Volume (cy)	Estimated Total Volume (cy)	Tentative Timing of Fill Availability
(+15 to +45)	7	Borrow Site	500,000	700,000	After Dec 2012
		Storage Site	200,000		
(+8 to +15)	6	Storage Site	300,000	300,000	Sept to Dec 2012
(-5 to +8)	5	LA County, Marina del Rey, Areas 1-6	116,000	531,000	May to Aug 2012
		LA County, Marina del Rey, Areas 7-9	108,000		
		China Shipping Surcharge	307,000		
(-15 to -5)	4	Eagle Rock Aggregate, Port of Long Beach	6,000	300,000	Jan to Apr 2012
		Port of Long Beach Projects	100,000		
		Colorado Lagoon	70,000		
		City of Long Beach Alamitos Bay	41,000		
		LA County, Marina del Rey, Areas 7-9	83,000		
(-20 to -15) Granular Layer	3	LA County, Marina del Rey, Areas 1-6	164,000	164,000	June to Dec 2011
(<-20) Berm	2	LA County, Marina del Rey, Areas 7-9	100,000	100,000	June to Dec 2011
(<-20')	1	City of Newport Beach, Rhine Channel	150,000	325,000	May to Aug 2011
		USACE LARE and City of Long Beach Rainbow	175,000		Sept to Dec 2010

Benefiting the Region

- Priority given to projects that
 - Have material not suitable for unconfined disposal
 - Do not have a permitted placement site
- Tentative fill plan was created to provide the most optimal use of Third party materials
- If all projects are able to meet the proposed schedule, 1.7 million cy of material will be removed from the marine environment and beneficially used

Next Steps

- CSTF to review and comment on process and tentative fill plan
- Port and applicant to develop project fill plans and formalize schedule
- Port will ensure insurance, licenses, & agreements (MOA) are in place
- Port will ensure dredging related permits are progressing to meet schedule

Port Contacts



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