(310) 305-9503 ✦ 13837 Fiji Way, Marina del Rey, CA 90292 ✦ beaches.lacounty.gov

Caring for Your Coast

Gary Jones
Acting Director

Kerry Silverstrom
Chief Deputy

John Kelly
Deputy Director

SMALL CRAFT HARBOR COMMISSION
AGENDA
December 11, 2013
10:00 A.M.

BURTON W. CHACE PARK COMMUNITY ROOM
13650 MINDANAO WAY
MARINA DEL REY, CA 90292

Audio

1. **CALL TO ORDER AND PLEDGE OF ALLEGIANCE**

2. **APPROVAL OF MINUTES**

   Small Craft Harbor Commission Meeting of September 11, 2013

3. **COMMUNICATION FROM THE PUBLIC**

   This is the opportunity for members of the public to address the Commission on items that are not on the posted agenda, provided that the subject matter is within the jurisdiction of the Commission. Speakers are reminded of the three-minute time limitation.

4. **COMMUNICATION WITH THE COMMISSIONERS**

   This is the opportunity for members of the Commission to provide notification to the public regarding any communication received by the Commissioners from the public, lessees, or other interested parties regarding business of Marina del Rey.

5. **REGULAR REPORTS**

   a. Marina Sheriff (DISCUSS REPORTS)
   - Crime Statistics (September, October & November 2013)
   - Enforcement of Seaworthy & Liveaboard
   - Sections of the Harbor Ordinance with Liveaboard Permit Percentages (September, October & November 2013)

   b. Marina del Rey and Beach Special Events (DISCUSS REPORT)
   c. Marina Boating Section Report (PRESENTATION)
   d. Marina del Rey Convention and Visitors Bureau (PRESENTATION)

6. **OLD BUSINESS**

   a. None

7. **NEW BUSINESS**

a.	Marina del Rey Total Maximum Daily Load	(DISCUSS REPORT)
b.	Strategic Plan for Boating Resources in Marina del Rey	(DISCUSS REPORT)
c.	U.S. Coast Guard Proposal to Discontinue Certain Aids to Navigation Lights	(DISCUSS REPORT)
d.	Proposed 2014 Commission Meeting Schedule	(APPROVAL REQUIRED)

8. **STAFF REPORTS**

Ongoing Activities (DISCUSS REPORTS)

- Board Actions on Items Relating to Marina del Rey
- Regional Planning Commission's Calendar
- California Coastal Commission Calendar
- Venice Pumping Plant Dual Force Main Project Update
- Redevelopment Project Status Report
- Design Control Board Minutes
- Marina Slip Report
- Coastal Commission Slip Report
- Department of Regional Planning Visioning Process
- Fisherman's Village (Parcel 56)

9. **ADJOURNMENT**

PLEASE NOTE

1. The Los Angeles County Board of Supervisors adopted Chapter 2.160 of the Los Angeles Code (Ord. 93-0031 ~ 2 (part), 1993, relating to lobbyists. Any person who seeks support or endorsement from the Small Craft Harbor Commission on any official action must certify that he/she is familiar with the requirements of this ordinance. A copy of the ordinance can be provided prior to the meeting and certification is to be made before or at the meeting.

2. The agenda will be posted on the internet and displayed at the following locations at least 72 Hours preceding the meeting date:

   Department of Beaches and Harbors Website Address: http://marinadelrey.lacounty.gov

   Department of Beaches and Harbors
   Administration Building
   13837 Fiji Way
   Marina del Rey, CA 90292

   MdR Visitors & Information Center
   4701 Admiralty Way
   Marina del Rey, CA 90292

   Burton Chace Park Community Room
   13650 Mindanao Way
   Marina del Rey, CA 90292

   Lloyd Taber-Marina del Rey Library
   4533 Admiralty Way
   Marina del Rey, CA 90292

3. The entire agenda package and any meeting related writings or documents provided to a Majority of the Commissioners (Board members) after distribution of the agenda package, unless exempt from disclosure Pursuant to California Law, are available at the Department of Beaches and Harbors and at http://marinadelrey.lacounty.gov

Si necesita asistencia para interpreter esta informacion llame al (310) 305-9503.

ADA ACCOMODATIONS: If you require reasonable accommodations or auxiliary aids and services such as material in alternate format or a sign language interpreter, please contact the ADA (Americans with Disabilities Act) Coordinator at (310) 305-9590 (Voice) or (310) 821-1734 (TDD).

SMALL CRAFT HARBOR COMMISSION MINUTES
September 11, 2013 – 10:07 a.m.

Commissioners: Allyn Rifkin, Chair; David Lumian, Vice Chair: Dennis Alfieri, Commissioner; Russ Lesser, Commissioner; Vanessa Delgado, Commissioner

Department of Beaches and Harbors: Gary Jones, Acting Director; Steve Penn, Chief, Asset Management Division; Matthew Kot, Lease Specialist, Asset Management Division; Carol Baker, Chief, Community and Marketing Services Division; Debra Talbot, Manager, Stephanie Gomez, Dockmaster Community and Marketing Services Division.

County: Amy Caves, Senior Deputy County Counsel; Captain Reginald Gautt, Sergeant Anthony Easter.

Chair Rifkin called the meeting to order at 10:07 a.m. and asked that there be a moment of silence for commemorating the victims of 9/11 followed by the Pledge of Allegiance.

Approval of Minutes: Motion to approve by Commissioner Lesser, seconded by Commissioner Lumian, unanimously approved.

Chair Rifkin read the commission policy on public comments.

Item 3 – Communication from the Public:
John Rizzo commented about the empty Bar Harbor restaurant and the building at Bali Way and Lincoln Blvd.

Jon Nahhas commented on the District Attorney's finding of the Brown Act violation and requested the Commission follow-up action. He also commented on the usage of the public promenade and requested staff provide a report on the status of the waterbus program, Boathouse construction, lease extension fees, and ACO Fund. Mr. Nahhas further commented on the high vacancy rates in the marina.

Commissioner Lesser responded that the high vacancy rate was due to the replacement of several anchorages.

Item 4 – Communication with the Commissioners
Chair Rifkin announced the forthcoming joint meeting on the evening of October 30th with the Design Control Board (DCB) on the visioning process. He also mentioned there were articles in the local newspapers about City Councilman Bonin's motion to change the name of the Marina Freeway to Ballona Freeway, and suggested that this be a future item for discussion.

Commissioner Lumian reported he had had communication with Aaron Clark about the resolution passed at last month's meeting regarding Fisherman's Village. He stated that Mr. Clark requested a letter be written to the Department of Regional Planning (DRP).

Commissioner Lesser reported he had also had communication with Mr. Clark about connecting the owner and developer of Shade Hotel in Manhattan Beach, to discuss the boutique hotel project, with Michael Pashaie.

Item 5a – Marina Sheriff
Sergeant Easter presented both the Liveaboard and Crime Stats report. He stated crimes of opportunity are still an issue.

Chair Rifkin disclosed he had read an LA Times article featuring a Misty Tosh who has completed improvements to her houseboat and wanted the sheriff to be aware of these types of innovative activities.

Commissioner Lesser asked if there is a policy on floating homes.

Mr. Jones responded that there is a policy but the existing floating homes are “grandfathered in”.

Item 5b – Marina del Rey and Beach Special Events
Carol Baker noted that the summer concert series is coming to an end with about 6,000 concert goers, the Beach Shuttles were popular and were featured in Let’s Go LA. The Farmers Market will continue as a year-around event. She reported planning for next summer has started.

Item 5c – Marina Boating Section Report
Debbie Talbot stated the month of September marked the one year anniversary of the Boating Section and introduced Stephanie Gomez who is the marina manager and dockmaster. She thanked and acknowledged Ms. Gomez for her hard work and commitment. Ms. Talbot provided an update on Water Bus ridership. In looking ahead to the 2014 Water Bus season she has requested two additional pick-up locations, two vessels, and to extend service until the end of October. She reported dock construction has begun at Burton Chace Park, and pile driving is commencing this week at the Marina City Club. She provided information on upcoming events: Discover Marina del Rey, ASMBYC Champion of Champion Regatta, final Sunset Race, Kayak cleanup day, and the 51st Holiday Boat Parade on December 14, 2013.

Chair Rifkin thanked Ms. Talbot for her service.

Commissioner Lumian asked about changing the annual schedule of the Discover Marina del Rey.

Ms. Baker responded there was a lot of support to keep it in October.

Item 6a – Status Update – Fisherman’s Village (Parcel 56)
Mr. Aaron Clark asked if the Commission would be willing to put in writing to the Regional Planning Commission (RPC) their support of moving forward with the Fisherman’s Village project.

Chair Rifkin asked Mr. Jones to provide an update on the item and congratulated him on his new role.

Mr. Jones stated that the Commission requested this item stay on the agenda. The department is still collaborating with DRP on the visioning process. There are no updates since the July meeting. If the Commission requests, staff will draft a letter to DRP on its behalf.

The SCHC Chair Rifkin asked Commissioners if they would like to have staff prepare a letter to DRP stating they would like to expedite the review and approval.

Commissioner Lumian stated the Commission should support having the letter written, because at the August 14th meeting it unanimously voted for support of the presentation and for staff to move forward with the project as quickly as possible.

Commissioner Lesser stated Fisherman’s Village is in such a state of disrepair and should not be remodeled but rebuilt; he supports anything that would help fast track it. It was requested that staff provide a list of steps the project has to go through to get approval and start construction.

Mr. Jones responded a list of steps can be provided of what needs to be achieved prior to construction.

The Commission requested staff prepare a letter for the Chair’s signature to DRP in support of moving the Fisherman’s Village project forward.

Mr. Jones further clarified the letter would be in reference to the August 14th meeting, and that the Chair would sign the letter on the Commission’s behalf.

Item 7a – Decennial Rent Adjustment (Parcel 53)
John Rizzo expressed his concern on whether the County is getting a fair return on its land and wanted to know why the information is not provided on how much the land is worth, who is doing the study, what percentage would the County receive and what is being used as comparable.

Jon Nahhas asked if the staff report can be provided before public comments.

Chair Rifkin responded he will ask staff to provide a report, and check with the Commissioners afterwards on how they feel about having public comments after.

Mr. Jones provided context information on why it's being presented to the Commission and why this action is being recommended to go before the Board for approval. He presented the reason for the new rent methodologies and the current County practice.

Mr. Kot summarized the staff report and stated the main reason to amend the rent structure is to attract boat-sale operators to come back to the marina and create new businesses.

Chair Rifkin stated that since there was something new in the verbal report he is in favor of allowing Mr. Nahhas to speak.

Jon Nahhas commented on do-it-yourself boatyard. He also stated the lessee should not be getting a price reduction and that there is not enough information provided.

Greg Schem provided a response.

Commissioner Lesser asked staff to explain "Office rental or occupancy use for the displace sell of boats 16 percent", he wanted to know 16 percent of what.

Mr. Jones responded that 16 percent of the rent the lessee collects from the sub-tenant.

Commissioner Lesser inquired about the percentage charged for boat hauling, boat repairs, fuel and petroleum sale.

Mr. Kot responded that the increase and decrease is about 1%.

Commissioner Lumian noted he welcomes making Marina del Ray more hospitable to boat serving businesses and inquired if this policy will be extended to other anchorages and to other kinds of business.

Mr. Jones responded it will and that it has already been incorporated into recent transactions that have been approved.

Commissioner Lumian asked about other types of business this would affect, including sailing schools and yachts clubs.

Mr. Jones responded that certain retail operators, boat brokerages, sailing schools and yachts clubs.

Mr. Kot clarified that boat hauling is going from 5% to 4%, repairs from 5% to 4%, and fuel and petroleum from 5% to 6%.

Commissioner Delgado clarified this was percentage rent and there would be no comparable to other marinas because this is County negotiated.

Chair Rifkin ask for a motion to approve. **Moved by Commissioner Lumain to approve the Decennial Rent Adjustment for Parcel 53; seconded by Commissioner Delgaldo; unanimously approved.**

Item 7b – Announcement of New Acting Director and Review of Departmental Priorities
Jon Nahhas requested to hear the staff report before public comments.

Chair Rifkin asked Mr. Nahhas to make his comments before the staff presentation.

Jon Nahhas commented on the new appointment.

Chair Rifkin stated that after hearing Mr. Nahhas' testimony he agreed with having public comment after the staff report.

Commissioner Lumian agreed.

Chair Rifkin confirmed going forward staff would provide the report before public comments.

Mr. Jones announced that at its August 20th meeting, the Board of Supervisors appointed him as the Acting Director. Mr. Jones outlined his priorities such as maintaining momentum on redevelopment in the Marina, docks replacements and projects to improve Marina Beach, Burton Chace Park, the Visitors Center, the completion of the Boathouse, continuing improvements and enhancement on visitors programs. He would like to continue promoting and increasing DBH's presence in the communities in which it serves. Recently the department implemented a new logo and soon to follow is a tag line commemorating the 50th anniversary of MdR. To follow is a revamped web page, creating ways for the public to interact with the department in obtaining services in the Marina and beaches.

Jon Nahhas commented that recreational boating should be at the forefront and would like to see programming that brings back boating. He voiced his concern that the Marina would be walled off with proposed buildings such as Traders Joe's and West Marine. He requested that Mr. Jones make a commitment to not allow the walling off of the marina or Mother's Beach. He also stated that the Mother's Beach name should remain.

Commissioner Lesser congratulated Mr. Jones and stated he has done a great job and believe he will continue to do a fine job.

Commissioner Delgado stated she feels the same and stated that she would like to see programs for under-privileged children.

Commissioner Lumian congratulated Mr. Jones and stated that he is in support of his goals.

Chair Rifkin liked to welcome Mr. Jones on a more permanent base, and inquired if the logo can be shared with the Convention and Visitors Bureau.

Ms. Baker responded that the logo can be adjoined when an event is being co-sponsored. The Visitors Bureau logo is more of a branding logo and our logo is a department logo.

Chair Rifkin stated he is interested for future discussion having a branding logo for the marina.

Commissioner Alfieri congratulated Mr. Jones on his new position.

Item 8 – Staff Reports
Mr. Jones presented the staff reports and acknowledged the receipt of the documents that had been placed on the table for the Commissioners and staff.

Jon Nahhas commented about the displacement plan, that the plan should be made available to the Commission and the public before construction and before submitting it to the Coast Commission. He stated that Parcel 125 was in violation of the Coastal Development Plan (CDP).

Mr. Jones responded that the Marina City Club parcel did provide and received approval from the Coastal Commission of a transitional displacement plan prior to the start of construction. Parcel 8 was approved by the Coastal Commission earlier then the Master CDP, so there was no requirement imposed on this anchorage to provide a displacement plan. Mr. Jones reported that the department has not received any complaints from any boaters due to construction.

Commissioner Lesser asked if there has been complaints of not being able to get a slip.

Mr. Jones responded not as the result of the construction.

Commissioner Lesser noted small boaters should not have problem finding slips.

Mr. Jones stated as a condition of the Coastal Commission the department is required to provide slips for smaller boats if and when there is a time when no small slips are available.

Chair Rifkin made an announcement to remind everyone of the Joint Meeting of the Marina Design Control Board and Small Craft Harbor Commission on Wednesday, October 30, 2013 at 6:00 p.m.

Adjournment
Chair Rifkin adjourned the meeting at 11:47 a.m.

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT
MARINA DEL REY STATION
PART I CRIMES SEPTEMBER 2013

	West Marina 2760	East Marina 2761	Lost R.D. 2762	Marina Water 2763	Upper Ladera 2764	County Area 2765	Lower Ladera 2766	Windsor Hills 2767	View Park 2768	Parks 2791	**TOTALS**
Homicide											
Rape											
Robbery: Weapon								1			1
Robbery: Strong-Arm											
Aggravated Assault	1	1					1		4		7
Burglary: Residence	2			1	1		6	3	2		15
Burglary: Other Structure		1			1			1	1		4
Grand Theft	9	2					1	1	2		15
Grand Theft Auto	3				1		3	4	1		12
Arson											
Boat Theft				1							1
Vehicle Burglary		1				1	1	1	1	2	7
Boat Burglary											
Petty Theft	5	2		2	1	2	3	2		1	18
REPORTING DISTRICTS TOTALS	**20**	**7**		**4**	**4**	**3**	**15**	**13**	**11**	**3**	**80**

Note- The above numbers may change due to late reports and adjustments to previously reported crimes.

Source- LARCIS, **Date Prepared October 01, 2013**
CRIME INFORMATION REPORT - OPTION C

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT

MARINA DEL REY STATION

PART 2 CRIMES - SEPTEMBER 2013

Community Advisory Committee	Upper Ladera 2764	Lower Ladera 2766
Homicide		
Rape		
Robbery: Weapon		
Robbery: Strong-Arm		
Aggravated Assault		1
Burglary: Residence	1	6
Burglary: Other Structure	1	
Grand Theft		1
Grand Theft Auto	1	3
Arson		
Boat Theft		
Vehicle Burglary		1
Boat Burglary		
Petty Theft	1	3
Total	**4**	**15**

Note- The above numbers may change due to late reports and adjustments to previously reported crimes.

Source- LARCIS, **Date Prepared October 01, 2013**
CRIME INFORMATION REPORT - OPTION C

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT

MARINA DEL REY STATION

PART 3 CRIMES- SEPTEMBER 2013

Part I Crimes	MARINA AREA (RD'S 2760-2763)	EAST END (RD'S 2764-2768)
Homicide		
Rape		
Robbery: Weapon		1
Robbery: Strong-Arm		
Aggravated Assault	2	5
Burglary: Residence	3	12
Burglary: Other Structure	1	3
Grand Theft	11	4
Grand Theft Auto	3	9
Arson		
Boat Theft	1	
Vehicle Burglary	1	4
Boat Burglary		
Petty Theft	9	8
Total	**31**	**46**

Note- The above numbers may change due to late reports and adjustments to previously reported crimes.

Source- LARCIS, **Date Prepared – October 01, 2013**
CRIME INFORMATION REPORT - OPTION C

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT
MARINA DEL REY STATION
PART I CRIMES OCTOBER 2013

	West Marina 2760	East Marina 2761	Lost R.D. 2762	Marina Water 2763	Upper Ladera 2764	County Area 2765	Lower Ladera 2766	Windsor Hills 2767	View Park 2768	Parks 2791	**TOTALS**
Homicide											
Rape											
Robbery: Weapon											
Robbery: Strong-Arm	1	1									2
Aggravated Assault							1	1			2
Burglary: Residence	3				1		5	6	3		18
Burglary: Other Structure											
Grand Theft	7	4		2	1		1	1			16
Grand Theft Auto	1					1		2	1	1	6
Arson											
Boat Theft											
Vehicle Burglary	3						1	2	3		9
Boat Burglary				2							2
Petty Theft	13	5	1		1	2	4	1			27
REPORTING DISTRICTS TOTALS	**28**	**10**	**1**	**4**	**3**	**3**	**12**	**13**	**7**	**1**	**82**

Note- The above numbers may change due to late reports and adjustments to previously reported crimes.

Source- LARCIS, **Date Prepared November 05, 2013**
CRIME INFORMATION REPORT - OPTION C

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT

MARINA DEL REY STATION

PART 2 CRIMES - OCTOBER 2013

Community Advisory Committee	Upper Ladera 2764	Lower Ladera 2766
Homicide		
Rape		
Robbery: Weapon		
Robbery: Strong-Arm		
Aggravated Assault		1
Burglary: Residence	1	5
Burglary: Other Structure		
Grand Theft	1	1
Grand Theft Auto		
Arson		
Boat Theft		
Vehicle Burglary		1
Boat Burglary		
Petty Theft	1	4
Total	**3**	**12**

Note- The above numbers may change due to late reports and adjustments to previously reported crimes.

Source- LARCIS, **Date Prepared November 05, 2013**
CRIME INFORMATION REPORT - OPTION C

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT

MARINA DEL REY STATION

PART 3 CRIMES- OCTOBER 2013

Part I Crimes	MARINA AREA (RD'S 2760-2763)	EAST END (RD'S 2764-2768)
Homicide		
Rape		
Robbery: Weapon		
Robbery: Strong-Arm	2	
Aggravated Assault		2
Burglary: Residence	3	15
Burglary: Other Structure		
Grand Theft	13	3
Grand Theft Auto	1	4
Arson		
Boat Theft		
Vehicle Burglary	3	6
Boat Burglary	2	
Petty Theft	19	8
Total	**43**	**38**

Note- The above numbers may change due to late reports and adjustments to previously reported crimes.

Source- LARCIS, **Date Prepared – November 05, 2013**
CRIME INFORMATION REPORT - OPTION C

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT
MARINA DEL REY STATION
PART I CRIMES NOVEMBER 2013

	West Marina 2760	East Marina 2761	Lost R.D. 2762	Marina Water 2763	Upper Ladera 2764	County Area 2765	Lower Ladera 2766	Windsor Hills 2767	View Park 2768	Parks 2791	**TOTALS**
Homicide											
Rape											
Robbery: Weapon											
Robbery: Strong-Arm					1						1
Aggravated Assault								1	1		2
Burglary: Residence	3				4		4	8	3		22
Burglary: Other Structure		1					1	3	1		6
Grand Theft	5	1						3	2		11
Grand Theft Auto	1	2					1				4
Arson											
Boat Theft											
Vehicle Burglary	2	1						3	3		9
Boat Burglary	1			1							2
Petty Theft	4	3		1		2	4	2	3		19
REPORTING DISTRICTS TOTALS	**16**	**8**		**2**	**5**	**2**	**10**	**20**	**13**		**76**

Note- The above numbers may change due to late reports and adjustments to previously reported crimes.

Source- LARCIS, **Date Prepared December 4, 2013**
CRIME INFORMATION REPORT - OPTION C

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT

MARINA DEL REY STATION

PART 2 CRIMES - NOVEMBER 2013

Community Advisory Committee	Upper Ladera 2764	Lower Ladera 2766
Homicide		
Rape		
Robbery: Weapon		
Robbery: Strong-Arm	1	
Aggravated Assault		
Burglary: Residence	4	4
Burglary: Other Structure		1
Grand Theft		
Grand Theft Auto		1
Arson		
Boat Theft		
Vehicle Burglary		
Boat Burglary		
Petty Theft		4
Total	**5**	**10**

Note- The above numbers may change due to late reports and adjustments to previously reported crimes.

Source- LARCIS, **Date Prepared December 4, 2013**
CRIME INFORMATION REPORT - OPTION C

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT

MARINA DEL REY STATION

PART 3 CRIMES- NOVEMBER 2013

Part I Crimes	MARINA AREA (RD'S 2760-2763)	EAST END (RD'S 2764-2768)
Homicide		
Rape		
Robbery: Weapon		
Robbery: Strong-Arm		1
Aggravated Assault		2
Burglary: Residence	3	19
Burglary: Other Structure	1	5
Grand Theft	6	5
Grand Theft Auto	3	1
Arson		
Boat Theft		
Vehicle Burglary	3	6
Boat Burglary	2	
Petty Theft	8	11
Total	**26**	**50**

Note- The above numbers may change due to late reports and adjustments to previously reported crimes.

Source- LARCIS, **Date Prepared – December 4, 2013**
CRIME INFORMATION REPORT - OPTION C

MARINA DEL REY HARBOR
LIVEABOARD COMPLIANCE REPORT
2013

Liveaboard Permits Issued

	September	October
New permits Issued:	5	2
Renewal Issued:	15	10
Total:	20	12
Notices to Comply Issued:	13	20

Totals:	September	October
Liveaboard:	277	283
Current Permits:	232	227
Expired Permits:	28	44
No Permits:	16	13

Total reported vessels in Marina del Rey Harbor:	4204
Percentage of vessels that are registered liveaboards	6.73%
Number of currently impounded vessel:	

MARINA DEL REY HARBOR
LIVEABOARD COMPLIANCE REPORT
2013

Liveaboard Permits Issued

	October	November
New permits Issued:	2	9
Renewal Issued:	10	26
Total:	12	35
Notices to Comply Issued:	20	20

Totals:	October	November
Liveaboard:	283	284
Current Permits:	227	240
Expired Permits:	44	32
No Permits:	13	12

Total reported vessels in Marina del Rey Harbor:	4189
Percentage of vessels that are registered liveaboards	6.78%
Number of currently impounded vessel:	20

(310) 305-9503 • 13837 Fiji Way, Marina del Rey, CA 90292 • beaches.lacounty.gov

Caring for Your Coast

Gary Jones
Acting Director

Kerry Silverstrom
Chief Deputy

John Kelly
Deputy Director

December 5, 2013

TO: Small Craft Harbor Commission

FROM: Gary Jones, Acting Director

SUBJECT: **AGENDA ITEM 5b - MARINA DEL REY SPECIAL EVENTS**

MARINA DEL REY FARMERS' MARKET

Marina "Mother's" Beach ♦ 4101 Admiralty Way ♦ Marina del Rey
Thursdays
9:00 a.m. – 2:00 p.m.

The Department of Beaches and Harbors (Department), in collaboration with Southland Farmers' Markets Association, is offering the Marina del Rey Farmers' Market on Thursdays. The Marina del Rey Farmers' Market offers fresh, locally-grown organic and conventionally grown fruits and veggies. Also available are prepared and packaged foods, hand-crafted products and much more! Paid parking is available at beach parking lot #10 for 25 cents for every 15 minutes.

For more information call: Marina del Rey Visitors Center at (310) 305-9545

BURTON CHACE PARK WALKING CLUB

Burton Chace Park ♦ Lobby ♦ 13650 Mindanao Way ♦ Marina del Rey
Tuesdays & Thursdays
10:30 a.m. - 11:30 a.m.

The Department is sponsoring a FREE one-hour walking club. Get your exercise while taking in the beautiful view of the Marina del Rey harbor. Please RSVP by calling (310) 305-9595.

For more information call: (310) 305-9595

BURTON CHACE PARK FITNESS CLUB

Burton Chace Park ♦ Lobby ♦ 13650 Mindanao Way ♦ Marina del Rey
Wednesdays
11:30 a.m. – 12:30 p.m.

The Department is offering FREE outdoor group workout sessions. Come get in shape with an experienced instructor in beautiful Burton Chace Park. Ages 13 and up. Please RSVP by calling (310) 305-9595.

For more information call: (310) 305-9595

BURTON CHACE PARK SENIOR RECREATION PROGRAM

Burton Chace Park ♦ Lobby ♦ 13650 Mindanao Way ♦ Marina del Rey
2nd and 4th Wednesday of each month
10:00 a.m. – 12:00 p.m.

The Department is offering a new recreational program for senior citizens at Burton Chace Park. Come join fellow seniors for bingo, dancing, art projects, exercising and more.

For more information call: (310) 305-9595

51st ANNUAL MARINA DEL REY HOLIDAY BOAT PARADE

Saturday, December 14
6:00 p.m. – 8:00 p.m.

Fireworks kicking off the start of the parade will be shot off the south jetty at 5:55 p.m. Beautifully lighted and decorated boats will participate in the event that is free to the public. The theme of this year's parade is "Holiday Magic". Boat owners will compete for numerous prize packages.

Best spots for viewing the boat parade are Burton Chace Park, located at 13650 Mindanao Way, and Fisherman's Village, located at 13755 Fiji Way, where spectators can see and hear the parade free of charge. Free parking is available in County lots throughout Marina del Rey.

For more information call: The Holiday Boat Parade at (310) 670-7130 or visit the website at mdrboatparade.org

YOUTH WINTER ADVENTURE CAMP

Burton W. Chace Park ♦ 13650 Mindanao Way ♦ Marina del Rey
December 23, 2013 – January 10, 2014
Monday – Friday 7:30am – 6:30pm
$33.00 per day / Boys & Girls / Ages 6 – 12

Burton W. Chace Park is now offering day camps full of fun, adventures, and new experiences. Sign up now for our winter camp. Don't be stuck in the cold, sign up! Registration is open until program is full.

Call (310) 305-9595 to reserve your space.

FISHERMAN'S VILLAGE WEEKEND CONCERT SERIES

Sponsored by Pacific Ocean Management, LLC
All concerts are from 12:00 p.m. - 3:00 p.m.

Saturday, December 7
Blue Breeze, playing R&B

Sunday, December 8
Jimi Nelson, playing Country

Saturday, December 14
Jimbo Ross & The Bodacious Blues Band, playing Blues

Sunday, December 15
Brasil Brazil, playing Bossa Nova/Samba

Saturday, December 21
Izm Skizm, playing Reggae

Sunday, December 22
Upstream, playing Reggae

Saturday, December 28
Friends, playing R&B

Sunday, December 29
2 Azz 1, playing Jazz/Funk

For more information call: Pacific Ocean Management at (310) 822-6866

GJ:CB:cml

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Caring for Your Coast

Gary Jones
Acting Director

Kerry Silverstrom
Chief Deputy

John Kelly
Deputy Director

December 5, 2013

TO: Small Craft Harbor Commission

FROM: Gary Jones, Acting Director

SUBJECT: **ITEM 7a – DISCUSSION OF PROPOSED REVISIONS TO THE MARINA DEL REY TOXICS TOTAL MAXIMUM DAILY LOAD (TMDL)**

Item 7a pertains to proposed revisions to the Marina del Rey Toxics TMDL. Beginning in 1996, the back basins of Marina del Rey Harbor (Basins D, E, and F) were included on a list of impaired water bodies under the Clean Water Act. In response to this inclusion, the Regional Water Quality Control Board (Regional Board) adopted a TMDL for the back basins on October 6, 2005. The TMDL was approved by the State Water Resources Board on January 13, 2006, and the United States Environmental Protection Agency on March 16, 2006. The purpose of the TMDL was to improve water quality by setting a maximum Waste Load Allocation (WLA) for toxic pollutants such as Copper, Lead, Zinc, Chlordane, and PCBs. Since the adoption of the original TMDL, Los Angeles County has done numerous water quality and toxicity studies, and has installed Best Management Practices (BMPs) to help reduce the pollutants entering our harbor.

The Regional Board has recently decided to reopen the Marina del Rey TMDL, and has made some suggested revisions that could have significant impacts on Marina del Rey boaters, and on the County as a whole. The drafts of the proposed TMDL documents and the Regional Board staff report has been released for public comments which are due December 20, 2013. The Department is working with the Department of Public Works staff on the County's comments to the proposed TMDL. Key changes include having the TMDL cover the entire Marina, requiring that 85% of all boats in the Marina del Rey Harbor be painted with non-copper based bottom paint by 2024, and removing contaminated sediment throughout the Marina (including in the anchorages) by 2029.

The Department agrees with the Regional Board on the importance of clean water in the Marina. However, the 2024 deadline to switch 85% of boats in the Marina over to non-copper paint may be too short given the cost to boaters and uncertainties about non-copper paint performance. Also, meeting the 2024 time frame assumes a "best case" scenario, where boaters are lined up to have their boats repainted from the moment the revised TMDL is issued (which may take a year or two). Marina del Rey's two boat yards have informed Department staff that if they were both working at full capacity, it

would take approximately 10 years to complete this task. In addition, the boat yards estimate that on average, it will cost between $7,000 to $10,000 to sand a standard boat and repaint it with non-copper based paint. At this time, the enforcement mechanism to help meet this objective is not known and therefore reaching the required level of compliance is likely not achievable while copper-based paint is still legal to use, and cheaper to apply than non-copper paint. Boaters may elect to leave Marina del Rey and moor their boats in nearby harbors where similar regulations are not pending.

The proposed sediment remediation is extremely complicated from a logistic and legal standpoint, as all but one of the anchorages in the Marina are leased to private entities, and the potential cost to the County is prohibitive. Regional Board staff is recommending that the contaminated sediment of the Marina del Rey Harbor be dredged, capped, or dredged and capped. Using data collected from the recent open-water dredging near the Marina del Rey breakwater, Regional Board staff estimates that it will cost between $147,378,000 and $196,504,000, to dredge the harbor by one foot, and deposit the sediment at an inland landfill. If the sediment could be deposited into a harbor slip fill project, as was recently done in Long Beach, Regional Board staff estimates that it would cost $14,737,800 to dispose of the sediment. County staff has not had the opportunity to independently verify these calculations. In addition, the above estimates are based on dredging in an open-water area, not amongst docks and other improvements. The Regional Board's draft staff report recommends giving the County until 2029 to remediate the sediment. Given the serious nature of the impacts more studies are warranted to analyze the toxicity of the Marina del Rey soil, and seek additional options to remediate the soil.

The Regional Board has been conducting outreach, regarding the proposed changes, to the Marina del Rey boating community, including; meetings with dockmasters and boat yard owners, and a fact sheet that was mailed to Marina del Rey boat owners (attached). Two additional meetings, specifically for boaters, have been scheduled for December 7th and 11th.

Jenny Newman and Shana Rapoport from the Regional Board will attend the SCHC meeting to provide information about the proposed changes to the TMDL and to answer your questions.

GJ:CM:mt

Attachments (3)

Protecting Marina del Rey Harbor by Reducing Copper

The Los Angeles Regional Water Quality Control Board, a state agency, is tasked with protecting and improving water quality in the Los Angeles area. We are seeking cooperation from boaters in Marina del Rey Harbor to work towards improving water quality in the harbor so that we can protect this important resource that we all value.

Background

Copper is used in antifouling paints to prevent marine organisms from attaching to boat hulls. This copper also makes its way into the water where it can negatively affect other organisms, causing gill and nervous system damage in fish, and mortality in invertebrates that make up the base of the food chain. The concentrations of copper in the waters in Marina del Rey Harbor are at levels harmful to organisms living in the harbor. In order to protect aquatic life and activities that depend on a healthy aquatic ecosystem (such as recreation, wildlife habitat, and sport fishing) the amount of copper entering Marina del Rey Harbor needs to be reduced.

A draft regulatory plan to reduce the amount of copper in Marina del Rey Harbor is currently available for public comment. In this plan, called a TMDL[1], Regional Board staff is recommending reducing the amount of copper released from boat hulls in order to protect the natural habitat and recreational uses, such as sport fishing, in the harbor.

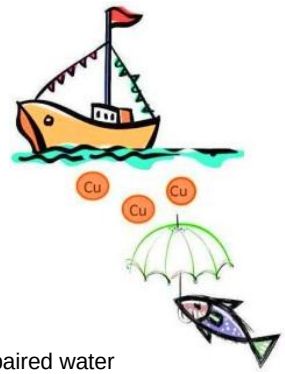
Copper pollution in the water is not isolated to Marina del Rey Harbor. Two marinas in Southern California already have similar TMDLs in place to reduce copper in the water: Shelter Island Yacht Basin in San Diego and Newport Bay in Orange County. Implementation of these regulatory plans has already begun.

Proposed Plan

The proposed plan allots 11 years to reduce copper discharge from boats by 85%. This plan is one step in a process to gradually reduce copper in the harbor waters. The plan can be amended based on new findings and good-faith efforts towards improving water quality.

Proposed Implementation Options

Options for reducing copper discharge from boats include switching from copper-based to non-toxic antifouling paints, use of slip liners, and use of less-abrasive hull cleaning techniques. The Regional Board is working with the paint industry to supply boaters with effective options and pursuing public funding to subsidize paint conversions.



Some Information on Alternative Antifouling Strategies

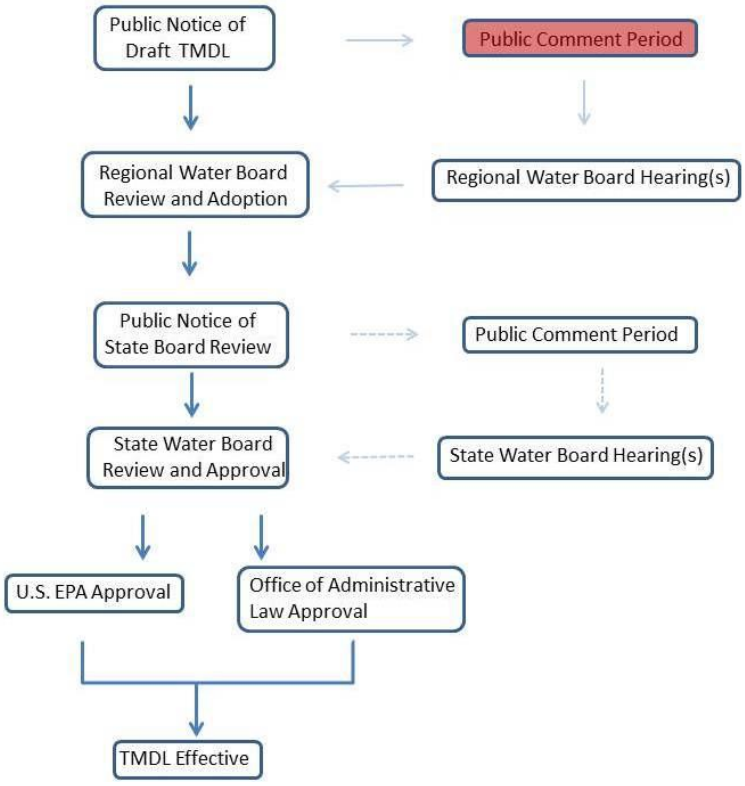
Copper Reduction Program, Port of San Diego:
http://www.portofsandiego.org/environment/copper-reduction-program.html

More information on alternative hull paint options:
http://ucanr.org/sites/coast/files/48350.pdf

[1] Total Maximum Daily Loads (TMDLs) are regulatory plans authorized by the Clean Water Act to address impaired water bodies. In California, the State and Regional Water Boards have the authority and responsibility to adopt and implement TMDLs. TMDLs are planning documents which are implemented through permits and other regulatory mechanisms.

TMDLs must go through a lengthy approval process before they become effective. The Draft Marina del Rey Toxic Pollutants TMDL is currently available for public comment. Elevated copper in the water is only one portion of the TMDL, which also addresses urban runoff and sediment impairments in Marina del Rey Harbor. Written comments are due to the Regional Board by December 20, 2013. The Regional Board will then hold a public meeting to consider the matter on February 6, 2014.

Process for Adopting a TMDL (approximately 1 year) **Opportunities for Public Comment**



FURTHER INFORMATION

"Citizens Guide to Working With the California Water Boards"
http://www.waterboards.ca.gov/publications_forms/publications/general/docs/citizenguide2011.pdf

Technical information regarding the TMDL and submitting comments
http://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/tmdl_list.shtml

To receive updates regarding TMDLs for the Marina del Rey Watershed, please visit the following website:
http://www.waterboards.ca.gov/resources/email_subscriptions/reg4_subscribe.shtml

Contact Information
For additional information, please contact the Regional Board at RB4-MdRTMDL@waterboards.ca.gov.

Reduciendo Cobre Para Proteger el Puerto de Marina del Rey: Para más información por favor de contactar Regional Board por medio de comunicación electronica ó e-mail a RB4-MdRTMDL@waterboards.ca.gov.

Amendment to the Water Quality Control Plan – Los Angeles Region to incorporate the Marina del Rey Harbor Toxic Pollutants TMDL

Adopted by the California Regional Water Quality Control Board, Los Angeles Region on October 6, 2005 and revised on [Insert Date].

Amendments:

Chapter 7. Total Maximum Daily Loads (TMDLs) Summaries, Section 7-18 (Marina del Rey Harbor Toxic Pollutants TMDL)

This TMDL was adopted by the Regional Water Quality Control Board on October 6, 2005.

This TMDL was approved by:

The State Water Resources Control Board on ~~[Insert Date]~~January 13, 2006.
The Office of Administrative Law on ~~[Insert Date]~~March 13, 2006.
The U.S. Environmental Protection Agency on ~~[Insert Date]~~March 13, 2006.

This TMDL was revised by the Regional Water Quality Control Board on [Insert Date].

This revised TMDL was approved by:

The State Water Resources Control Board on [Insert Date].
The Office of Administrative Law on [Insert Date].
The U.S. Environmental Protection Agency on [Insert Date].

The following tables include the elements of this TMDL.

Table 7-18.1. Marina del Rey Harbor Toxic Pollutants TMDL: Elements

Element	Key Findings and Regulatory Provisions
Problem Statement	~~The back basins of~~ Marina del Rey Harbor ~~are~~ is on the Clean Water Act Section 303(d) list of impaired waterbodies for chlordane, copper, lead, zinc, PCBs, DDT, dieldrin, ~~–~~sediment toxicity and a fish consumption advisory. Review of available data during the development of this TMDL indicated that dieldrin is ~~and DDT are~~ no longer a cause~~s~~ of impairment, and that there is a dissolved copper impairment in the water column as well as in the sediment. The following designated beneficial uses are impaired by chlordane, copper, lead, zinc, PCBs, DDT, and sediment toxicity: water contact recreation (REC1); marine habitat (MAR); wildlife habitat (WILD); commercial and sport fishing (COMM); and shellfish harvesting (SHELL).
Numeric Target *(Interpretation of the narrative and numeric water quality objective, used to calculate the allocations)*	**Numeric Targets for Sediment** Sediment targets were established based on the narrative objectives of this Basin Plan, the State's Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (EBE Plan Part 1), the sediment quality guidelines compiled by the National Oceanic and Atmospheric Administration (NOAA), and associated sediments targets required to achieve fish tissue targets. The EBE Plan Part 1~~,~~ includes sediment objectives to protect aquatic life (direct effects) and human health (indirect effects of sediment contamination in fish tissue), and the lower objective is used as the numeric target. ~~Numeric targets for the harbor sediments are based on the sediment quality guidelines compiled by the National Oceanic and Atmospheric Administration, which are used in evaluating waterbodies within the Los Angeles Region for development of the 303(d) list.~~ The NOAA Effects Range-Low (ERLs) guidelines are established as the numeric targets for copper, lead, zinc, chlordane, Total DDTs, and p,p'-DDE in sediments in Marina del Rey Harbor. The numeric target for total PCBs in sediment is selected to protect humans from consumption of contaminated fish tissue and is based on the fish tissue target and the food web bioaccumulation model developed by Gobas and Arnot (2010)[1]. **Numeric Targets for Metals in Sediment (mg/kg)** Copper: 34 ; Lead: 46.7 ; Zinc: 150 **Numeric Targets for Organic Compounds in Sediment (µg/kg)** ~~Chlordane: 0.5 ; Total PCBs: 22.7~~ Chlordane: 0.5 ; Total PCBs: 3.2 ; Total DDTs: 1.58 ; p,p'-DDE: 2.2

[1] Gobas F. A.P.C. and J.A. Arnot. 2010. Food web bioaccumulation model for polychlorinated biphenyls in San Francisco Bay, California, USA. *Environmental Toxicology and Chemistry* 23(6): 1385-1395.

Element	Key Findings and Regulatory Provisions
	In addition to the above numeric sediment targets, the categories designated in the EBE Plan Part 1 as Unimpacted and Likely Unimpacted by the interpretation and integration of multiple lines of evidence shall be considered as the protective narrative objective for sediment toxicity and benthic community effects. The thresholds established in the EBE Plan Part 1 are based on statistical significance and magnitude of the effect. Therefore, this TMDL implicitly includes sediment toxicity and benthic community targets by its application of the EBE Plan Part 1. **Numeric Targets for Water Column and Fish Tissue** In addition to the sediment numeric targets, water column and fish tissue targets are set ~~for~~ to address the PCB impairment in fish tissue and a water column target is set to address the dissolved copper impairment. The California Toxics Rule (CTR) criterion for the protection of human health from the consumption of aquatic organisms is selected as the final numeric target for total PCBs in the water column. ~~However, given the inability of current analytical methods to detect concentrations at this low level, an interim numeric target will be applied. The CTR Chronic Criterion for the protection of aquatic life in saltwater is selected as the interim numeric target for the fish tissue impairment by PCBs. This numeric target will remain in effect until advances in technology allow for analysis of PCBs at lower detection limits.~~ ~~**Interim Target for total PCBs in the Water Column:** 0.03µg/L~~ **Final Target for total PCBs in the Water Column:** 0.00017 µg/L The numeric ~~Target~~ target for PCBs in fish tissue is the ~~Threshold Tissue Residue Level that is derived from CTR human health criteria, which are adopted criteria for water designated to protect humans from consumption of contaminated fish or other aquatic organisms~~Office of Environmental Health Hazard Assessment (OEHHA) Fish Contaminant Goal (FCG). **Numeric Target for total PCBs in Fish Tissue:** ~~5.3~~3.6 µg/Kg The numeric targets for copper in the water column are set equal to the CTR saltwater copper criteria for the protection of aquatic life. **Numeric Targets for Dissolved Copper in the Water Column:** Acute (single sample maximum): 4.8 µg/L Chronic (four-day average): 3.1 µg/L
Source Analysis	Urban storm water has been recognized as a substantial source of metals. Numerous researchers have documented that the most prevalent metals in urban storm water (i.e., copper, lead, and zinc) are consistently associated with suspended solids. Because metals are typically associated with fine particles in storm water runoff, they have the potential to accumulate in marine sediments where they may pose a

Element	Key Findings and Regulatory Provisions
	risk of toxicity. Similar to metals, the majority of organic constituents in storm water are associated with particulates. Once the particles accumulate in the sediments in the harbor, the sediments themselves can become a source through sediment re-suspension and are thus assigned load allocations. Passive leaching and hull cleaning of copper-based anti-fouling paints ~~is a potential source of copper loading to the sediment. However, there is insufficient information available to quantify the contribution of boat discharges to the sediment pollutant load. This TMDL requires a study designed to estimate copper partitioning between the water column and sediment in Marina del Rey harbor, in order to determine the impact of passive leaching on the marine sediment.~~are recognized as substantial sources of dissolved copper to the water column. Site-specific modeling supports the conclusion that copper-based anti-fouling paints are the primary source of dissolved copper to the water column and a major contributor to the copper impairment in the water column. Copper-based anti-fouling paints are also a potential source of copper to the sediments. Addressing the copper impairment in the water column should consequently address the contribution of this source to the sediment impairment. Direct deposition of airborne particles to the water surface may be responsible for contributing copper, lead, ~~and~~ zinc, chlordane, PCBs, and DDTs to ~~the~~ Marina del Rey ~~back basins~~Harbor. The estimated contribution from this source is minor. Indirect atmospheric deposition reflects the process by which metals and organic compounds deposited on the land surface may be washed off during storm events and delivered to Marina del Rey Harbor. The loading of metals and organic compounds associated with indirect atmospheric deposition ~~are~~ is accounted for in the storm water runoff.
Loading Capacity	TMDLs are developed for copper, lead, zinc, chlordane, DDTs, and PCBs within the sediments of Marina del Rey Harbor~~'s back basins~~. The loading capacity for Marina del Rey Harbor is calculated by multiplying the numeric targets by the average annual total suspended solids (TSS) loading to the harbor sediment. The average annual TSS discharged to the ~~back basins of the~~ harbor is ~~64,166~~84,612 kilograms per year (kg/yr). The TMDL is set equal to the loading capacity. ~~**Metals Loading Capacity (kilograms/year)**~~ ~~Copper Lead Zinc~~ ~~2.18 3.0 9.6~~ ~~**Organics Loading Capacity (grams/year)**~~ ~~Chlordane Total PCBs~~ ~~0.03 1.46~~ **Metals Loading Capacity (kilograms/year)** Copper Lead Zinc

Element	Key Findings and Regulatory Provisions
	2.88 3.95 12.69 **Organics Loading Capacity (grams/year)** Chlordane Total PCBs Total DDTs p,p'-DDE 0.04 1.92 0.13 0.19 A TMDL is also developed for dissolved copper in the water column. Based on modeling results, the loading capacity for copper in the water column is 557 kg/yr.
Load Allocations *(for nonpoint sources)*	Load allocations (LA) are developed for nonpoint sources in Marina del Rey Harbor.~~,~~ ~~which~~ Non-point sources of the sediment impairment include~~s~~ direct atmospheric deposition and internal sources from the harbor sediments. Non-point sources of the water column copper impairment include the discharge of dissolved copper from boat hulls through passive leaching and hull cleaning. **LAs for Sediment Impairments** The load allocations for atmospheric deposition are not assigned to a particular nonpoint source or group of nonpoint sources. The mass-based load allocation for direct atmospheric deposition is equal to the percentage of the watershed covered by water (~~5.4~~11.7%) multiplied by the total loading capacity. ~~**Metals Load Allocations for Direct Atmospheric Deposition (kg/yr)**~~ ~~Copper Lead Zinc~~ ~~0.12 0.16 0.52~~ ~~**Organics Load Allocations for Direct Atmospheric Deposition(g/yr)**~~ ~~Chlordane Total PCBs~~ ~~0.002 0.079~~ **Metals Load Allocations for Direct Atmospheric Deposition (kg/yr)** Copper Lead Zinc 0.34 0.46 1.49 **Organics Load Allocations for Direct Atmospheric Deposition(g/yr)** Chlordane Total PCBs Total DDTs p,p'-DDE 0.005 0.225 0.016 0.022 The in-harbor LAs for concentrations in sediment are set equal to the numeric targets. **Load Allocations for Metals in Sediment (mg/kg)** Copper Lead Zinc 34 46.7 150

Element	Key Findings and Regulatory Provisions
	Load Allocations for Organic Compounds in Sediment (µg/kg) Chlordane: 0.5 | Total PCBs: 3.2 | Total DDTs: 1.58 | p,p'-DDE: 2.2 **LAs for Copper Water Column Impairment** The LAs for discharges of dissolved copper from boats is an 85% reduction in the baseline copper load from boats.
Waste Load Allocations *(for point sources)*	Waste load allocations (WLA) are assigned to point sources for the Marina del Rey watershed. A grouped mass-based waste load allocation is developed for the storm water permittees (Los Angeles County MS4, Caltrans, General Construction and General Industrial) by subtracting the load allocations from the total loading capacity. Concentration-based waste load allocations are developed for other point sources in the watershed. ~~**Metals Waste Load Allocations for Storm Water (kg/yr)**~~ ~~Copper: 2.06 | Lead: 2.83 | Zinc: 9.11~~ ~~**Organics Waste Load Allocations for Storm Water (g/yr)**~~ ~~Chlordane: 0.03 | Total PCBs: 1.38~~ **Metals Waste Load Allocations for Storm Water (kg/yr)** Copper: 2.54 | Lead: 3.49 | Zinc: 11.20 **Organics Waste Load Allocations for Storm Water (g/yr)** Chlordane: 0.04 | Total PCBs: 1.70 | Total DDT: 0.12 | p,p'-DDE: 0.16 The storm water waste load allocations are apportioned between the MS4 permittees, Caltrans, the general construction and the general industrial storm water ~~permits~~ permittees based on an estimate of the percentage of land area covered under each permit. ~~**Metals Storm Water WLAs Apportioned between Permits (kg/yr)**~~ ~~Copper | Lead | Zinc~~ ~~MS4 Permittees: 2.01 | 2.75 | 8.85~~ ~~Caltrans: 0.022 | 0.03 | 0.096~~ ~~General Construction: 0.033 | 0.045 | 0.144~~ ~~General Industrial: 0.004 | 0.006 | 0.018~~ **Metals Storm Water WLAs Apportioned between Permitsees (kg/yr)** Copper | Lead | Zinc MS4 Permittees: 1.96 | 2.69 | 8.64

Element	Key Findings and Regulatory Provisions

Caltrans	0.032	0.04	0.14
General Construction	0.20	0.28	0.89
General Industrial	0.010	0.014	0.046

~~**Organics Storm Water WLAs Apportioned between Permits (g/yr)**~~

	~~Chlordane~~	~~Total PCBs~~
~~MS4 Permittees~~	~~0.0295~~	~~1.34~~
~~Caltrans~~	~~0.0003~~	~~0.015~~
~~General Construction~~	~~0.0005~~	~~0.022~~
~~General Industrial~~	~~0.0001~~	~~0.003~~

Organics Storm Water WLAs Apportioned between Permitsees (g/yr)

	Chlordane	Total PCBs	Total DDT	p'p-DDE
MS4 Permittees	0.0288	1.31	0.091	0.13
Caltrans	0.0005	0.021	0.0015	0.0020
General Construction	0.0030	0.13	0.0094	0.013
General Industrial	0.0002	0.0069	0.0005	0.0007

Each storm water permittee enrolled under the general construction or industrial storm water permits will receive an individual waste load allocation on a per acre basis, based on the acreage of their facility.

~~**Metals per Acre WLAs for Individual General Construction or Industrial Storm Water Permittees (g/yr/ac)**~~

~~Copper~~	~~Lead~~	~~Zinc~~
~~2.3~~	~~3.1~~	~~10~~

Metals per Acre WLAs for Individual General Construction or Industrial Storm Water Permittees (g/yr/ac)

Copper	Lead	Zinc
1.7	2.3	7.3

~~**Organics per acre WLAs for Individual General Construction or Industrial Storm Water Permittees (mg/yr/ac)**~~

~~Chlordane~~	~~Total PCBs~~
~~0.03~~	~~1.5~~

Organics per acre WLAs for Individual General Construction or Industrial Storm Water Permittees (mg/yr/ac)

Chlordane	Total PCBs	Total DDTs	p,p'-DDE
0.02	1.1	0.08	0.11

Concentration-based waste load allocations are assigned to the minor NPDES permits and general non-storm water NPDES permits that discharge to Marina del Rey Harbor. Any future minor NPDES permits or enrollees under a general non-storm water NPDES permit will also be subject to the concentration-based waste load allocations.

Element	Key Findings and Regulatory Provisions
	Metals Concentration-based Waste Load Allocations (mg/kg) Copper: 34 — Lead: 46.7 — Zinc: 150 ~~**Organic Concentration-based Waste Load Allocations (µg/kg)**~~ ~~Chlordane: 0.5 — Total PCBs: 22.7~~ **Organic Concentration-based Waste Load Allocations (µg/kg)** Chlordane: 0.5 — Total PCBs: 3.2 — Total DDTs: 1.58 — p,p'-DDE: 2.2
Margin of Safety	An implicit margin of safety is applied through the use of the more protective numeric targets, including the ERL sediment quality guideline values and Fish Contaminant Goal fish tissue value for PCBs. An implicit margin of safety is included by virtue of the selection of multiple numeric targets, including targets for water, sediment and fish tissue, and the use of multiple lines of evidence (benthic community, sediment chemistry, and sediment toxicity) required by the EBE Plan Part 1. Conservative modeling assumptions provide a margin of safety in addressing copper in the water column.
Implementation	Compliance with the TMDL shall be determined through water, sediment, and fish tissue monitoring. ~~and comparison with the WLAs and LAs and numeric targets.~~ Compliance with the sediment TMDLs for metals, chlordane, total DDTs, and p,p'-DDE shall be based on achieving the LAs and WLAs or, alternatively, demonstrating attainment of the Sediment Quality Objectives in the EBE Plan Part 1 through the sediment triad/multiple lines of evidence approach outlined therein. Compliance with the TMDL for total PCBs shall be based on achieving the LAs or WLAs, the PCB fish tissue related sediment target, or, alternatively, by meeting fish tissue targets. If monitoring data or special studies indicate that load and waste load allocations will be attained, but fish tissue targets may not be achieved, the Regional Board shall reconsider the TMDL to modify the waste load and load allocations to ensure that the fish tissue targets are attained. The regulatory mechanisms used to implement the TMDL will include the Los Angeles County Municipal ~~Storm Water~~Separate Storm Sewer System (MS4) NPDES Permit ~~(MS4)~~, the State of California Department of Transportation (Caltrans) Storm Water Permit, minor NPDES permits, general NPDES permits, general industrial storm water NPDES permits, and general construction storm water NPDES

Element	Key Findings and Regulatory Provisions
	permits. Nonpoint sources will be regulated through the authority contained in sections 13263 and 13269 of the Water Code, in conformance with the State Water Resources Control Board's Nonpoint Source Implementation and Enforcement Policy (May 2004). ~~Each~~ The NPDES permit for each point source assigned a WLA shall be reopened or amended at re-issuance, in accordance with applicable laws, to incorporate the applicable WLAs as a permit requirement. ~~The Regional Board shall reconsider this TMDL in six years after the effective date of the TMDL based on additional data obtained from special studies.~~ Table 7-18.2 presents the implementation schedule for the responsible ~~permittees~~ entities. **Minor NPDES Permits and General Non-Storm Water NPDES Permits:** The concentration-based waste load allocations for the minor NPDES ~~permits~~ permittees and general non-storm water NPDES ~~permits~~ permittees will be implemented ~~through NPDES~~as permit limits. Permit writers may translate applicable waste load allocations into effluent limits for the minor and general NPDES permits by applying the effluent limitation procedures in Section 1.4 of the State Water Resources Control Board's Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California or applying other applicable ~~engineering practices~~methodologies authorized under federal regulations. The minor and currently enrolled general non-storm water NPDES permittees are allowed up to ~~seven years from the effective date of the TMDL~~ March 22, 2016 to achieve the waste load allocations. ~~**General Industrial Storm Water Permit:**~~ ~~The Regional Board will develop a watershed specific general industrial storm water permit to incorporate waste load allocations. Concentration based permit limits may be set to achieve the mass based waste load allocations. These concentration based limits would be equal to the concentration based waste load allocations assigned to the other NPDES permits. It is expected that permit writers will translate the waste load allocations into BMPs, based on BMP performance data. However, the permit writers must provide adequate justification and documentation to demonstrate that specified BMPs are expected to result in attainment of the numeric waste load allocations. The general industrial storm water permittees are allowed up to seven years from the effective date of the TMDL to achieve the waste load allocations.~~ **General Industrial and Construction Storm Water Permits:** Waste load allocations will be incorporated into the State Board general permits ~~upon renewal~~ or into ~~a~~ watershed specific ~~general construction storm water~~ permits developed by the Regional Board. ~~Within seven years of the effective date of the TMDL, the construction industry will submit the results of BMP effectiveness studies to~~

Element	Key Findings and Regulatory Provisions
	~~determine BMPs that will achieve compliance with the waste load allocations assigned to construction storm water permittees. Regional Board staff will bring the recommended BMPs before the Regional Board for consideration within eight years of the effective date of the TMDL. General construction storm water permittees will be considered in compliance with waste load allocations if they implement these Regional Board approved BMPs.~~ ~~All g~~General construction permittees must attain WLAs by March 22, 2016. General industrial permittees must attain WLAs by March 22, 2016. Permittees may demonstrate compliance with WLAs in one of two ways. First, general industrial and construction storm water permittees may be deemed in compliance with permit limitations if they demonstrate that there are no exceedances of the permit limitations at their discharge points or outfalls. Second, if permittees provide a quantitative demonstration that control measures and best management practices (BMPs) will achieve WLAs consistent with the schedule in Table 7-~~32~~18.2, then compliance may be demonstrated by implementation of those control measures and BMPs, subject to Executive Officer approval.~~implement the approved BMPs within nine years of the effective date of the TMDL. If no effectiveness studies are conducted and no BMPs are approved by the Regional Board within eight years of the effective date of the TMDL, each general construction storm water permit holder will be subject to site-specific BMPs and monitoring requirements to demonstrate compliance with waste load allocations.~~ **MS4 and Caltrans Storm Water Permits:** The County of Los Angeles, County of Los Angeles Flood Control District, City of Los Angeles, and Culver City are jointly responsible for meeting the mass-based waste load allocations ~~for~~ assigned to the MS4 permittees. Caltrans is responsible for meeting ~~their~~ its mass-based waste load allocations, however, ~~they~~ it may choose to work with the other MS4 permittees. ~~The primary jurisdiction for the Marina del Rey Harbor watershed is the County of Los Angeles.~~ Compliance with the sediment WLAs for Cu, Pb, Zn, Chlordane, total PCB~~S~~s, p'p-DDE and total DDT may be demonstrated via any one of three different means: a. The qualitative sediment condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the EBE Plan Part 1, is met. b. Sediment numeric targets are met in bed sediments. c. Final sediment WLAs, as presented above, are met. Compliance with the sediment WLAs for PCBs may be demonstrated via any of four different means: a. Fish tissue targets are met in species resident to the waterbody.

Element	Key Findings and Regulatory Provisions
	b. Final sediment allocations, as presented above, are met. c. Sediment numeric targets to protect fish tissue are met in bed sediments. d. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan, as amended to address contaminants in resident finfish and wildlife. Each municipality and permittee will be required to meet the waste load allocations ~~at the designated TMDL effectiveness monitoring points~~. If permittees provide a quantitative demonstration as part of a watershed management program ~~plan~~ that control measures and BMPs will achieve WLAs consistent with the schedule in Table 7-18.2, then compliance with ~~WLAs~~permit water quality based effluent limitations (WQBELs) may be demonstrated by implementation of those control measures and BMPs, subject to Executive Officer approval. A phased implementation approach, using a combination of non-structural and structural BMPs may be used to achieve compliance with the waste load allocations. The administrative record and the fact sheets for the MS4 and Caltrans storm water permits must provide reasonable assurance that the BMPs selected will be sufficient to implement the numeric waste load allocations. ~~We expect that r~~The quantitative demonstration must include an estimate of the reductions to be achieved by each BMP ~~will be documented~~ and ~~that~~ sufficient monitoring ~~will~~ must be ~~put in place~~conducted to verify that the ~~desired~~ necessary reductions are achieved. The permits ~~should~~ must also provide a mechanism to adjust the required BMPs as necessary to ensure their adequate performance. The implementation schedule for the MS4 and Caltrans permittees consists of a phased approach, with compliance to be achieved in prescribed percentages of the watershed or as a reduction from the baseline loading, with total compliance to be achieved ~~within 10 years~~ by March 22, 2018. ~~However, the Regional Board may extend the implementation period up to 15 years if an integrated water resources approach is employed.~~ **Load Allocations for In-Harbor Sediments** The County of Los Angeles is the responsible party for the load allocations assigned to in-harbor sediments. Load allocations shall be implemented through the following: (1) Memorandum of Agreement (MOA), or (2) Cleanup and Abatement Order or other regulatory order The County of Los Angeles shall be allowed one year from the effective date of the TMDL reconsideration to enter into a MOA with the Regional Board, detailing the voluntary efforts that will be undertaken to attain the load allocations. The MOA shall include development of a contaminated sediment management plan. The MOA

Element	Key Findings and Regulatory Provisions
	shall comply with the Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options ("Policy"), including part II, section 2.c.ii. and related provisions, and shall be consistent with the requirements of this TMDL. If the MOA is timely adopted, and so long as it is implemented, the program described in the MOA shall be deemed "certified", pursuant to the Policy, subject to the conditions of section 2.e. of the Policy. The MOA must be approved by the Executive Officer, and may be amended with Executive Officer approval, as necessary. If an MOA is not established within one year or if the responsible party does not comply with the terms of the MOA, a cleanup and abatement order pursuant to California Water Code section 13304 or another appropriate regulatory order shall be issued to implement the load allocations. **Load Allocations for Discharges of Dissolved Copper** The responsible parties for the load allocations assigned to discharges of dissolved copper from boats are the County of Los Angeles, individual anchorages, and persons owning boats moored in the Marina. LAs shall be implemented through waste discharge requirements (WDRs), waivers of WDRs, or other regulatory mechanisms in accordance with the Nonpoint Source Implementation and Enforcement Policy. Compliance with the load allocations may be demonstrated by any one of three means: a. Meeting numeric targets in the water column, or b. Demonstrating that 85% of boats in the harbor are using non-copper hull paints, or c. Another acceptable means of compliance approved by the Regional Board. **Reconsideration of TMDL** The TMDL may be reconsidered to revise the implementation schedule in order to ensure that pollutant sources are controlled and a suitable location for contaminated sediment disposal is available prior to remediation of contaminated sediments if the County has made a good faith effort to plan, fund, and permit sediment remediation activities.
Seasonal Variations and Critical Conditions	There is a high degree of inter- and intra-annual variability in total suspended solids discharged to Marina del Rey Harbor. This is a function of the storms, which are highly variable between years. The TMDL is based on a TSS load derived from long-term average rainfall over a 52-year period from 1948 to 2000. This time period contains a wide range of storm conditions and drain discharges to Marina del Rey Harbor. Use of the average condition for the TMDL is appropriate because issues of sediment effects on benthic communities and potential for bioaccumulation to higher trophic levels occurs over long time periods.
Monitoring	~~Effective m~~Monitoring will be required to assess the on-going condition of Marina del Rey Harbor and to assess ~~the on-going effectiveness of efforts by~~ attainment of WLAs and LAs assigned to dischargers ~~to reduce toxic pollutants loading from~~and responsible

Element	Key Findings and Regulatory Provisions
	parties in the Marina del Rey Watershed. Special studies may also be appropriate to provide further information about new data, new or alternative sources, and revised scientific assumptions. Below the Regional Board identifies the various goals of monitoring efforts and studies that shall be developed in a coordinated manner. The programs, reports, and studies will be included as requirements in subsequent permits or other orders ~~will be developed in response to subsequent orders~~ issued by the Executive Officer. ~~**Ambient Component**~~ ~~A monitoring program is necessary to assess water quality throughout Marina del Rey Harbor and to assess fish tissue and sediment quality in the harbor's back basins. Data on background water quality for copper will help refine the numeric targets and waste load allocations and assist in the effective placement of BMPs. In addition, fish tissue data is required in Marina del Rey's back basins to confirm continued impairment.~~ ~~Water quality samples shall be collected monthly and analyzed for chlordane and total PCBs at detection limits that are at or below the minimum levels until the TMDL is reconsidered in the sixth year. The minimum levels are those published by the State Water Resources Control Board in Appendix 4 of the Policy for the Implementation of Toxic Standards for Inland Surface Water, Enclosed Bays, and Estuaries of California, March 2, 2000. Special emphasis should be placed on achieving detection limits that will allow evaluation relative to the CTR standards. If these can not be achieved with conventional techniques, then a special study should be proposed to evaluate concentrations of organics.~~ ~~Water quality samples shall also be collected monthly and analyzed for copper, lead, and zinc until the TMDL is reconsidered in the sixth year. For metals water column analysis, methods that allow for (1) the removal of salt matrix to reduce interference and avoid inaccurate results prior to the analysis; and (2) the use of trace metal clean sampling techniques, should be applied. Examples of such methods include EPA Method 1669 for sample collection and handling, and EPA Method 1640 for sample preparation and analysis.~~ ~~Storm water monitoring shall be conducted for metals (copper, lead, and zinc) and organics (chlordane and total PCBs) to provide assessment of water quality during wet weather conditions and loading estimates from the watershed to the harbor. Special emphasis should be placed on achieving lower detection limits for organochlorine compounds.~~ ~~The MS4 and Caltrans storm water permittees are jointly responsible for conducting bioaccumulation testing of fish and mussel tissue within the Harbor. The permittees are required to submit for approval of the Executive Officer a monitoring plan that will provide the data needed to~~

Element	Key Findings and Regulatory Provisions
	~~confirm the 303(d) listing or de-listing, as applicable.~~ ~~Representative sediment sampling shall be conducted quarterly within the back basins of the harbor for copper, lead, zinc, chlordane, and total PCBs at detection limits that are lower than the ERLs. Sediment samples shall also be analyzed for total organic carbon, grain size and sediment toxicity.~~ ~~Initial sediment toxicity monitoring should be conducted quarterly in the first year of the TMDL to define the baseline and semi-annually, thereafter, to evaluate effectiveness of the BMPs until the TMDL is reconsidered in the sixth year. The sediment toxicity testing shall include testing of multiple species, a minimum of three, for lethal and non-lethal endpoints. Toxicity testing may include: the 28-day and 10-day amphipod mortality test; the sea urchin fertilization testing of sediment pore water; and the bivalve embryo testing of the sediment/water interface. The chronic 28-day and shorter-term 10-day amphipod tests may be conducted in the initial year of quarterly testing and the results compared. If there is no significant difference in the tests, then the less expensive 10-day test can be used throughout the rest of the monitoring, with some periodic 28-day testing.~~ **MS4 and Caltrans ~~Effectiveness Component~~Monitoring** MS4 permittees and Caltrans are jointly responsible for TMDL ~~effectiveness~~ monitoring. ~~The w~~Discharge water quality samples shall be collected during wet weather, and shall be analyzed for total dissolved solids, settleable solids and total suspended solids~~ if not already part of the sampling program~~. Sampling shall be designed to collect sufficient volumes of settleable and suspended solids to allow for analysis of copper, lead, zinc, chlordane, total PCBs, total DDTs, p,p'-DDE, and total organic carbon in the sediment. Receiving water quality samples shall be collected monthly and analyzed for total PCBs at detection limits that are at or below the minimum levels. The minimum levels are those published by the State Water Resources Control Board in Appendix 4 of the Policy for the Implementation of Toxic Standards for Inland Surface Water, Enclosed Bays, and Estuaries of California, March 2, 2000. Special emphasis should be placed on achieving detection limits that will allow evaluation relative to the CTR standards. Receiving water quality samples shall also be collected monthly and analyzed for copper. For metals water column analysis, methods that allow for (1) the removal of salt matrix to reduce interference and avoid inaccurate results prior to the analysis; and (2) the use of trace metal clean sampling techniques, should be applied. Examples of such methods include EPA Method 1669 for sample collection and handling, and EPA Method 1640 for sample preparation and analysis. ~~Monthly representative sediment sampling shall be conducted at existing monitoring locations throughout the harbor, and analyzed for~~

Element	Key Findings and Regulatory Provisions
	~~copper, lead, zinc, chlordane, and total PCBs at detection limits that are lower than the ERLs. The, sediment samples shall also be analyzed for total organic carbon and grain size. Sediment toxicity testing shall be conducted semi annually, and shall include testing of multiple species (a minimum of three) for lethal and non lethal endpoints. Toxicity testing may include: the 28-day or10-day amphipod mortality test; the sea urchin fertilization testing of sediment pore water; and the bivalve embryo testing of the sediment/water interface.~~ ~~Toxicity shall be indicated by an amphipod survival rate of 70% or less in a single test, in conjunction with a statistically significant decrease in amphipod survival relative to control organisms (significance determined by T test, a=0.05). Accelerated monitoring maybe conducted to confirm toxicity at stations identified as toxic. Accelerated monitoring shall consist of six additional tests, approximately every two weeks, over a 12 week period. If the results of any two of the six accelerated tests are less than 90% survival, then the MS4 and Caltrans permittees shall conduct a Toxicity Identification Evaluation (TIE). Alternatively, responsible parties have the option of foregoing accelerated toxicity testing and conducting a TIE directly following an indication of toxicity. The TIE shall include reasonable steps to identify the sources of toxicity and steps to reduce the toxicity The Phase I TIE shall include the following treatments and corresponding blanks: baseline toxicity; particle removal by centrifugation; solid phase extraction of the centrifuged sample using C8, C18, or another media; complexation of metals using ethylenediaminetetraacetic acid (EDTA) addition to the raw sample; neutralization of oxidants/metals using sodium thiosulfate addition to the raw sample; and inhibition of organo-phosphate (OP) pesticide activation using piperonyl butoxide addition to the raw sample (crustacean toxicity tests only).~~ Sediment quality objective evaluation as detailed in the EBE Plan Part 1 (sediment triad sampling) shall be performed every five years beginning in 2008. Sampling and analysis for the full chemical suite, two toxicity tests and four benthic indices as specified in the EBE Plan Part 1 shall be conducted and evaluated. In addition, one of the toxicity tests shall be a 10-day mortality test with *Leptocheirus plumulosus* as previous investigations in Marina del Rey Harbor have shown toxicity to this organism. Locations for sediment triad assessment and the methodology for combining results from sampling locations to determine sediment conditions shall be specified in the CMP to be approved by the Executive Officer. The sampling design shall be in compliance with the EBE Plan Part 1 Sediment Monitoring section (VII.E). A stressor identification is required by the EBE Plan Part 1 (VII.F) if sediments fail to meet SQOs. Based on the fact that the failure to meet SQOs has been documented, the MS4 and Caltrans permittees shall conduct a stressor identification in Marina del Rey Harbor and submit a report detailing the results of the stressor identification by December

Element	Key Findings and Regulatory Provisions
	15, 2016. Sediment chemistry and toxicity samples shall also be collected annually (in addition to, and in between, the sediment triad sampling events as described above) to evaluate trends in general sediment quality constituents (total organic carbon, grain size) and listed constituents (copper, lead, zinc, chlordane, PCBs, Total DDTs, and p,p'-DDE) relative to sediment quality targets. Monitoring of fish and mussel tissue within the Harbor shall be conducted annually for total PCBs, chlordane and Total DDTs. The permittees are required to submit for approval of the Executive Officer a monitoring plan that will provide the data needed to assess the effectiveness of the TMDL. ~~The general industrial storm water permit shall contain a model monitoring and reporting program to evaluate BMP effectiveness. A permittee enrolled under the general industrial permit shall have the choice of conducting individual monitoring based on the model program or participating in a group monitoring effort. MS4 permittees are encouraged to take the lead in group monitoring efforts for industrial facilities within their jurisdiction because compliance with waste load allocations by these facilities will in many cases translate to reductions in contaminate loads to the MS4 system.~~ Currently, several of the constituents of concern have numeric targets that are lower than the readily available detection limits. As analytical methods and detection limits continue to improve (i.e., development of lower detection limits) and become more environmentally relevant, responsible parties shall incorporate new method detection limits in the monitoring plan. **Oxford Basin Monitoring** The Los Angeles County Flood Control District shall monitor any discharges of sediment from Oxford Basin to the harbor. This monitoring shall be initiated after completion of the Oxford Basin Enhancement Project and shall be used to determine attainment of numeric targets in the area of Oxford Basin that mixes with the water in Basin E of the harbor. Effectiveness monitoring developed as part of the Proposition 84 grant agreement for the Oxford Basin Enhancement Project may be used to meet this requirement; however, the monitoring shall continue beyond the term of the Proposition 84 grant. **Other Permittees and Responsible Parties Monitoring** Monitoring for other permittees, general industrial and construction stormwater permittees, and responsible parties for the in-harbor sediment and dissolved copper load allocations shall be included in the regulatory mechanisms developed to implement the load and waste load allocations for these sources.

Element	Key Findings and Regulatory Provisions
	~~**Special Studies**~~ ~~Special studies are necessary to refine source assessments, to provide better estimates of loading capacity, and to optimize implementation efforts. The Regional Board will re-consider the TMDL in the sixth year after the effective date in light of the findings of these studies.~~ ~~Studies required for this TMDL include:~~ ~~• Evaluate partitioning coefficients between water column and sediment to assess the contribution of water column discharges to sediment concentrations in the harbor, and~~ ~~• Evaluate the use of low detection level techniques to determine water quality concentrations for those contaminants where standard detection limits cannot be used to assess compliance for CTR standards or are not sufficient for estimating source loadings from tributaries and storm water.~~ ~~Studies recommended for this TMDL include:~~ ~~• Develop and implement a monitoring program to collect the data necessary to apply a multiple lines of evidence approach;~~ ~~• Refine the relationship between pollutants and suspended solids aimed at better understanding of the delivery of pollutants to the watershed, and~~ • ~~Evaluate the effectiveness of BMPs to address pollutants and/or sediments.~~

Table 7-18.2. Marina del Rey Harbor Toxic Pollutants TMDL: Implementation Schedule

Date	Action
~~Effective date of the TMDL~~March 22, 2006	~~Regional Board permit writers shall incorporate the waste load allocations for sediment into the NPDES permits.~~ Effluent limitations consistent with the assumptions and requirements of ~~Waste~~ waste load allocations will be implemented through NPDES permits ~~limits~~ in accordance with the implementation schedule contained herein, at the time of permit issuance, renewal or re-opener.
March 22, 2024	The LAs for discharges of dissolved copper from boats shall be attained.
March 22, 2029	The LAs for in-harbor sediments shall be attained.
~~On-going~~	~~The Executive Officer shall promptly issue appropriate investigatory and clean up and abatement orders to address any toxicity hotspots within sediments identified as a result of data submitted pursuant to this TMDL, any U.S. Army Corps of Engineer dredging activity, or any other investigation.~~
~~Within 6 months after the effective date of the State Board adopted sediment quality objectives and implementation policy~~	~~The Regional Board will re-assess the numeric targets and waste load allocations for consistency with the State Board adopted sediment quality objectives.~~
~~5 years after effective date of the TMDL~~	~~Responsible jurisdictions and agencies shall provide to the Regional Board result of any special studies.~~
~~6 years after effective date of the TMDL~~	~~The Regional Board shall reconsider this TMDL to re-evaluate the waste load allocations and the implementation schedule.~~
MINOR NPDES PERMITS AND GENERAL NON-STORM WATER NPDES PERMITS	
~~7 years after effective date of the TMDL~~March 22, 2013	The non-storm water NPDES permits shall achieve the concentration-based waste load allocations for sediment per provisions allowed for in NPDES permits.
GENERAL INDUSTRIAL STORM WATER PERMIT	
Up to March 22, 2016~~7 years after effective date of the TMDL~~	The general industrial storm water permits shall achieve the mass-based waste load allocations for sediment per provisions allowed for in NPDES permits. ~~Permits shall allow an iterative BMP process including BMP effectiveness monitoring to achieve compliance with permit requirements.~~

Date	Action
GENERAL CONSTRUCTION STORM WATER PERMIT	
~~7 years from the effective date of the TMDL~~	~~The construction industry will submit the results of the BMP effectiveness studies to the Regional Board for consideration. In the event that no effectiveness studies are conducted and no BMPs are approved, permittees shall be subject to site-specific BMPs and monitoring to demonstrate BMP effectiveness.~~
~~8 years from the effective date of the TMDL~~	~~The Regional Board will consider results of the BMP effectiveness studies and consider approval of BMPs no later than eight years from the effective date of the TMDL.~~
~~9 years from the effective date of the TMDL~~Up to March 22, 2016	The general construction storm water permits shall achieve the mass-based waste load allocations for sediment per provisions allowed for in NPDES permits.~~All general construction storm water permittees shall implement Regional Board-approved BMPs.~~
MS4 AND CALTRANS STORM WATER PERMITS	
~~12 months after the effective date of the TMDL~~March 22, 2007	~~In response to an order issued by the Executive Officer, the MS4 and Caltrans storm water NPDES permittees must submit a coordinated monitoring plan, to be approved by the Executive Officer, which includes both ambient monitoring and TMDL effectiveness monitoring. Once the coordinated monitoring plan is approved by the Executive Officer, monitoring shall commence within 6 months. The draft monitoring report shall be made available for public comment and the Executive Officer shall accept public comments for at least 30 days.~~
~~5 years after effective date of TMDL~~March 22, 2011 ~~(Draft Report)~~ ~~5 ½ years after effective date of TMDL~~August 22, 2011 ~~(Final Report)~~	~~The MS4 and Caltrans storm water NPDES permittees shall provide a written report to the Regional Board outlining how they will achieve the waste load allocations for sediment to Marina del Rey Harbor. The report shall include implementation methods, an implementation schedule, proposed milestones, and any applicable revisions to the TMDL effectiveness monitoring plan. The draft report shall be made available for public comment and the Executive Officer shall accept public comments for at least 30 days.~~
June 22, 2015	The MS4 and Caltrans storm water NPDES permittees shall submit a revised coordinated monitoring plan, reflecting the revised requirements of this TMDL as amended by Resolution No. R13-XXX.
December 15, 2016	The MS4 and Caltrans storm water NPDES permittees shall conduct a stressor identification in Marina del Rey Harbor and submit a report detailing the results to the Regional Board.
~~Schedule for MS4 and Caltrans Permittees if Pursuing a TMDL Specific Implementation Plan~~	

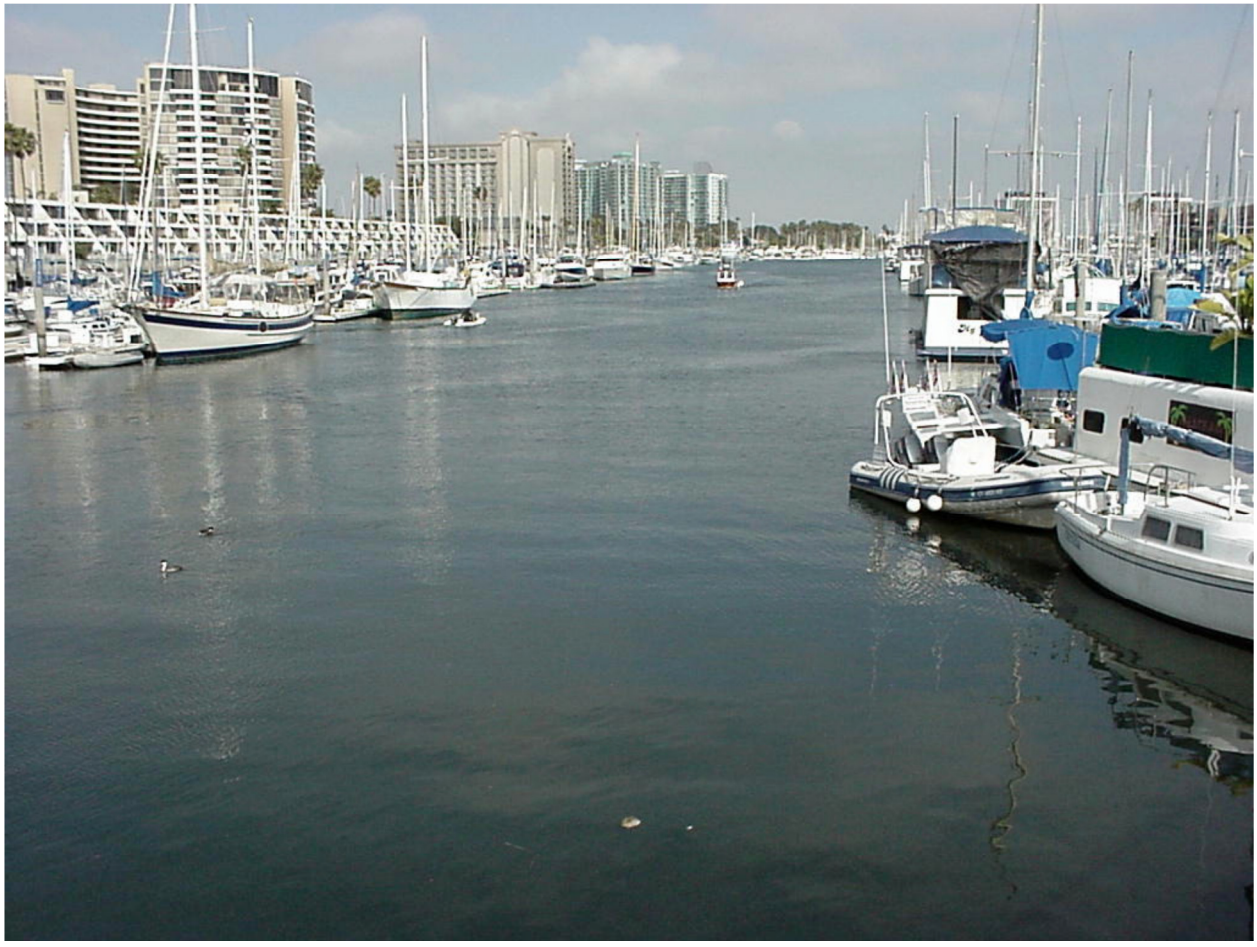
Date	Action
Schedule for MS4 and Caltrans Permittees for Marina del Rey Harbor Back Basins (Basins D, E, and F)	
~~8 years after effective date of the TMDL~~March 22, 2016	Compliance with the interim sediment allocations for Cu, Pb, Zn, chlordane, p'p-DDE, and total DDTs may be demonstrated via any one of three different means: 1. Demonstrate that the sediment quality condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the EBE Plan Part 1, is met; or 2. Sediment numeric targets are met in bed sediments over a three-year averaging period; or 3. Interim allocations in the discharge are met as described below: The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 50% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment. Alternatively, permittees shall attain a 50% reduction in the difference between the current loadings and WLAs, as measured at the relevant existing MS4 permit monitoring location and/or at relevant MS4 monitoring stations identified in an approved coordinated monitoring plan. Compliance with the interim sediment allocations for total PCBs may be demonstrated via any of four different means: 1. Fish tissue targets are met in species resident to Marina del Rey Harbor; or 2. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan, as amended to address contaminants in resident finfish and wildlife; or 3. Sediment numeric targets are met in bed sediments over a three-year averaging period; or 4. Final allocations in the discharge are met as described below: The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 50% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment. Alternatively, permittees shall attain a 50% reduction in the difference between the current loadings and WLAs, as measured at the relevant existing MS4 permit monitoring location and/or at relevant MS4 monitoring stations identified in an approved coordinated monitoring plan.
~~10 years after effective date of the~~	Compliance with the sediment TMDLs for Cu, Pb, Zn, chlordane,

Date	Action
~~TMDL~~March 22, 2018	p'p-DDE and total DDTs may be demonstrated via any one of three different means: 1. Demonstrate that the sediment quality condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the EBE Plan Part 1, is met; or 2. Sediment numeric targets are met in bed sediments over a three-year averaging period; or 3. Final allocations in the discharge are met as described below: The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 100% of the total drainage area served by the MS4 ~~system~~ is effectively meeting the waste load allocations for sediment. Compliance with the sediment TMDL for total PCBs may be demonstrated via any of four different means: 1. Fish tissue targets are met in species resident to Marina del Rey Harbor; or 2. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan, as amended to address contaminants in resident finfish and wildlife; or 3. Sediment numeric targets are met in bed sediments over a three-year averaging period; or 4. Final allocations in the discharge are met as described below: The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 100% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment.
Schedule for MS4 and Caltrans Permittees for Marina del Rey Harbor Front Basins (Basins A, B, C, G, and H)	
March 22, 2019	Compliance with the interim sediment allocations for Cu, Pb, Zn, chlordane, p'p-DDE, and total DDTs may be demonstrated via any one of three different means: 1. Demonstrate that the sediment quality condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the EBE Plan Part 1, is met; or 2. Sediment numeric targets are met in bed sediments over a three-year averaging period; or

Date	Action
	3. Interim allocations in the discharge are met as described below: The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 50% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment. Alternatively, permittees shall attain a 50% reduction in the difference between the current loadings and WLAs, as measured at the relevant existing MS4 permit monitoring location and/or at relevant MS4 monitoring stations identified in an approved coordinated monitoring plan. Compliance with the interim sediment allocations for total PCBs may be demonstrated via any of four different means: 1. Fish tissue targets are met in species resident to Marina del Rey Harbor; or 2. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan, as amended to address contaminants in resident finfish and wildlife; or 3. Sediment numeric targets are met in bed sediments over a three-year averaging period; or 4. Final allocations in the discharge are met as described below: The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 50% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment. Alternatively, permittees shall attain a 50% reduction in the difference between the current loadings and WLAs, as measured at the relevant existing MS4 permit monitoring location and/or at relevant MS4 monitoring stations identified in an approved coordinated monitoring plan.
March 22, 2021	Compliance with the sediment TMDLs for Cu, Pb, Zn, chlordane, p'p-DDE and total DDTs may be demonstrated via any one of three different means: 1. Demonstrate that the sediment quality condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the EBE Plan Part 1, is met; or 2. Sediment numeric targets are met in bed sediments over a three-year averaging period; or 3. Final allocations in the discharge are met as described below: The MS4 and Caltrans storm water NPDES permittees shall

Date	Action
	demonstrate that 100% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment. Compliance with the sediment TMDL for total PCBs may be demonstrated via any of four different means: 1. Fish tissue targets are met in species resident to Marina del Rey Harbor; or 2. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan, as amended to address contaminants in resident finfish and wildlife; or 3. Sediment numeric targets are met in bed sediments over a three-year averaging period; or 4. Final allocations in the discharge are met as described below: The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 100% of the total drainage area served by the MS4 is effectively meeting the waste load allocations for sediment.
~~Schedule for MS4 and Caltrans Permittees if Pursuing an Integrated Resources Approach, per Regional Board Approval~~	
~~7 years after effective date of the TMDL~~	~~The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 25% of the total drainage area served by the MS4 system is effectively meeting the waste load allocations for sediment.~~
~~9 years after effective date of the TMDL~~	~~The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 50% of the total drainage area served by the MS4 system is effectively meeting the waste load allocations for sediment.~~
~~11 years after effective date of the TMDL~~	~~The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 75% of the total drainage area served by the MS4 system is effectively meeting the waste load allocations for sediment.~~
~~15 years after effective date of the TMDL~~	~~The MS4 and Caltrans storm water NPDES permittees shall demonstrate that 100% of the total drainage area served by the MS4 system is effectively meeting the waste load allocations for sediment.~~

RECONSIDERATION OF THE TOTAL MAXIMUM DAILY LOAD FOR TOXIC POLLUTANTS IN MARINA DEL REY HARBOR



PREPARED BY
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

DRAFT REPORT: November 5, 2013

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1. Introduction

This staff report presents technical analyses in support of recommendations to reconsider aspects of the Marina del Rey Harbor Toxic Pollutants TMDL established by the Los Angeles Regional Water Quality Control Board (Regional Board). The regulatory background, beneficial uses to be protected, geographical extent and complete TMDL elements along with supporting analysis are described in the original staff report and amendment to the Los Angeles Region Water Quality Control Plan (Basin Plan) (LARWQCB, 2005c) at (http://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/tmdl_list.shtml) and are not repeated, herein.

While the Regional Board can amend the Basin Plan to adjust a TMDL at any time, implementation schedules for TMDLs in the Los Angeles Region have often included scheduled "reconsiderations" by the Regional Board at a specific point during implementation. Specific reconsiderations have been included so that aspects of the TMDL, or the TMDL implementation schedule, could be adjusted based on anticipated new information or methods. This approach has allowed the Regional Board to establish TMDLs with all the required elements, including numeric targets, allocations, and implementation schedules, so that responsible parties could begin implementing the TMDL to improve water quality, while acknowledging the potential benefit to refining certain technical elements of the TMDL or the implementation schedule after additional study and data collection were completed. The timeframe included in the original TMDL implementation schedule for the current reconsideration was six years after the effective date of the TMDL.

2. History and Status of the TMDL

The Marina del Rey Harbor Toxic Pollutants TMDL was adopted by the Regional Board on October 6, 2005 (Regional Board Resolution No. R05-2012), approved by the State Water Resources Control Board (State Board) on January 13, 2006 (State Board Resolution No. 2006-0006), and approved by the United States Environmental Protection Agency (U.S. EPA) on March 16, 2006. The waste load allocations (WLAs) and other associated requirements of the TMDL have been incorporated into the National Pollution Discharge Elimination System (NPDES) permits covering point source discharges within the Marina del Rey (MdR) Watershed, including the Los Angeles County Municipal Separate Storm System (MS4) Permit (Order No. R4-2012-0175) and the Caltrans MS4 Permit (Order No. 2012-0011-DWQ). Actions related to the TMDL that have occurred since adoption are listed in Tables 2-1 and 2-2. The Coordinated Monitoring Plan (CMP) was approved and two annual reports have been submitted to the Regional Board. The responsible parties have submitted two separate implementation plans: one plan from the County of Los Angeles and one plan from the City of Los Angeles, Culver City, and the California Department of Transportation (collectively the MdR Watershed Agencies). Two special studies were required by the TMDL and have been conducted: a Low Detection

Level Study and a Partitioning Coefficient Study. Two recommended studies have also been completed: the Marina del Rey Sediment Characterization Study and a BMP effectiveness study.

Table 2-1. TMDL Actions to Date

Item	Date
TMDL In Effect	March 22, 2006
Special Study: Marina del Rey Sediment Characterization Study	April 2008
Coordinated Monitoring Plan Final Approval	March 3, 2009
Special Study: BMP Effectiveness Phase I	September 9, 2010
Special Study: Low Detection Level Study	December 22, 2011
Special Study: Partitioning Coefficient Study	December 22, 2011
CMP Annual Monitoring 2010-11 Submittal	January 30, 2012
Los Angeles County Implementation Plan	August 22, 2012
CMP Annual Monitoring 2011-2012 Submittal	December 3, 2012
MdR Watershed Agencies Implementation Plan	December 10, 2012

Structural and non-structural BMPs have been instituted or are in progress in the Marina del Rey Harbor Watershed. A sampling of these BMPs is listed in Table 2-2.

Table 2-2. BMPs in Marina del Rey Harbor Watershed

	Anticipated Completion Date	Completion Date
Structural BMPs		
Bio-retention Filters (5)	--	December 2006
Low Flow Diversions (3)	--	November 2009
Oxford Basin Multi-Benefit Enhancement Project	December 2015	--
Improvement of Marina Parking Lots (5)	2017	--
Non-Structural BMPs		
Increased Frequency of Street and Parking Lot Sweeping	--	Ongoing since 2008
L.A. City and County adopted LID ordinances	--	Ongoing
Green Marinas Program	--	Ongoing
Participation in Brake Pad Partnership	--	Ongoing

2.1 Special Studies

In order to obtain necessary information to refine the TMDL and better target implementation actions, the TMDL required two special studies to be conducted and recommended three additional studies. The status of these studies and related findings are discussed below.

2.1.1 Partitioning Coefficient Study

A Partitioning Coefficient Study Report, required by the TMDL, was submitted by the County of Los Angeles Department of Public Works on behalf of the County of Los Angeles, the California Department of Transportation, and the Cities of Culver City and Los Angeles to the Regional Board on December 28, 2011 (Brown and Caldwell 2011b). Concentrations of copper and partitioning coefficients were investigated in the sediment, water column, and storm water of Marina del Rey Harbor. Some trends were evident; however, findings bear further investigation due to inherent noisiness in the data. Partitioning coefficients appear lower in the water column than in the sediment, suggesting the sediments were not acting as a source of copper to the water column during the study period. Elevated dissolved copper concentrations in the upper water column relative to the middle and lower water column suggest an input of copper to the upper water column. Possible sources of copper to the water column discussed in the study report include storm water and boats.

Analyses of lead and zinc are included in Appendix G; however, these results are not discussed in the report. While the results of the study suggest Marina del Rey Harbor sediments may not be a source of copper to the water column, potential contributions of other pollutants, including lead and zinc, to the water column from the sediment have not been investigated.

2.1.2 Low Detection Level Study

The original TMDL required a special study to "evaluate the use of low detection level techniques to determine water quality concentrations for those contaminants where standard detection limits cannot be used to assess compliance for CTR standards or are not sufficient for estimating source loadings from tributaries and storm water." A Low Detection Level Study Report was submitted by the County of Los Angeles Department of Public Works on behalf of the County of Los Angeles, the California Department of Transportation, and the Cities of Culver City and Los Angeles to the Regional Board on December 28, 2011 (Brown and Caldwell 2011b). The submitted study was a field and laboratory investigation of PCB and chlordane levels in Marina del Rey Harbor that was conducted in conjunction with the CMP. A negative chemical ionization procedure was used for concentrating the samples for some chlordane analyses. The details and logistics of the negative chemical ionization procedure are not included in the report; however, the analyses resulted in a method detection limit (MDL) of 0.028 ng/L, which is lower than the TMDL numeric target of 0.5 µg/kg (ng/L) (for comparison, the MDL for similar chlordane analyses in the CMP is 50 ng/L). The reporting limit (RL) achieved from incorporating negative chemical ionization (NCI) into laboratory procedures for chlordane was not discussed in the report. In part due to elevated PCB readings in blanks, methods utilized to analyze PCB samples did not achieve detection limits below numeric targets.

2.1.3 Storm-Borne Sediment Pilot Study

A pilot study is currently in progress to establish a sediment collection approach that will result in sufficient sediment mass for analysis and comparison to the TMDL numeric targets/waste load allocations. A single storm event was sampled for the pilot study

during the 2013 storm season. Passive sediment collection devices were deployed at three locations to collect sediment from storm water for laboratory analyses. Sediments were analyzed in the laboratory for TMDL constituents, including copper, lead, zinc, chlordane, and PCBs. Preliminary results indicate all metals and chlordane concentrations measured were higher than TMDL numeric targets. PCBs were non-detectable at two of the three sites; however, at site MdR-5, near Boone-Olive Pump Station, total PCBs were measured as 1900 µg/kg (TMDL numeric target: 22.7 µg/kg). The reporting limits for both PCBs and chlordane were both greater than the TMDL numeric limit. Greater storm size and corresponding sediment volume may make it possible to attain reporting limits for organic pollutants that are lower than the TMDL numeric targets using current analytical methods. The pilot study is anticipated to resume during the 2014 storm season.

2.1.4 Multiple Lines of Evidence - Sediment Characterization Study

A Sediment Characterization Study investigated the entirety of Marina del Rey Harbor -- both the front and back basins as well as the main channel (Weston Solutions 2008). Chemistry was investigated in surface sediment grab samples as well as in the tops and bottoms of sediment cores. The report presents sediment concentrations for TMDL constituents throughout Marina del Rey Harbor, which frequently exceed ERLs and ERMs. DDTs commonly exceeded ERMs at the bottom depth of sediment cores.

In addition to sediment chemistry analyses, an SQO assessment, including toxicity and benthic community analysis, was conducted as part of the sediment characterization study. This assessment was completed based on a draft version of California's *Water Quality Control Plan for Enclosed Bays and Estuaries - Part 1 Sediment Quality.* State SQO guidelines specify that a minimum of two toxicity tests -- one short term survival sediment toxicity test and one sublethal sediment toxicity test must be used to conduct the assessment (SWRCB 2009). The sediment characterization study incorporated only one toxicity test: a 10-day short term survival test using the amphipod *Eohaustorius estuarius*. Additionally, a line of evidence (LOE) titled "Severity of Biological Effects," which integrated toxicity and benthic condition LOEs was used in the SQO assessment. These procedures are not consistent with California's SQOs (SWRCB 2009); therefore, individual chemistry, toxicity, and benthic community analyses conducted during this study are discussed in section 4.1.1 of this report, but the SQO assessment itself is not included here.

2.1.5 BMP effectiveness

The TMDL required the construction industry to submit the results of wet-weather BMP effectiveness studies to the Regional Board for consideration by March 22, 2013. The purpose of the studies was for the Regional Board to approve BMPs that would result in attainment of wet-weather waste load allocations to be included in the construction stormwater permit. The Building Industry Association initiated a BMP study and published the results (Wu 2010). The study investigated the potential for short-term release of cadmium, copper, lead, and zinc from a first flush of 18 different BMPs. The study suggests that the release of heavy metals from BMPs can contribute to

pollution. The study was not a BMP effectiveness study as required by the TMDL and the findings do not provide the necessary justification for the approval of BMPs that would result in the attainment of wet-weather waste load allocations.

3. Reconsideration Items Required by the TMDL

The implementation plan that was adopted as a part of the TMDL includes a mandatory reconsideration six years after the effective date of the TMDL to re-evaluate waste load allocations and the implementation schedule. Two specific components are required to be addressed by the Regional Board and will be discussed here in further detail: SQOs and toxicity hotspots.

3.1 Sediment Quality Objectives

The Water Quality Control Plan for Enclosed Bays and Estuaries - Part 1 Sediment Quality (SWRCB 2009), which promulgated sediment quality objectives (SQOs), was adopted after the effective date of the Marina del Rey Harbor Toxic Pollutants TMDL. As the SQOs were in development when the Marina del Rey Harbor Toxic Pollutant TMDL was adopted, an item was included in the implementation plan of the original TMDL requiring the Regional Board to "re-assess the numeric targets and waste load allocations for consistency with the State Board adopted sediment quality objectives."

The SQOs are proposed to be incorporated into the TMDL as an alternative target and means of demonstrating attainment of the TMDL. This addition does not necessitate any changes to the original numeric targets or waste load allocations. However, new monitoring requirements and language regarding alternative means of demonstrating compliance are necessary to fully utilize the SQOs. In accordance with the State's SQOs, the alternative target enables the use of a multiple lines of evidence (MLOE) approach to demonstrate that Marina del Rey Harbor sediments fall within the categories of **Unimpacted** or **Likely Unimpacted**. These categories are considered protective of beneficial uses such that if Marina del Rey Harbor sediments meet this target, beneficial uses are considered protected even if sample data indicate that pollutant specific numeric targets are not met in sediments.

3.2 Toxicity Hotspots

The TMDL implementation plan requires the Executive Officer of the Regional Board to issue investigatory and clean up and abatement orders to address toxicity hotspots within sediments. The Sediment Characterization Study (Weston Solutions 2008) indicates that the sediment of Marina del Rey Harbor is contaminated throughout the harbor, in both front and back basins as well as the main channel, rather than being confined to hotspots.

The Regional Board has not yet issued clean up and abatement orders as removing the sediment prior to reducing contaminant loading will likely result in re-contamination and a potential need to repeat the costly dredging. In order to ensure contaminated sediments are addressed, in this reconsideration load allocations are assigned to the sediment. Los Angeles County, the responsible party for the in-situ sediment, may comply with assigned load allocations by creating a contaminated sediment management plan, which it may commit to implementing through a Memorandum of Agreement (MOA) or, in the event an MOA is not

established, a clean-up and abatement order may be issued by the Regional Board. These options will be discussed in detail in section 4.10.3.

4. Proposed Changes

Based on data collected and evaluated since the adoption of the original TMDL, staff proposes several changes to the TMDL, including the extension of the geographical area of the TMDL to include the front basins (Basins A, B, C, G, and H) (see Section 4.1), the addition of a TMDL for DDT in the sediments (see Section 4.2), the addition of load allocations for the in-situ contaminated sediments (see Section 4.3), the addition of a copper water column TMDL (see Section 4.4), the revision of final water column, fish tissue, and sediment numeric targets for PCBs (see Sections 4.5-4.7), the revision of certain monitoring requirements (see Section 4.9), and the revision of the implementation plan to reflect changes to the technical elements of the TMDL (see Section 10). The proposed changes are discussed in detail below.

4.1 Geographical Extent of Impairment in Marina del Rey Harbor

Figure 4-1 shows a map of Marina del Rey Harbor. Currently all Clean Water Act Section 303(d) listings for Marina del Rey Harbor are for the back basins (Basins D, E, and F). Data collected since the adoption of the TMDL indicates that impairments are not confined to the back basins but are also present in the front basins (Basins A, B, C, G, and H). With the exception of lead, all pollutants listed in the Marina del Rey Harbor Toxic Pollutants TMDL (copper, zinc, chlordane, and PCBs) are also impairing the front basins. The data for each pollutant is discussed in detail in section 4.1.1, below.

Figure 4-1. Marina del Rey Watershed Map

Based on the analysis in section 4.1.1, and in order to ensure that the water body be treated holistically and that positive implementation actions in the back basins are not hindered by effects from the front basins, Regional Board staff recommends updating the Clean Water Act Section 303(d) listing for Marina del Rey Harbor during the next listing cycle to encompass toxic impairments throughout the harbor and addressing these impairments in this reconsideration of the Marina del Rey Harbor Toxic Pollutants TMDL.

The linkage and source analyses in the original TMDL are still appropriate and will not be repeated here. The original TMDL divided the watershed into five sub-watersheds based on the drainage patterns provided by the Los Angeles County Department of Public Works (LACDPW). These five sub-watersheds are described in the staff report of the original TMDL (LARWQCB 2005d). The proposed change in geographical area is the addition of sub-watershed Area 1B, which drains into the front basins of Marina del Rey Harbor.

4.1.1 Data Analysis Demonstrating Additional Impairments in Front Basins of Marina del Rey Harbor

The following is a review of new data available since the adoption of the TMDL, which confirm previously identified impairments and demonstrate additional impairments of the sediment by copper, zinc, chlordane and PCBs in the front basins of Marina del Rey Harbor. Each pollutant is assessed individually and for each, data are discussed separately for the back basins and then the front basins, in the discussion. Sources of data include the Coordinated Monitoring Plan, monitoring by Aquatic Bioassay & Consulting Laboratories, Bight '08, and the Sediment Characterization Study discussed in section 2.1.4.

The Regional Board has received two years of monitoring data from the Coordinated Monitoring Plan (2010-2011 and 2011-2012). The Coordinated Monitoring Plan was designed specifically to meet the monitoring requirements of the TMDL.

The County of Los Angeles Department of Beaches and Harbors contracted with Aquatic Bioassay & Consulting Laboratories, Inc. (ABC Labs) to conduct annual monitoring. Sediment chemistry data from 2004-2005, 2005-2006 and 2007-2008 is included in this evaluation. Due to budgetary issues no monitoring report is available for the 2006-2007 time period. This monitoring program concluded in 2008.

Bight '08, a collaborative regional monitoring project, studied a wide array of parameters affecting coastal ecology in the Southern California Bight. Sediment chemistry, toxicity, and benthic community data collected in Marina del Rey during Bight '08 is included in the following data review.

A sediment characterization study (Weston Solutions, 2008) included analyses of surficial samples as well as cores. Only surface data collected from Van Veen grab samplers is included for analysis in this report as it is most comparable to other studies conducted.

4.1.1.1. Copper Data for the Back Basins

The original TMDL addresses a copper impairment in the sediment. All copper measurements in the sediment collected through the Coordinated Monitoring Plan (Fig. 4-2a) and during Bight '08 (Fig. 4-2b) exceed 34 mg/kg, the TMDL numeric target for copper in sediment (County of Los Angeles Department of Public Works 2012a, County of Los Angeles Department of Public Works 2012b, Schiff et al. 2011). All measurements of copper in the sediment collected by ABC Labs (ABC Labs 2007, ABC Labs 2009) and during the Marina del Rey Harbor Sediment Characterization Study (Weston Solutions 2008) also exceed the TMDL numeric target.

Figure 4-2. Copper in Marina del Rey Harbor Sediment

Figure 4-2a. CMP

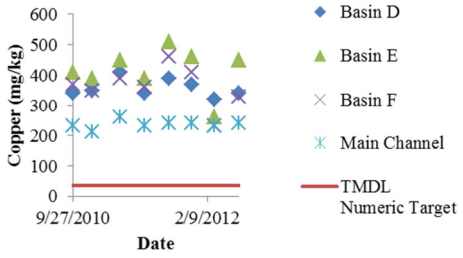
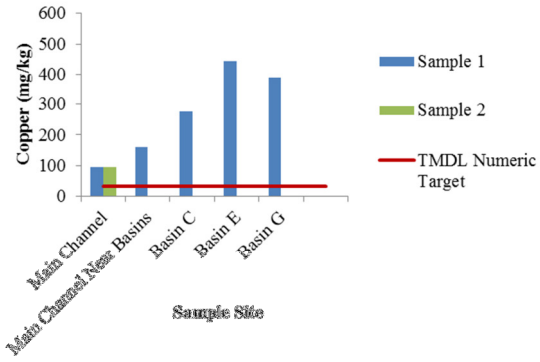


Figure 4-2b. Bight '08



4.1.1.2. Copper Data for the Front Basins

Sediment chemistry in the front basins of Marina del Rey Harbor was investigated by ABC Labs during annual sampling, during Bight '08 and as part of the Sediment Characterization Study. Five of the 24 copper samples exceed the Effects Range-Median (ERM) threshold of 270 mg/g (Table 4-1). In line with the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (303(d) listing policy) (SWRCB 2004), this is sufficient evidence for identifying copper in the sediment as an impairment in the front basins.

Table 4-1. Copper in the Sediment of the Marina del Rey Harbor Front Basins

	# Samples	# ERM Exceedances	Minimum # Exceedances Required to List (SWRCB 2004)
ABC Labs	11	1	2
Bight '08	4	2	2
Sed. Characterization Study	9	2	2
Total	24	5	2

4.1.1.3. Lead Data for the Back Basins

The original TMDL addresses a lead impairment in the sediment. All lead measurements in the sediment collected through the Coordinated Monitoring Plan (Fig. 4-3a) and during Bight '08 (Fig. 4-3b) exceed 46.7 mg/kg, the TMDL numeric target for lead in sediment (County of Los Angeles Department of Public Works 2012a, County of Los Angeles Department of Public Works 2012b, Schiff et al. 2011). Five out of the six samples of lead in the sediment included in each of the 2005-2006 and 2007-2008 reports from ABC Labs also exceed the TMDL numeric target (ABC Labs 2007, ABC Labs 2009). All measurements of lead in the sediment reported in the Marina del Rey Harbor Sediment Characterization Study exceed the TMDL numeric target (Weston Solutions 2008).

Figure 4-3. Lead in Marina del Rey Harbor Sediment

Figure 4-3a. CMP

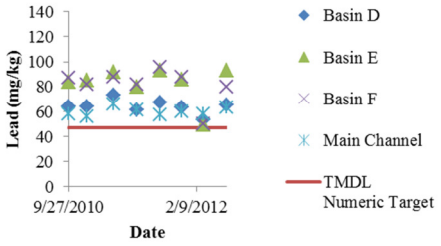
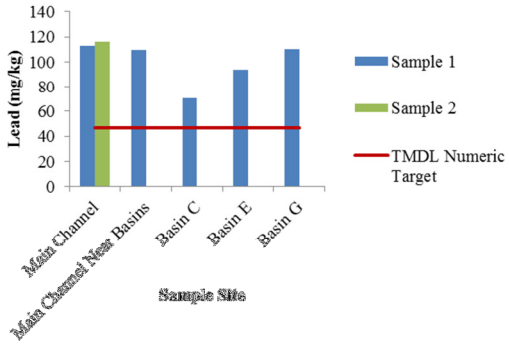


Figure 4-3b. Bight '08



Lead samples in the water column measured through the Coordinated Monitoring Plan are all below CTR acute and chronic saltwater criteria (210 µg/L and 8.1 µg/L, respectively) (County of Los Angeles Department of Public Works 2012a, County of Los Angeles Department of Public Works 2012b). There is currently no 303(d) listing for lead in the water column in Marina del Rey Harbor.

4.1.1.4. Lead Data for the Front Basins

Sediment chemistry in the front basins of Marina del Rey Harbor was investigated by ABC Labs during annual sampling, during Bight '08 and as part of the Sediment Characterization Study. All measurements of lead in the front basins were below the ERM of 218 µg/g (Table 4-2).

Table 4-2. Lead in Sediment in the Marina del Rey Harbor Front Basins

	# Samples	# ERM Exceedances	Minimum # Exceedances Required for 303d Listing (SWRCB 2004)
ABC Labs	11	0	2
Bight '08	4	0	2
Sed. Characterization Study	9	0	2
Total	24	0	2

4.1.1.5. Zinc Data for the Back Basins

The original TMDL addresses a zinc impairment in the sediment. All zinc measurements in the sediment from the back basins collected through the Coordinated Monitoring Plan (Fig. 4-4a) and during Bight '08 (Fig. 4-4b) exceed the TMDL numeric target for zinc in sediment of 105 mg/kg (County of Los Angeles Department of Public Works 2012a, County of Los Angeles Department of Public Works 2012b, Schiff et al. 2011). All samples of zinc in sediment reported in the 2005-2006 report, and five out of the 6 samples in the 2007-2008 report, from ABC Labs also exceed the TMDL numeric target for zinc in sediment (ABC Labs 2007, ABC Labs 2009). All measurements of zinc in the sediment reported in the Marina del Rey Harbor Sediment Characterization Study exceed the TMDL numeric target (Weston Solutions 2008).

Figure 4-4. Zinc in Sediment of the Marina del Rey Harbor Back Basins

Figure 4-4a. CMP

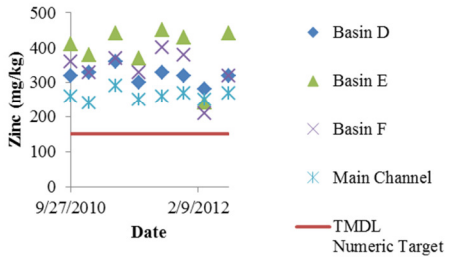
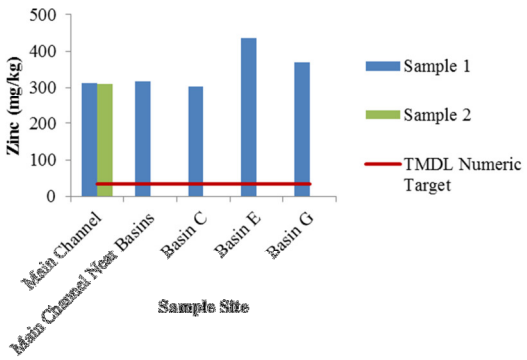


Figure 4-4b. Bight '08



4.1.1.6. Zinc Data for the Front Basins

Sediment chemistry in the front basins of Marina del Rey Harbor was investigated by ABC Labs during annual sampling, during Bight '08 and as part of the Sediment Characterization Study. Two samples from the monitoring by ABC Labs exceed the ERM of 218 mg/g (Table 4-3). In line with California's 303(d) listing policy, this is

sufficient evidence for identifying zinc in the sediment as an impairment in the front basins.

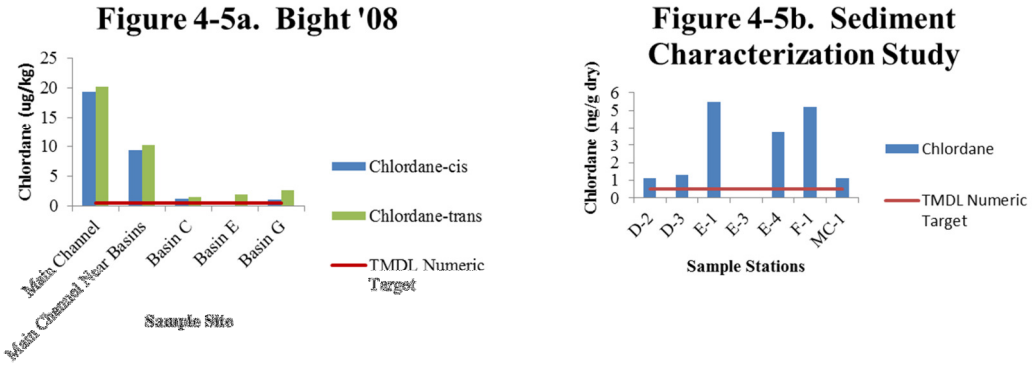
Table 4-3. Zinc in Sediment in the Marina del Rey Harbor Front Basins

	# Samples	# ERM Exceedances	Minimum # Exceedances Required for 303d Listing
ABC Labs	11	2	2
Bight '08	4	0	2
Sed. Characterization Study	9	0	2
Total	24	2	2

4.1.1.7. Chlordane Data for the Back Basins

The original TMDL addresses a chlordane impairment in the sediment. All chlordane measurements in the sediment collected through the Coordinated Monitoring Plan were non-detectable. As the TMDL numeric target for chlordane in sediment, 0.5 µg/kg, is below the current detection limit of approximately 1 µg/kg, these data are inconclusive regarding whether or not sediment quality improvements have occurred. However, measurements of chlordane in sediment collected during Bight '08 all exceed the TMDL numeric target (Fig. 4-5a) as do all but one of the back basin sites investigated in the Marina del Rey Harbor Sediment Characterization Study (Weston Solutions 2008) (Fig. 4-5b). Site E3 was recorded as non-detectable, which for the reason stated above is inconclusive regarding whether or not the chlordane concentration exceeds the TMDL numeric target.

Figure 4-5. Chlordane in Marina del Rey Harbor Sediment



Chlordane samples in the water column measured through the Coordinated Monitoring Plan are all non-detectable except for a measurement of 0.19 µg/L at sample station MdRH-B1 on October 27, 2011. There is currently no 303(d) listing for chlordane in the water column in Marina del Rey Harbor.

4.1.1.8. Chlordane Data for the Front Basins

Sediment chemistry in the front basins of Marina del Rey Harbor was investigated by ABC Labs during annual sampling, during Bight '08 and as part of the Sediment Characterization Study. Ten samples, combined from the monitoring by ABC Labs and the Sediment Characterization Study, exceed the ERM of 6 µg/g (Table 4-4). In line with California's 303(d) listing policy, this is sufficient evidence for identifying chlordane in the sediment as an impairment in the front basins.

Table 4-4. Chlordane in Marina del Rey Harbor Front Basins Sediment

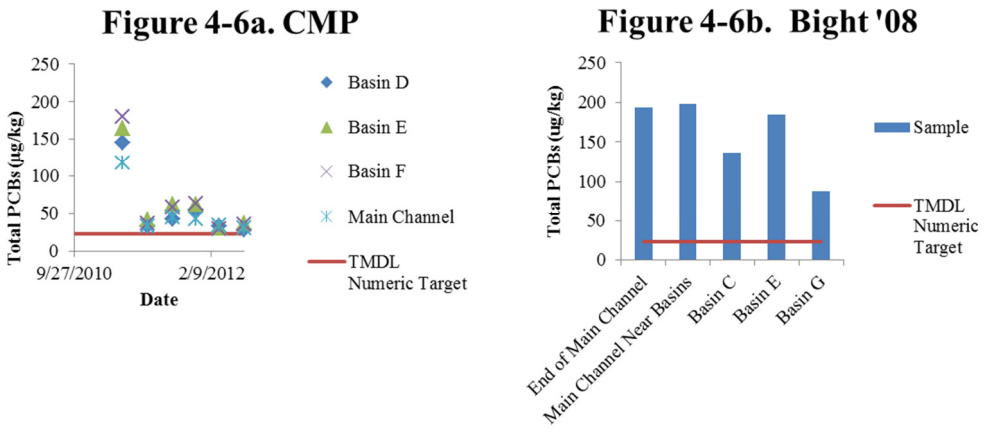
	# Samples	# ERM Exceedances	Minimum # Exceedances Required for 303d Listing
ABC Labs	11	5	2
Bight '08	4	0*	2
Sed. Characterization Study	9	5	2
Total	24	10	2

*Not measured as total chlordane, calculated as total of chlordane-cis and chlordane-trans

4.1.1.9. PCBs Data for the Back Basins

The original TMDL addresses a PCB impairment in the sediment. Some samples exceed the TMDL numeric target for PCBs in sediment, 22.7µg/kg, at every site sampled through the Coordinated Monitoring Plan (Fig. 4-6a). Remaining PCB sediment samples from the Coordinated Monitoring Plan are non-detectable. The fact that the TMDL numeric target for PCBs in sediment is below the current detection limit, and that all sites show detectable PCBs in the sediment at some point during the monitoring period indicates that the PCB impairment in the sediments continues to exist. Measurements of PCBs in sediment collected during Bight '08 all exceed the TMDL numeric target (Fig. 4-6b), confirming that the impairment still exists. One of four PCB samples analyzed in the sediment of Marina del Rey Back Basins reported in the 2005-2006 annual report and all samples in the 2007-2008 annual report from ABC Labs also exceed the TMDL numeric target for total PCBs in sediment (ABC Labs 2007, ABC Labs 2009). All Marina del Rey Harbor Back Basin measurements of total PCBs in the sediment reported in the Marina del Rey Harbor Sediment Characterization Study exceed the TMDL numeric target (Weston Solutions 2008).

Figure 4-6. PCBs in Marina del Rey Harbor Sediment



PCB samples in the water column measured through the Coordinated Monitoring Plan are all non-detectable. There is currently no 303(d) listing for PCBs in the water column in Marina del Rey Harbor.

All organisms in which bioaccumulation samples were measured through the Coordinated Monitoring Plan exceed the total PCB TMDL numeric target for fish tissue, 5.3 µg/kg in the original TMDL, at all sample sites. Consequently, fish tissue samples also exceed the Office of Environmental Health Hazard Assessment (OEHHA) Fish Contaminant Goal (FCG) of 3.6 µg/kg, the proposed new target, at all sample sites.

4.1.1.10. PCBs Data for the Front Basins

Sediment chemistry in the front basins of Marina del Rey Harbor was investigated by ABC Labs during annual sampling, during Bight '08 and as part of the Sediment Characterization Study. Two samples from Bight '08, both in the Main Channel outside the back basins, exceed the ERM of 180 µg/g (Table 4-5). In line with California's 303(d) listing policy (SWRCB 2004), this is sufficient evidence for identifying an impairment due to PCBs in the sediment in the front basins.

Table 4-5. PCBs in Marina del Rey Harbor Front Basins Sediment

	# Samples	# ERM Exceedances	Minimum # Exceedances Required for 303d Listing
ABC Labs	11	0	2
Bight '08	4	2	2
Sed. Characterization Study	9	0	2
Total	24	2	2

4.1.1.11. Comparison of Data With Sediment Quality Objectives

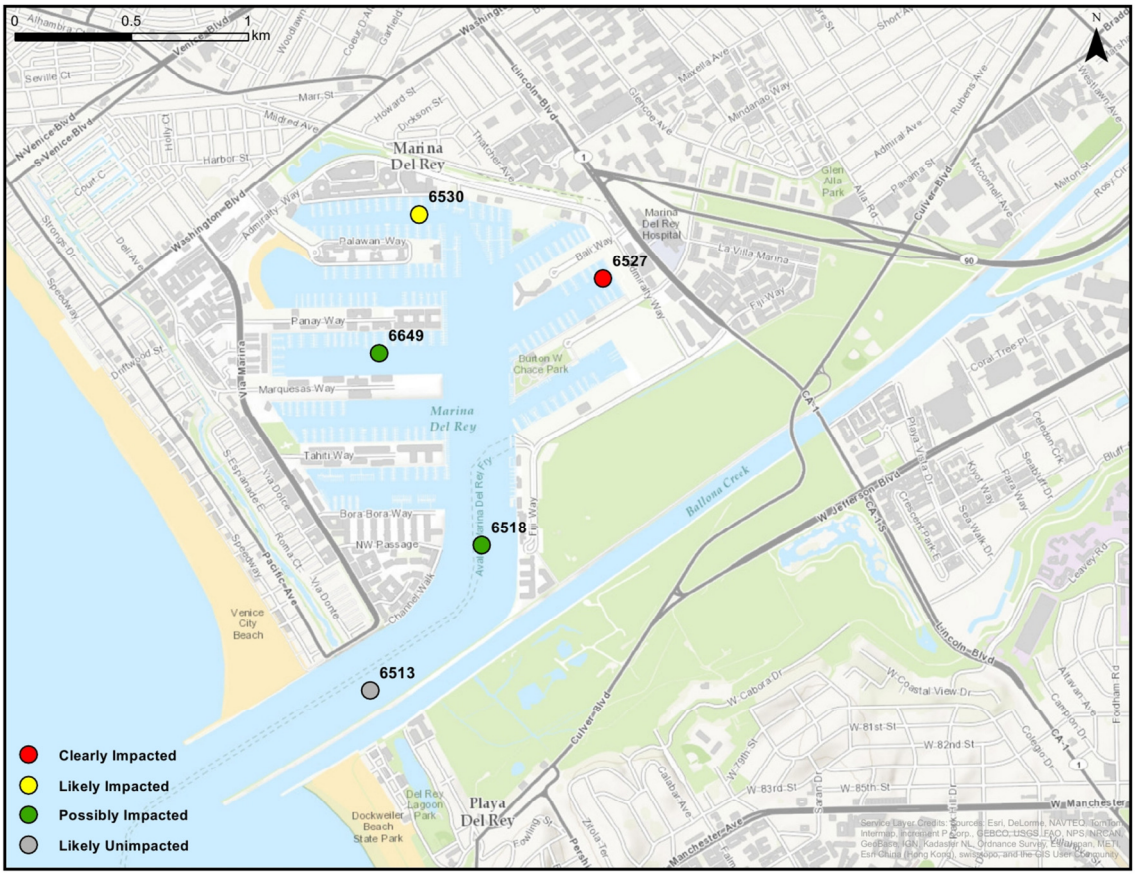
In conjunction with regional monitoring conducted through Bight '08, researchers with SCCWRP characterized sediments in Marina del Rey Harbor to determine whether or not SQOs were being met (Schiff et al. 2011). Samples were collected and evaluations made of sediments at five sites: Basin C, Basin E, Basin G, near the front basin in the main channel, and near the outlet of the harbor. The site near the outlet of the marina was classified as likely unimpacted. Both the main channel and Basin C were classified as possibly impacted. Basin E was classified as likely impacted. Basin G was classified as clearly impacted (Table 4-6).

Table 4-6. Sediment Quality Objectives Status in Marina del Rey Harbor

Site	SQO Category	Toxicity	Chemistry	Benthic Community
Basin C	Possibly Impacted	Nontoxic	Moderate Exposure	Moderate Disturbance
Basin E	Likely Impacted	Nontoxic	High Exposure	Moderate Disturbance
Basin G	Clearly Impacted	Moderate Toxicity	High Exposure	Moderate Disturbance
Main Channel (near front basins)	Possibly Impacted	Low Toxicity	High Exposure	Low Disturbance
Main Channel (Harbor Outlet)	Likely Unimpacted	Nontoxic	High Exposure	Low Disturbance

Only the site in the forward area of the main channel, categorized as Likely Unimpacted, is considered as achieving the protective condition of the station according to the definition above. The remaining four sites are all considered degraded (Figure 4-7). This analysis of the SQO data indicates SQO impairment throughout Marina del Rey Harbor and provides additional rationale for expanding the TMDL requirements to encompass the entire harbor.

Figure 4-7. Marina del Rey Watershed Map: Bight '08 SQO Results



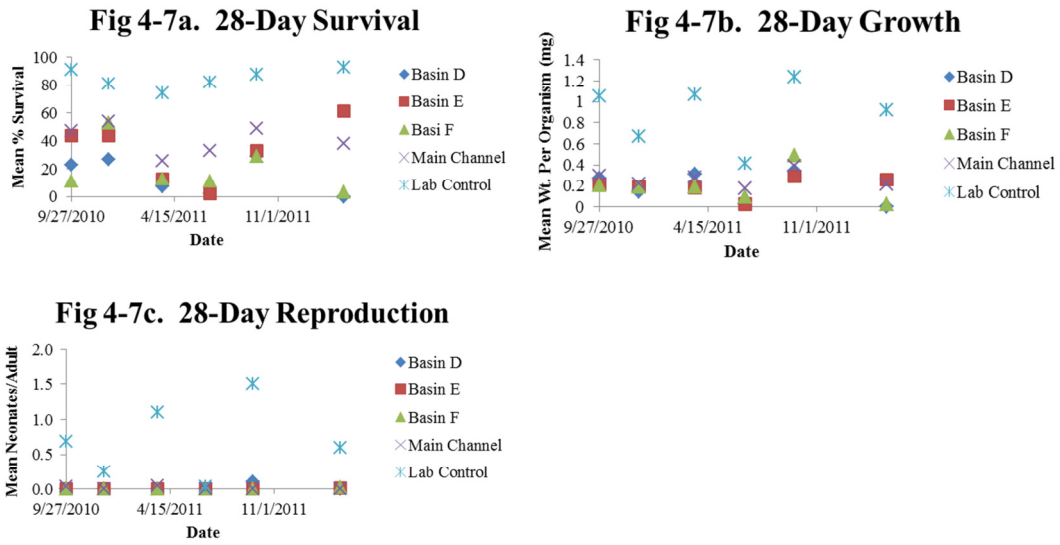
As detailed above, SQOs rely on three lines of evidence- sediment chemistry, sediment toxicity, and benthic community. Data from each of the lines of evidence provides valuable information regarding sediment quality. Sediment chemistry data has been discussed earlier in this section. Sediment toxicity and benthic community analyses are discussed below.

4.1.1.12. Sediment Toxicity Data

4.1.1.12.1. Coordinated Monitoring Plan

Toxicity testing was conducted through the Coordinated Monitoring Plan. Three types of tests were conducted utilizing the marine amphipod *Leptocheirus plumulosus*: 28-day survival, 28-day growth, and 28-day reproduction (Fig. 4-7). All three tests indicated inhibited survival, growth, and reproduction of *L. plumulosus* relative to laboratory controls.

Figure 4-8. *L. plumulosus* toxicity tests



Ten-day survival tests were carried out utilizing the amphipod *Eohaustourius estuarius.* This test is approved for use in determining the status of sediments relative to the State's Sediment Quality Objectives. All *E. estuarius* survival tests in Basin D, Basin F, and in the main channel were categorized as Nontoxic or Low Toxicity. Two of six samples from Basin E indicated Moderate Toxicity while the remaining four were categorized as Nontoxic.

Forty-eight hour embryo development tests were conducted utilizing the mussel *Mytilus galloprovincialis*. This test is approved for use in determining the status of sediments relative to the State's Sediment Quality Objectives. Results from all *M. galloprovincialis* embryo development tests were categorized as Nontoxic.

Gamete fertilization tests were conducted utilizing purple sea urchins, *Strongylocentrotus purpuratus* (Fig. 4-8). Results of *S. purpuratus* toxicity tests with Marina del Rey Harbor sediments are highly variable with results suggesting both toxicity and non-toxicity at all four sites.

Figure 4-9. 20-Minute Gamete Fertilization *Strongylocentrotus purpuratus*

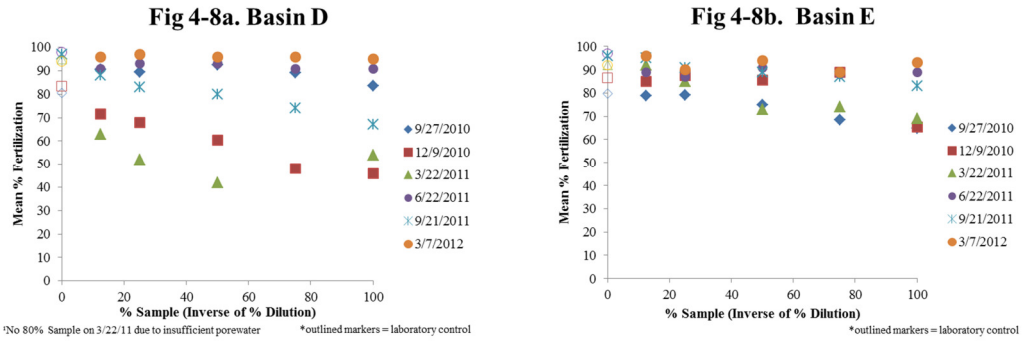


Fig 4-8c. Basin F

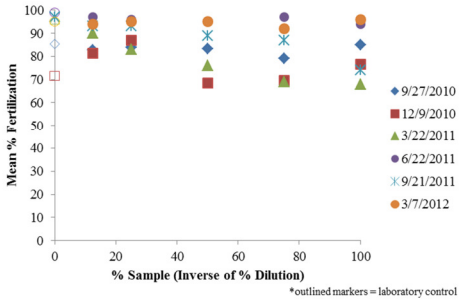
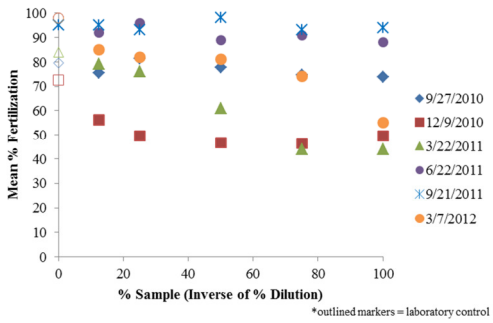


Fig 4-8d. Main Channel



As discussed above, the results of the toxicity tests conducted through the Coordinated Monitoring Plan show a great deal of variation. However, the consistent evidence of inhibited survival, growth, and reproduction of *L. plumulosus* when introduced in the laboratory to Marina del Rey Harbor Back Basin sediments indicates that these sediments are toxic.

4.1.1.12.2. Bight '08 Data

Two toxicity tests were used to characterize sediment throughout the Southern California Bight during Bight '08: a 10-day survival test using the amphipod *Eohaustorius estuarius* and a 10-day embryo development test using *Mytilus galloprovincialis* (Bay 2008). The results of the Bight '08 toxicity tests were used to classify sediments according to toxicity categories included in the State's Sediment Quality Objectives (SQOs). The categories determined for sites in Marina del Rey Harbor are listed in Table 4-7. Only one of the sites studied in Marina del Rey Harbor was in the Back Basins, station 6530 located in Basin E. On the basis of the Bight '08 data, the Marina del Rey Harbor sediments investigated were classified as Nontoxic or Low Toxicity, with the exception of Basin G, which is outside the back basin area addressed by the current TMDL. The State's EBE Plan – Part 1 Sediment Quality allows for any one of three approved survival tests to be used in determining toxicity categories. Results from the CMP toxicity testing, described above, suggest that had *Leptocheirus plumulosus* been used for the survival tests, the results of these SQO analyses may have differed from the results shown in Table 4-7.

Table 4-7. Bight '08 Sediment Toxicity Classification

Location	Bight '08 Station #	SQO Toxicity Category
End of Main Channel	6513	Nontoxic
Main Channel Near Basins	6518	Low Toxicity
Basin C	6649	Nontoxic
Basin E	6530	Nontoxic
Basin G	6527	Moderate Toxicity

4.1.1.12.3. Sediment Characterization Study

Eohaustorius estuarius survival tests were conducted throughout Marina del Rey Harbor as part of the Sediment Characterization Study (Weston Solution 2008). Thirteen of the sixteen tests conducted yielded less than 81% survival, indicating a minimum of Moderate Toxicity according to the State's SQO classification. Three tests showed less than 59% survival, placing them in the High Toxicity category used in determining whether sediments meet the State's SQOs - these tests were conducted with sediment from Basin B, Basin F, and Basin G. The three tests showing greater than 81% survival were located in Basin A, Basin H, and the Main Channel.

4.1.1.13. Benthic Community Assessment

Benthic community condition is a line of evidence incorporated in the State's SQOs. The current CMP does not include benthic community analyses. As will be discussed later, it is recommended that benthic community analyses be added to the CMP such that complete SQO evaluations can be conducted utilizing future CMP data. The following discussion includes data from both the front and back basins of Marina del Rey Harbor.

Benthic community analyses consistent with that required by the State's SQOs, were conducted by the Southern California Coastal Water Research Project (SCCWRP) during Bight '08. The results of these analyses are presented in Table 4-8 for the sites investigated in Marina del Rey Harbor. The SQO procedure calculates four different biological indices. The SQO benthic category, final column in Table 4-8, is a median of these indices. Three sites in Marina del Rey Harbor basins were investigated during Bight '08, Basins C and G of the front basins and Basin E of the back basins. The benthic community of all three sites was categorized as exhibiting "moderate disturbance." At the two sites in the main channel, the benthic community was categorized as exhibiting "low disturbance."

Table 4-8. Bight '08 Benthic Community Analysis

	RBI Score	RBI Category	IBI Score	IBI Category	BRI Score	BRI Category	RIVPACS SCORE	RIVPACS Category	SQO Benthic Category
Basin C	0.05	High Disturbance	2	Moderate Disturbance	63.60	Moderate Disturbance	0.54	Moderate Disturbance	Moderate Disturbance
Basin E	0.02	High Disturbance	1	Low Disturbance	65.71	Moderate Disturbance	0.42	Moderate Disturbance	Moderate Disturbance
Basin G	0.12	Moderate Disturbance	1	Low Disturbance	58.51	Moderate Disturbance	0.56	Moderate Disturbance	Moderate Disturbance
Main Channel (near front basins)	0.57	Reference	1	Low Disturbance	35.92	Reference	0.78	Low Disturbance	Low Disturbance
Main Channel (Harbor Outlet)	0.61	Reference	1	Low Disturbance	34.26	Reference	0.65	Moderate Disturbance	Low Disturbance

Results of the benthic community evaluation conducted as part of the Sediment Characterization Study (Weston Solutions 2008) are presented in Table 4-9. A map of the station locations can be found in the study report; however, the naming scheme includes either the basin (A, B, C, D, E, F, G, or H) or "MC," indicating the station is in the main channel of the harbor. Thirteen of the sixteen sites in Marina del Rey Harbor were categorized as exhibiting either moderate or high disturbance of the benthic community. One site in the main channel, MC-4, was categorized as a "reference" site.

Table 4-9. Sediment Characterization Study Benthic Community Analysis

Station Name	IBI Score	RBI Score	BRI Score	RIVPAC Score	SQO Benthic Category
A-2	1	0.10	43.98	0.73	Moderate Disturbance
B-2	2	0.08	46.00	0.36	Moderate Disturbance
C-2	0	0.09	55.32	0.61	Moderate Disturbance
D-2	1	0.10	52.64	0.61	Moderate Disturbance
D-3	2	0.03	47.54	0.24	High Disturbance
E-1	1	0.09	49.63	0.48	Moderate Disturbance
E-3	2	0.03	36.86	0.12	High Disturbance
E-4	2	0.04	38.46	0.36	Moderate Disturbance
F-1	0	0.10	54.95	0.61	Moderate Disturbance
G-2	1	0.07	47.81	0.61	Moderate Disturbance
H-2	0	0.38	47.04	0.73	Low Disturbance
MC-1	1	0.08	48.42	0.61	Moderate Disturbance
MC-2	1	0.10	52.38	0.48	Moderate Disturbance

MC-3	1	0.12	41.33	0.24	Moderate Disturbance
MC-4	0	0.45	36.10	0.73	Reference
MC-5	1	0.23	31.03	0.85	Low Disturbance

ABC Labs used benthic data collected during their 2007-2008 monitoring to calculate three of the benthic indices (BRI, IBI, RBI) necessary for determining the benthic component of the SQOs (ABC Labs 2009). The range of values reported for the RBI score are not consistent with those utilized for SQO evaluation (SWRCB 2009). Due to uncertainty regarding the calculation of the benthic indices, those values are not presented in this report. However, raw data included in the report from ABC Labs may be useful for potential future benthic community analyses.

4.1.2 Summary of Additional Impairments in Front Basins of Marina del Rey Harbor

In conclusion, new data available since the adoption of the TMDL demonstrate additional sediment impairments in the front basins of Marina del Rey Harbor. A TMDL revision is proposed for the additional geographic area. Sections 4.1.3 through 4.1.6 describe the elements of the revised TMDL to include the expanded area (back basins and front basins).

4.1.3 Numeric Targets for Sediment Impairments Based on Revised Geographic Area

Expansion of the area of impairment in Marina del Rey Harbor to encompass all of the basins necessitates re-evaluation of the numeric targets for these pollutants. The numeric sediment targets for the front basins in the current TMDL are set equivalent to Effects Range-Low (ERL) sediment quality guidelines derived by the National Oceanic and Atmospheric Administration. These concentration-based targets are appropriate for the front basins as well as the back basins and the application of the numeric targets should be updated to reflect the newly defined geographic boundary of the impairment.

The front basin sediments were not found to be impaired due to lead; however, it remains on the 303(d) list for the back basins and is being addressed by the current TMDL. For purposes of continuity within the TMDL as well as addressing the watershed holistically, this TMDL addresses all constituents on a watershed basis and consequently, the numeric target for lead in sediment is applied to the entirety of the area addressed by the TMDL rather than remaining confined to the back basins. The TMDL for lead in the front basins is set to maintain existing conditions. This will eliminate any necessity to deal with the back basins as an isolated component of the marina. No additional implementation actions or increased costs are anticipated as a result of aligning the extent of the lead impairment with that of all other constituents addressed through the TMDL. Table 4-10 lists the sediment numeric targets for the entire Marina del Rey Harbor.

Table 4-10. Numeric Targets for Sediment Quality in Marina del Rey

	Pollutant	Numeric Target
Metals	Copper	34 mg/kg
	Lead	46.7 mg/kg
	Zinc	150 mg/kg
Organics	Chlordane	0.5 µg/kg
	Total PCBs	3.2 µg/kg[1]

4.1.4 Loading Capacity for Sediment Impairments Based on Revised Geographic Area

The loading capacity of the sediments of Marina del Rey Harbor is based on annual average total suspended solids (TSS) loading to the harbor. TSS values were estimated from the PLOAD model prepared for U.S. EPA Region IX and included in the original TMDL (LARWQCB 2005c) (Table 4-11). Future revisions to TSS estimates from Marina del Rey Harbor may be warranted based on the results of the storm-borne sediment pilot study discussed in section 2.1.3.

Table 4-11. Average Annual TSS Loading to Marina del Rey Harbor (Front and Back Basins)

Subwatershed	TSS (lb/yr)	TSS (kg/yr)
Area 1A	21,933	9,948
Area 1B	45,074	20,,445
Area 3	7,788	3,533
Area 4	111,742	50,685
Total	186,537	84,612

Assuming fine sediments carried by storm water to be the main source of contaminated sediments to the harbor, pollutant specific loading capacity was calculated by multiplying the average annual total suspended solids load of 84,612 kg/yr discharged to the harbor by the numeric sediment targets (Table 4-10). The resultant numbers are presented in Table 4-12. The TMDL for sediment is set equal to the loading capacity.

Table 4-12. Loading Capacities for Marina del Rey Sediment Based on Revised Geographic Area

	Pollutant	Loading Capacity
Metals	Copper	2.88 kg/yr
	Lead	3.95 kg/yr
	Zinc	12.69 kg/yr
Organics	Chlordane	0.04 g/yr
	Total PCBs	1.92 g/yr

[1] Fish tissue associated sediment target, see section 4.7.

4.1.5 Updated Load Allocations for Marina del Rey Sediment Impairments Based on Revised Geographic Area

A mass-based load allocation is developed for direct atmospheric deposition (Table 4-13). An estimate of direct atmospheric deposition was based on the percent area of surface water within the watershed area, which is approximately 203 acres or 11.7% of the total watershed area according to the report on the PLOAD model prepared for U.S. EPA Region IX and included as an appendix in the original TMDL (LARWQCB 2005c). The load allocation for atmospheric deposition is calculated by multiplying this percentage by the total loading capacity, according to the following equation:

Direct Atmospheric Deposition = 0.117 x TMDL

Table 4-13. Load Allocations for Direct Atmospheric Deposition

	Pollutant	Load Allocation
Metals	Copper	0.34 kg/yr
	Lead	0.46 kg/yr
	Zinc	1.49 kg/yr
Organics	Chlordane	0.005 g/yr
	Total PCBs	0.225 g/yr

4.1.6 Waste Load Allocations for Marina del Rey Sediment Impairments

Waste load allocations are assigned for all point sources that drain to the front and back basins.

4.1.6.1. Waste Load Allocation for Storm Water

A mass-based waste load allocation (WLA), for the impairing pollutants in sediment is developed for the storm water permittees by subtracting the load allocation for direct atmospheric deposition from the TMDL according to the following equation (Table 4-14):

Combined Storm Water Sources = TMDL - Direct Atmospheric Deposition

Table 4-14. Grouped Storm Water Allocation Based on Revised Geographic Area

	Pollutant	Grouped Storm Water WLA
Metals	Copper	2.54 kg/yr
	Lead	3.49 kg/yr
	Zinc	11.20 kg/yr
Organics	Chlordane	0.04 g/yr
	Total PCBs	1.70 g/yr

The combined storm water waste load allocation (Table 4-14) is divided among the four storm water permits (MS4, Caltrans, general industrial, and general construction)

based on an estimate of the percentage of land area covered under each permit (Table 4-15). The percent land area has been updated since the original TMDL based on new area draining to the front basins and a revision in the number of permittees enrolled in the general construction storm water permit. Based on these areas, the waste load allocations for each group of storm water permittees are presented in Table 4-16.

Table 4-15. Areal Extent of Watershed and Percent Area Covered by Storm Water Permits Based on Revised Geographic Area

Category	Area (acres)	Percent Area
Los Angeles County MS4 Permit	1177	77.1
Caltrans Storm Water Permit	19	1.2
General Construction Storm Water Permit	121	7.9
General Industrial Storm Water Permit	6	0.4
Water (for direct atmospheric deposition)	203	13.3
Total	1527	100.0

Table 4-16. Combined Storm Water Allocation Apportioned Based on Percent of Watershed based on revised geographic area Based on Revised Geographic Area

Metals	**General Construction Permittees (kg/yr)**	**General Industrial Permittees (kg/yr)**	**Caltrans (kg/yr)**	**MS4 Permittees (kg/yr)**
Copper	0.20	0.01	0.032	1.96
Lead	0.28	0.006	0.04	2.69
Zinc	0.89	0.018	0.14	8.64
Organics	**General Construction Permittees (g/yr)**	**General Industrial Permittees (g/yr)**	**Caltrans (g/yr)**	**MS4 Permittees (g/yr)**
Chlordane	0.0030	0.0002	0.0005	0.0288
Total PCBs	0.0002	0.0069	0.0001	1.31

Each storm water permittee enrolled under the general construction or industrial storm water permits will receive individual waste load allocations on a per acre basis, based on the acreage of their facility as presented in Table 4-17.

Table 4-17. Per Acre Waste Load Allocation for an Individual General Construction or Industrial Storm Water Permittee Based on Revised Geographic Area

	Pollutant	WLA
Metals		
	Copper	1.7 g/yr/ac
	Lead	2.3 g/yr/ac
	Zinc	7.3 g/yr/ac
Organics		
	Chlordane	0.02 mg/yr/ac
	Total PCBs	1.1 mg/yr/ac

4.1.6.2. Waste Load Allocation for Other NPDES Permits

As was done in the original TMDL, the concentration-based sediment waste load allocations for the minor and general non-storm water NPDES permits for the front and back basins are set equal to the sediment numeric targets (Table 4-18).

Table 4-18. Concentration-Based Waste Load Allocation for Marina del Rey Sediment

	Pollutant	WLA
Metals		
	Copper	34 mg/kg
	Lead	46.7 mg/kg
	Zinc	150 mg/kg
Organics		
	Chlordane	0.5 µg/kg
	Total PCBs	3.2 µg/kg

4.2 DDT Sediment Impairment

DDT in Marina del Rey Harbor sediment was included on the 1998 303(d) list. When the Marina del Rey Harbor Toxic Pollutants TMDL (LARWQCB 2005c) was put into place in 2005 it included a finding of non-impairment for DDT in Marina del Rey Harbor sediments and the pollutant was therefore not addressed by the TMDL. New data has been collected since the adoption of the TMDL indicating that a DDT impairment does exist in Marina del Rey Harbor sediments. Consequently, it is recommended that a DDT impairment be included on the 303(d) list for Marina del Rey Harbor and addressed through this TMDL.

4.2.1 Data Supporting DDT Impairment in the Sediment in Marina del Rey Harbor

The original TMDL did not address DDT as there was a finding of non-impairment for DDT in Marina del Rey Harbor. As such, DDT data is not currently being collected through the Coordinated Monitoring Plan. DDT data has been analyzed in the front and back basin sediments of Marina del Rey Harbor through the monitoring conducted by ABC Labs (ABC Labs 2006, ABC Labs 2007, ABC Labs 2009) and as part of the

Sediment Characterization Study (Weston Solutions 2008). The Sediment Characterization Study included sample sites near the outlet of the Marina. These data are not included here as dredging of the marina outlet has occurred since this sampling.

Sediments were analyzed for total DDT as well as p,p' DDD, p,p' DDE, and p,p' DDT. Only total DDT and p,p' DDE will be discussed here as the data indicates impairment exists due to these constituents. Figure 4-9 illustrates findings for total DDT. Between the two studies, forty-two samples were analyzed for total DDT. Four of the forty-two samples exceeded the ERM of 46.1 µg/kg (Table 4-19). Figure 4-10 illustrates findings for p,p' DDE. When the two studies are combined, eight of forty-two samples exceed the ERM of 27 µg/kg (Table 4-19). The number of exceedances for total DDT and p,p'-DDE indicate that Marina del Rey Harbor is impaired due to these constituents.

Figure 4-10. Total DDT in Marina del Rey Harbor

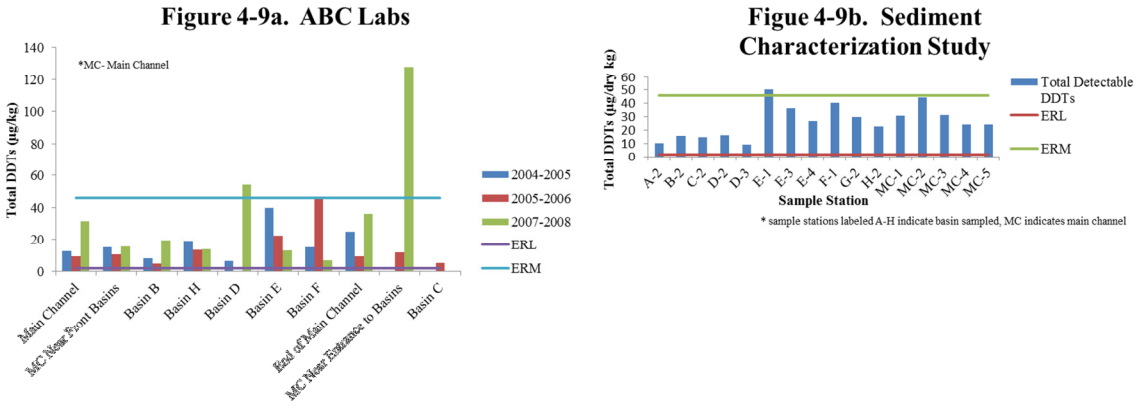


Figure 4-11. p,p'-DDE in Marina del Rey Harbor

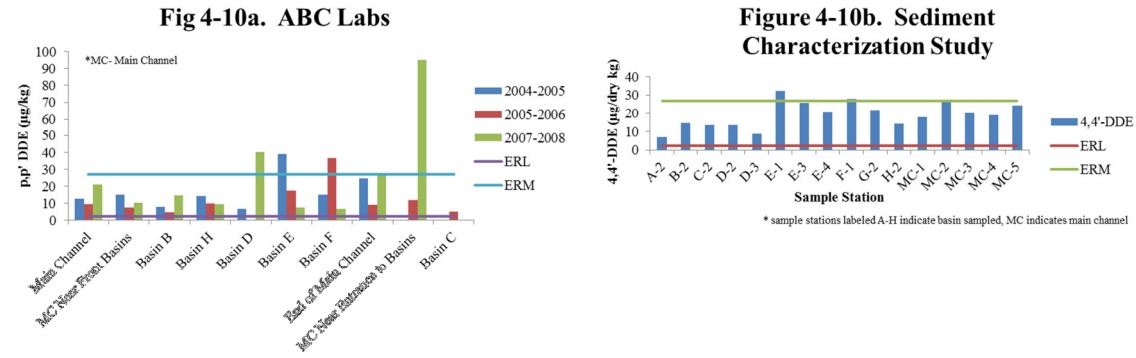


Table 4-19. Basis for Impairment Finding due to DDT in Marina del Rey Harbor

	# Samples	# Total DDT Exceedances of ERM	# p,p' DDE Exceedances of ERM	Minimum # Exceedances Required to List (SWRCB 2004)
ABC Labs	26	**3**	**5**	3
Sediment Characterization Study	16	1	**3**	2
Total	42	**4**	**8**	4

* Values in bold indicate sufficient exceedances to identify impairment per the State's listing policy.

4.2.2 303(d) Listing of DDT in Marina del Rey Harbor

The following narrative objective in the Basin Plan applies to DDTs in sediment:

No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

For purposes of evaluating impairments, the above narrative objective can be quantitatively analyzed by using effects range-median (ERM) values found in NOAA's Sediment Quality Guidelines (NOAA 1999). This is consistent with the evaluation of other toxic pollutants in the Marina del Rey Watershed as well as throughout the region.

Available data for DDT in Marina del Rey Harbor sediments was reviewed in section 4.2.1 of this report. Forty-two samples have been collected since the adoption of the TMDL. Four of these samples exceeded the ERM for Total DDT and eight samples exceeded the ERM value for p,p' DDE (Table 4-19). The minimum number of exceedances requiring listing of a pollutant on the 303(d) list for a particular water body is dependent on the total number of samples evaluated (SCWRB 2004). When evaluating forty-two samples, four or more exceedances are required for 303(d) listing of a toxicant. Following this policy, both total DDT and p,p' DDE should be listed on California's 303(d) list for Marina del Rey Harbor.

4.2.3 Source Assessment for DDT Sediment Impairment

Dichlorodiphenyltrichloroethane, DDT, is a legacy insecticide banned from agricultural usage in the United States in 1972. DDT can still be legally manufactured in the United States for sale or use by foreign countries. According to the National Pesticide Information Center, DDT is bioaccumlative, affects the nervous system by interfering with normal nerve impulses, and has been categorized by U.S. EPA as having been shown to cause cancer in laboratory animals. The half-life of DDT in aquatic environments is approximately 150 years.

DDT impairments are prevalent throughout Los Angeles and Ventura Counties. In the area regulated by the California Regional Water Quality Control Board, Los Angeles Region, TMDLs for DDTs are in place for: Ballona Creek Estuary (LARWQCB 2005a), Calleguas Creek (LARWQCB 2005b), Colorado Lagoon (LARWQCB 2009a), McGrath Lake (LARWQCB 2009b), Machado Lake (LARWQCB 2010), Dominguez Channel

(LARWQCB 2011), Greater Los Angeles Harbor (LARWQCB 2011), Greater Long Beach Harbor (LARWQCB 2011), Oxnard Drain #3 (U.S. EPA 2011b), Santa Monica Bay (U.S. EPA 2012a), Peck Road Park Lake (U.S. EPA 2012b), and Puddingstone Reservoir (U.S. EPA 2012b).

There are fifteen NPDES permits in the Marina del Rey Watershed. The current NPDES permits are listed in Table 4-20. This is an update of Table 4-1 in the Staff Report of the original TMDL (LARWQB 2005c). These permits for existing discharges and any permits issued in the future for new discharges will be utilized by the Regional Board to implement this TMDL.

Table 4-20. NPDES Permits in the Marina del Rey Watershed

Type of NPDES Permit	Number of Permits (2013)
Phase I Municipal Separate Storm Sewer System (MS4)	1
California Department of Transportation Storm Water	1
General Construction Storm Water	8
General Industrial Storm Water	4
Total	**15**

The following beneficial uses designated in Marina del Rey Harbor are impaired by DDT contamination: water contact recreation (REC 1), marine habitat (MAR), wildlife habitat (WILD), commercial and sport fishing (COMM), and shellfish harvesting (SHELL).

The sources of DDTs in Marina del Rey Harbor are the same as those of other organic pollutants (e.g., chlordane and PCBs) causing water quality impairments in Marina del Rey Harbor. Although it is no longer used in the US, DDT persists in the environment, adhering strongly to soil particles. It is assumed that the only source of DDT in the watershed is storm water runoff carrying historically deposited DDT most likely attached to eroded sediment particles.

4.2.4 Numeric Target for DDTs Sediment Impairment

Dichlorodiphenyldichloroethylene (DDE) and dichlorodiphenyldichloroethane (DDD) are the major breakdown products of DDT in the environment as well as being components of the original DDT pesticide mixtures. Water quality guidelines are available based on total DDT (DDT+DDD+DDE) as well as for the individual compounds. As discussed in section 4.2.1, concentrations of both DDE and total DDT in Marina del Rey Harbor sediments exceed ERL (effects range low) sediment quality guidelines. Concentrations of the individual compounds DDD and DDT were below ERLs in Marina del Rey Harbor; therefore, TMDLs are necessary only for DDE as an individual compound and Total DDTs. The numeric targets in the TMDL are set equivalent to the ERLs (Table 4-21). Consistent with other TMDLs in the region, including those for organic pollutants in Marina del Rey Harbor, selection of the ERL is

considered to be a conservative numeric target and thus inclusive of an implicit margin of safety.

Table 4-21. Numeric Targets for DDT Sediment Impairment

	ERL (ug/kg)
p,p' DDE	2.2
Total DDT (DDD + DDE + DDT)	1.58

As will be discussed in section 4.10.1, SQOs are proposed as an alternate means of demonstrating compliance with the sediment TMDL. This option will apply to DDTs as well as all other pollutants addressed in the Marina del Rey Harbor Toxic Pollutants TMDL. Responsible parties have an option to comply with the TMDL by demonstrating that the protective condition identified in the SQOs is met in the harbor sediments. If such evidence is provided to the Regional Board, the responsible parties will have met the TMDL requirements and would not need to demonstrate compliance with the chemistry based numeric targets or waste load allocations.

4.2.5 Loading Capacity for DDT Sediment Impairment

The p,p' DDE and total DDT loading capacity of Marina del Rey Harbor sediment was calculated by multiplying the average annual total suspended solids load of 84,612 kg/yr (Table 4-11) discharged to the harbor by the numeric sediment targets (Table 4-22). The same methodology has been used to determine the loading capacity of Marina del Rey Harbor sediment for all metal and organic pollutants addressed by this TMDL (section 4.1.3). The TMDL is set equal to the loading capacity.

Table 4-22. p,p-DDE and Total DDT Loading Capacity for Marina del Rey Harbor

Pollutant	Loading Capacity (g/yr)
p,p' DDE	0.13
Total DDT (DDD + DDE + DDT)	0.19

4.2.6 Load Allocations for Direct Atmospheric Deposition for DDT Sediment Impairment

A mass-based load allocation is developed for direct atmospheric deposition of p,p' DDE and total DDT (Table 4-23). An estimate of direct atmospheric deposition was based on the percent area of surface water within the watershed area of the harbor (front and back basins), which is approximately 203 acres or 11.7% of the total watershed area according to the report on the PLOAD model prepared for U.S. EPA Region IX and included as an appendix in the original TMDL (LARWQCB 2005c). The load allocation for atmospheric deposition is calculated by multiplying this percentage by the total loading capacity, according to the following equation:

Direct Atmospheric Deposition = 0.117 x TMDL

Table 4-23. Load Allocations for Atmospheric Deposition of DDT

Pollutant	Load Allocation (g/yr)
p,p' DDE	2.2
Total DDT (DDD + DDE + DDT)	1.58

4.2.7 Waste Load Allocations for DDT Sediment Impairment

Waste load allocations are assigned for all point sources that drain to the front and back basins.

4.2.7.1. Waste Load Allocation for Storm Water

Mass-based waste load allocations for total DDT (DDD+DDE+DDT) and p'p-DDE in sediment are developed for the storm water permittees by subtracting the load allocation for atmospheric deposition from the TMDL according to the following equation (Table 4-24):

Combined Storm Water Sources = TMDL - Direct Atmospheric Deposition

Table 4-24. Grouped Storm Water Allocation

Pollutant	WLA
Total DDT	0.12 g/yr
p,p'-DDE	0.16 g/yr

The combined storm water waste load allocation (Table 4-24) is divided among the four storm water permits (Los Angeles County MS4, Caltrans, general industrial, and general construction) based on an estimate of the percentage of land area covered under each permit (Table 4-15 section 4.1.5.1). Based on these areas, the waste load allocations for each storm water permit are presented in Table 4-25.

Table 4-25. Combined Storm Water Allocation Apportioned Based on Percent of Watershed

	General Construction Permit (g/yr)	General Industrial Permit (g/yr)	Caltrans (g/yr)	LA County MS4 Permit (g/yr)
Total DDT	0.0094	0.0005	00.0015	0.0910
p,p'-DDE	0.0130	0.0007	0.0020	0.1267

Each storm water permittee enrolled under the general construction or industrial storm water permits will receive individual waste load allocations on a per acre basis, based on the acreage of their facility as presented in Table 4-26.

Table 4-26. Per Acre Waste Load Allocation for an Individual General Construction or Industrial Storm Water Permittee

Pollutant	WLA
Total DDT	0.08 mg/yr/ac
p,p'-DDE	0.11 mg/yr/ac

4.2.7.2. Waste Load Allocation for Other NPDES Permits

Concentration-based sediment waste load allocations have been developed for the minor NPDES permits and general non-storm water NPDES permits that discharge to Marina del Rey Harbor to ensure that these do not contribute loadings to the system that would cause or contribute to exceedances of water quality standards. The concentration-based waste load allocations are equal to the sediment numeric targets (Table 4-27).

Table 4-27. Concentration-Based Waste Load Allocation for Marina del Rey Sediment

	Pollutant	WLA
Metals		
	Copper	34 mg/kg
	Lead	46.7 mg/kg
	Zinc	150 mg/kg
Organics		
	Chlordane	0.5 µg/kg
	Total PCBs	3.2 µg/kg

4.3 Sediment Load Allocations

In order to ensure contaminated sediments are addressed, the proposed TMDL revision includes load allocations for the sediment in the Marina. The load allocations are set equal to the numeric targets in Tables 4-10 and 4-21. This approach has been used in other TMDLs in the region (e.g. 2005 Calleguas Creek Watershed Toxicity, Chlorpyrifos and Diazinon TMDL, 2009 McGrath Lake Pesticides and PCBs TMDL, 2010 Machado Lake Pesticides and PCBs TMDL, and 2011 Los Angeles and Long Beach Harbors Toxic and Metals TMDLs). Load allocations are assigned on a concentration basis (Table 4-28).

Table 4-28. Marina del Rey Harbor Sediment Load Allocations

Pollutant	Sediment Load Allocation
Copper	34 mg/kg
Lead	46.7 mg/kg
Zinc	150 mg/kg
Chlordane	0.5 µg/kg
4,4'-DDE	2.2 µg/kg
Total DDT	1.58 µg/kg
Total PCBs	3.2 µg/kg

4.4 Copper Water Column Impairment

A copper impairment in the water column of Marina del Rey Harbor was not addressed in the original TMDL due to insufficient data to assess the status of a potential impairment. As will

be discussed in section 4.4.1, new data collected through the Coordinated Monitoring Plan shows the criterion maximum concentration (CMC) value of the saltwater copper criteria, 4.8 µg/L, established by the California Toxics Rule (CTR), was exceeded at every site investigated in Marina del Rey Harbor.

The CTR established water quality criteria for 126 priority pollutants for the protection of aquatic life and human health. Copper is one of the priority pollutants regulated through the CTR. Based on these exceedances it is recommended that Marina del Rey Harbor be listed as having a copper impairment in the water column during the next listing cycle. It is also recommended that the impairment be addressed through this TMDL by the incorporation of numeric targets, load allocations, and waste load allocations.

4.4.1 Data Supporting Impairment of Copper in the Water Column

Water column exceedances of the California Toxic Rule (CTR) acute and chronic saltwater copper criteria (4.8 µg/L and 4.1 µg/L, respectively) were measured at all sites in both the back basins (Fig. 4-11a) and front basins (Fig. 4-11b) of Marina del Rey Harbor through the Coordinated Monitoring Plan (County of Los Angeles Department of Public Works 2012a, County of Los Angeles Department of Public Works 2012b). There is currently no 303(d) listing for copper in the water column in Marina del Rey Harbor.

Figure 4-12. Copper in Marina del Rey Harbor Water Column

Figure 4-11a. Dissolved Cu: Marina del Rey Harbor Back Basins

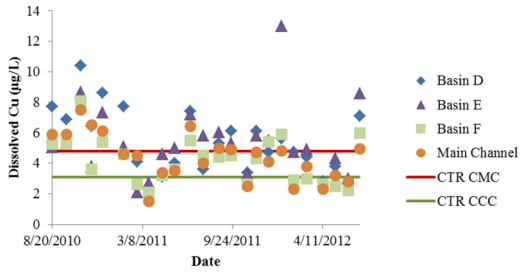


Figure 4-11b. Dissolved Cu: Marina del Rey Harbor Front Basins

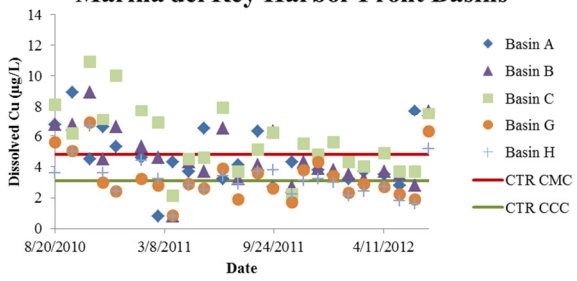


Table 4-29 lists the number of exceedances of the CTR saltwater acute criterion (i.e., Criterion Maximum Concentration, or CMC) of 4.8 µg/L, at sites sampled through the Coordinated Monitoring Plan in each basin of Marina del Rey Harbor. Dissolved copper was measured at a site in the main channel as well and those data are also summarized in Table 4-29. Based on the number of exceedances at each site as well the total number of exceedances throughout the harbor, the water column throughout the harbor is impaired by copper.

Table 4-29. Dissolved Copper in Marina del Rey Harbor

	# Samples	# Exceedances of CTR Saltwater Criteria (CMC)	Minimum # Exceedances Required for 303(d) Listing (SWRCB 2004)
Basin A	24	8	2
Basin B	24	9	2
Basin C	24	14	2
Basin D	24	12	2
Basin E	24	15	2
Basin F	24	8	2
Basin G	24	4	2
Basin H	24	3	2
Main Channel (near Back Basins)	24	9	2
Total	216	82	19

4.4.2 Numeric Target

As discussed above, the CTR established the water quality criteria for copper in both fresh and salt water (40 C.F.R. section 131.38). Numeric targets for dissolved copper in the water column are set equivalent to the CTR saltwater criteria for the protection of aquatic life:

Acute target: CTR CCC (criterion continuous concentration): 4.8 µg/L
Chronic target: CTR CMC (criterion maximum concentration): 3.1 µg/L

4.4.3 Source Assessment

According to a U.S. EPA report, copper is the primary constituent used in most biocidal anti-fouling paints (U.S. EPA 2011c). Staff has estimated the amount of copper entering Marina del Rey Harbor from copper-based hull paints using a model previously utilized in the TMDL for Dissolved Copper in Shelter Island Yacht Basin, San Diego Bay (SDRWQCB 2005) and U.S. EPA's Newport Bay Toxics TMDL (U.S. EPA 2002b). The model quantifies the annual load of copper from antifouling paint by summing the copper loads from passive leaching and hull cleaning. Results of the Marina del Rey Harbor modeling suggest antifouling paints contribute a total of 3609 kg/yr of dissolved copper to Marina del Rey Harbor, 3390 kg/yr of copper from passive leaching and 219 kg/yr of copper due to hull cleaning activity (Appendix A).

In calculating the annual copper load from hull cleaning, the same methodology was employed that was previously incorporated in the TMDL for Dissolved Copper in Shelter Island Yacht Basin, San Diego Bay (SDRWQCB 2005). This quantification is based on rates of copper released during hull cleaning quantified in Schiff (2003). The TMDL for Toxics in Newport Bay, CA (U.S. EPA 2002b), promulgated by U.S. EPA, Region IX and released prior to the publication of the report by Schiff (2003), relies on an earlier study investigating concentrations of copper in plumes created during hull cleaning (U.S.

EPA 2002b). There is a variability of more than two degrees of magnitude in these methods for quantifying copper released during hull cleaning. The methodology incorporated in the Shelter Island Yacht Basin TMDL is based on a more recent study and has been vetted during the adoption of the TMDL; therefore, this method has been used to quantify the loading to Marina del Rey Harbor. The large magnitude of difference in the two methodologies suggests that the method used in the Shelter Island Yacht Basin TMDL, and here in the Marina del Rey Harbor Toxic Pollutants TMDL, may underestimate the copper loading from hull cleaning. Further investigation regarding concentrations of copper in plumes created during hull cleaning would aid in determining the true contribution of this source of the impairment. The U.S. Navy is currently conducting a study on the contribution of copper from antifouling paints that may aid in future refinement of these calculations.

One study investigating copper loading due to hull cleaning has been completed since the adoption of the Shelter Island TMDL (AMEC 2006). The study was conducted in Shelter Island Yacht Basin and estimated an average dissolved copper emission rate of 10.0 $\mu g/cm^2$/event. When applied to the Shelter Island Yacht Basin modeling, which relied on a value of 8.5 $\mu g/cm^2$/event, the predicted annual copper load from hull cleaning increases. The model for Marina del Rey Harbor was tested for sensitivity to this leaching rate. Incorporating a leaching rate of 10.0 $\mu g/cm^2$/event results in less than 1% change in the modeled output of dissolved copper released from hull paint. This is consistent with the finding that reductions in copper inputs to the water column attainable through hull cleaning BMPs are small relative to the passive leaching of copper from antifouling paints (AMEC 2006). For purposes of this evaluation, the original Shelter Island Yacht Basin value is employed in the Marina del Rey Harbor modeling.

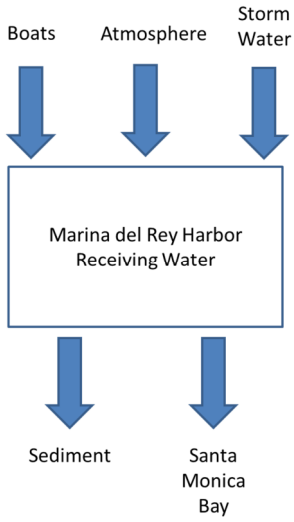
Conservative assumptions were employed in the modeling to ensure protection of water quality. The rates calculated in the model are based on the maximum number of ships that might occupy the marina. At the time of this report there are vacant slips in Marina del Rey Harbor; however, the TMDL is designed to be protective of water quality while the harbor is operating at its maximum capacity. It was also assumed that all boats in Marina del Rey Harbor have copper paint and are cleaned regularly while remaining in the water.

4.4.4 Linkage Analysis: Copper in the Water Column

The three known sources of copper to the receiving water of Marina del Rey Harbor are antifouling paint from boats, storm water, and atmospheric deposition (Figure 4-12). Modeling of copper loading from anti-fouling paints in Marina del Rey Harbor suggests 3609 kg/yr of dissolved copper are being released into Marina del Rey Harbor from antifouling paints (Appendix A). The contribution of copper from storm water to Marina del Rey has been evaluated through the original sediment TMDL. The TMDL implementation schedule anticipates that storm water permittees will meet a copper waste load allocation of 2.54 kg/year by 2021. Once copper waste load allocations for the sediment TMDL are met, storm water is not likely to be a significant source of copper to the water column. The amount of copper entering the receiving water (front and back basins of harbor) due to direct atmospheric deposition, 0.34 kg/yr, is also negligible relative to the contribution from antifouling paints. Given the magnitude of copper

entering Marina del Rey Harbor from antifouling paint, it is recommended that this source be addressed through TMDL implementation efforts since the data and modeling indicate that antifouling paint from boats are the major source of copper to Marina del Rey Harbor.

Figure 4-13. Dissolved copper mobility in Marina del Rey Harbor



Wood preservatives utilized on pilings and other marina structures can contain copper and may also be a source to the marina. A survey of marinas in California investigating the use of wood preservatives suggested that it was unlikely that copper-treated wood has a significant direct influence on the amount of copper in the water column (Singhasemanon 2009). Based on this information, wood preservatives have not been included in this TMDL. Should new information indicate wood preservatives to be a significant source of copper to Marina del Rey Harbor, the TMDL should be adjusted to reflect this contribution.

Two primary routes are available for copper to be removed from the water column in Marina del Rey Harbor (Figure 4-12): copper migration to the sediment and through water column mixing directly to the adjacent waters of the Santa Monica Bay. The partitioning coefficient study discussed in section 2.1.1 of this report suggests that there is a greater movement of copper from the water column to the marina sediments (not vice versa) and thus the water column is a source of copper to the sediments.

4.4.4.1. Steady-State Copper Model: Marina del Rey Water Column

Modeling of copper flux in Shelter Island Yacht Basin relied on targeted field work and extensive model calibration in San Diego Bay. Given the similarities between Shelter Island Yacht Basin and Marina del Rey Harbor, for purposes of this TMDL use of the Shelter Island model is found to be valid for Marina del Rey Harbor. Refinement of the model may be necessary as efforts to reduce copper pollution in Marina del Rey Harbor proceed and our understanding of the site-specific factors affecting copper in Marina del Rey improves.

A detailed description of the model, including associated assumptions and limitations, was included in the TMDL for Dissolved Copper in Shelter Island Yacht Basin and is included as Appendix B of this report. Adjustments made to the model for its use in Marina del Rey Harbor, including inputs into the model (Table 4-30), are detailed here. The model evaluates total copper in the water column and calculates a maximum dissolved copper concentration of 547 kg/yr to be the maximum concentration that can enter the water column in Marina del Rey Harbor while enabling TMDL numeric targets to be achieved. The TMDL numeric target for copper in the water column is based on the dissolved fraction. Model results in total copper are converted to dissolved copper using a ratio of 0.83 dissolved copper to total copper (U.S. EPA 2000).

Table 4-30. Model Inputs

Variable	Definition	Value
S_1	boundary salinity	33.75 ppt/psu
S_2	box salinity	31.1 ppt/psu
C_1	boundary concentration	0.7 µg/L
A_c	cross sectional area at boundary	1463 m^2
A_s	surface area of box	1,200,000 m^2
e	evaporation rate	0.330409 cm/d
dx	gradient length scale	1310 m
V_2	box volume	6,400,800 m^3
R_L	loss rate to sediment	7 %/day
R_s	input rate to box	1.8 kg/d

S_1: boundary salinity
A review of salinity in Marina del Rey Harbor is included in reporting by ABC Labs (ABC Labs 2007). The discussion included a finding by SCCWRP of mean salinity in ocean samples of 33.75 ppt and, within a subset of that data, ninety percent of samples in Southern California ranging from 33.57 to 33.92 ppt.

S_2: box salinity
Salinity in Marina del Rey Harbor ranged from 33.5 to 31.1 ppt during 2007 to 2008 (ABC Labs 2007). The report with this date noted this range to be typical of previous years. The model calculation regarding salinity is based on the difference between the salinity inside the Marina (referred to as the "box" in the model description) and outside of the marina (referred to as the area outside of the box in the model description). A value of 31.1 ppt was used as a conservative value in the model as inputting the lower end of the salinity range maximizes the difference in salinity between the two areas.

C_1: boundary concentration
The boundary concentration in Marina del Rey Harbor was set equivalent to the value used for the modeling of Shelter Island Yacht Basin as this value, 0.5 µg/L, represents the concentration of total copper in ambient seawater. The value is on based on field measurements made in San Diego Bay.

A_c: cross sectional area at boundary
The boundary of the harbor for the purpose of this box model ends in the main channel adjacent to the beginning of the front basins. The cross-sectional area at this boundary was determined by multiplying the width of the main channel by the depth of the main channel. The width of the main channel, 17.5 ft (5.334m), was determined from the Marina Del Rey nautical chart published by the National Oceanographic and Atmospheric Administration.

A_s: surface area of box
The surface area of the box, 1,200,000 m^2, was determined by GIS and was selected to encompass the area addressed by the Marina del Rey Harbor Toxic Pollutants TMDL. The box area investigated with the model included the front and back basins as well as the main channel area connecting those basins.

e: evaporation rate
The evaporation rate is set equal to the average monthly evapotranspiration rate for the Los Angeles Basin/Santa Monica for the year beginning Aug 2012 and ending July 2013. Monthly evaporation rates were obtained from the Department of Water Resources website (http://wwwcimis.water.ca.gov/cimis/data.jsp).

dx: gradient length scale
The gradient length scale is set equivalent to the length of the main channel from the end of the back basins to the beginning of the front basins, 1310m as determined by GIS.

V_2: box volume
The volume of the harbor was calculated by multiplying the surface area of the harbor, 1,200,000m, by the depth, 17.5 ft (5.334 m).

R_L: loss rate to sediment
The loss rate of copper from the water column to sediment has not been evaluated for Marina del Rey Harbor. The current model employs the R_L value quantified for Shelter Island Yacht Basin as this is believed to be an appropriate estimate of sediment loss rate in Marina del Rey Harbor due to the geographical and ecological similarities in the two harbors. As in Shelter Island Yacht Basin, loss of copper to the sediment is believed to be the dominant means of removal of copper from the water column in Marina del Rey Harbor.

R_s: input rate to box
The input rate into the box represents the amount of copper entering the water column. This value was manipulated to achieve a copper water column concentration equivalent to 3.1 µg/L, the CTR CCC. Given that all other variables in the model are fixed, adjusting the input rate of copper into the system in this manner, utilizes the model to calculate the maximum amount of copper that can enter the water column while achieving TMDL numeric targets, set equivalent to the CTR CCC, in the water column. The CTR criterion of 3.1 µg/L is a dissolved copper criteria and was

converted to total copper, 3.7 µg/L, using a ratio of 0.83 dissolved copper to total copper (U.S. EPA 2000).

Sensitivity Analysis

A sensitivity analysis of the general model is included in Appendix B. A test of the model sensitivity to changes in salinity was performed with site-specific data. Salinity manipulations of the model to encompass the range of salinities measured in Marina del Rey Harbor (ABC Labs 2007) result in a 77.4% to 84.8% required reduction of dissolved copper entering Marina del Rey Harbor to enable the TMDL numeric target to be met in the water column.

4.4.5 Load Allocations

Modeling of copper in the water column, section 4.4.4.1, estimates 547 kg/yr dissolved copper to be the maximum concentration that can enter the water column in Marina del Rey Harbor while enabling TMDL numeric targets to be achieved. This amount is set as the TMDL for dissolved copper in Marina del Rey Harbor.

As discussed in section 4.4.3, antifouling paints are the primary source of dissolved copper to the water column, contributing 3609 kg/yr of dissolved copper. In order to achieve the TMDL, an 85% reduction of copper from antifouling paints is required (Table 4-31).

Table 4-31. Load Allocation Quantification

Dissolved Copper TMDL	547 kg/yr
Current Dissolved Copper Loading from Antifouling Paint	3609 kg/yr
Required Reduction of Dissolved Copper	**85%**

4.5 Final Target for Water Column PCBs

When the TMDL was initiated, laboratory detection limits for PCBs in the water column were higher than the CTR criterion for the protection of human health from the consumption of aquatic organisms. Both a final target and interim target for PCBs in the water column were placed in the TMDL to allow time for development of more sensitive analytical techniques while acknowledging that the final CTR criterion must eventually be met in Marina del Rey Harbor. Since the effective date of the TMDL more sensitive analysis, namely EPA Method 1668, has become more prevalent. The Santa Monica Bay TMDLs for DDTs and PCBs, established in 2012 by U.S. EPA, recommend the use of Method 1668 for analysis of PCBs (U.S. EPA 2012a). It is acknowledged that employing this method will increase the cost of analysis; however, the current methodology is not sufficiently sensitive for comparison with water quality standards. EPA has validated Method 1668 and states can require permits to include analytical methods more sensitive than those within 40 C.F.R. Part 136. Regional Board Staff recommends removing the interim target for total PCBs in the water column, 0.03µg/L; thus, establishing the final target, 0.00017 µg/L, as the numeric target for total PCBs in the water column of Marina del Rey Harbor. This criterion has

previously been applied as a numeric target in the Machado Lake Pesticides and PCBs TMDL.

Since the adoption of the original TMDL, the Office of Environmental Health Hazard Assessment (OEHHA) has published "Health Advisory and Safe Eating Guidelines for Fish from Coastal Areas of Southern California" (OEHHA 2009). Marina del Rey Harbor falls in the area designated by OEHHA as the red zone, between Santa Monica Beach south of Santa Monica Pier to Seal Beach (OEHHA 2009). Pollutant concentrations of fish in the red zone have resulted in reduced consumption or "do not eat" recommendations from OEHHA.

4.6 Fish Tissue Targets

The following narrative objective in the Basin Plan applies to PCBs in fish tissue:

Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.

The fish tissue target for PCBs in the original TMDL was based on the Threshold Tissue Residual Level derived from CTR human health criteria. In 2008, after the adoption of the original TMDL, the Office of Environmental Health Hazard Assessment (OEHHA) promulgated Fish Contaminant Goals (FCGs) (OEHHA 2008) based on public health considerations from consumption of fish. The FCG for PCBs in fish tissue is 3.6 µg/kg. It is recommended that OEHHA's FCG be designated as the numeric target for PCBs in fish tissue in Marina del Rey Harbor. This number was used as the numeric target in the Los Angeles and Long Beach Harbors TMDL (Resolution R11-008).

4.7 Sediment Target for Total PCBs

Sediment targets in the original TMDL are based on NOAA's ERL values. Since the adoption of the Marina del Rey Harbor Toxic Pollutants TMDL, precedent has been set to ensure numeric targets in sediment are protective of fish tissue (LARWQCB 2011). The State's Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (EB&E Plan Part 1), which was adopted in 2009 after the original establishment of the toxics TMDL, includes (1) a narrative objective to protect benthic communities along with an evaluation approach based on integrating multiple lines of evidence (the "triad" approach) to determine whether this objective is achieved, and (2) a narrative objective to protect the human health beneficial use. Therefore, it is necessary to include fish tissue targets and associated sediment targets for the bioaccumulatives to protect the human health beneficial use and ensure that the narrative objective for indirect effects contained in the State's EB&E Plan is achieved. The requirement that a TMDL for a particular pollutant must be developed to achieve all water quality objectives for that pollutant set to protect designated beneficial uses was affirmed in a 2011 court decision, Anacostia Riverkeeper, Inc., et al. v. Lisa Jackson, US EPA. In its decision, the court affirmed that a TMDL must address all the beneficial uses and water quality objectives for a particular pollutant whether or not they are listed on the CWA Section 303(d) list.

Modeling by Gobas and Arnot (2010) yielded a bioaccumulation-based sediment concentration of 3.2 µg/kg dry weight total PCBs in sediment to reflect a cancer risk of 10^{-5} from consuming white croaker. This value has previously been applied as a numeric target in

the TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters. Use of fish tissue targets is appropriate to account for uncertainty in the relationship between pollutant loadings and beneficial use effects (USEPA 2002) and directly addresses potential human health impacts from consumption of contaminated fish or other aquatic organisms. Table 4-32 shows a comparison of the Effects Range-Low (ERL)-based target with the bioaccumulation-based target for total PCBs. The more conservative bioaccumulation-based sediment target is recommended to replace the ERL as the numeric target for total PCBs in the Marina del Rey Harbor Toxic Pollutants TMDL.

Table 4-32. Fish Tissue Associated Sediment Objectives

	ERL (µg/kg)	Fish Tissue Associated Sediment Target (µg/kg dry wt)
Chlordane	0.5	1.3
Total PCBs	22.7	3.2
Total DDT		1.9

Should the numeric targets for total PCBs in fish tissue be met, while the concentration of total PCBs in Marina del Rey Harbor sediment continues to exceed the sediment numeric target designed to be protective of fish tissue, the TMDL should be reconsidered to include a numeric sediment target for total PCBs that is protective of the benthic community (i.e. it may be appropriate to apply the ERL as the numeric sediment target rather than the fish tissue associated sediment objective).

Fish tissue associated sediment values are also available for chlordane and total DDT (Table 4-32) based on thresholds developed by the San Francisco Estuary Institute (Greenfield 2007). These values are less protective than ERLs and thus the ERLs are the appropriate numeric sediment targets for Marina del Rey Harbor to protect the aquatic life beneficial use (direct effects).

4.8 Zinc from Boats

While there is currently not evidence of a zinc impairment in the water column of Marina del Rey Harbor, a sediment impairment is present and is included in this TMDL. Concerns have been raised regarding potential sources of zinc to Marina del Rey Harbor that were not evaluated during the adoption of the original TMDL. Those potential sources as well as an analysis of zinc in the water column are discussed below.

4.8.1 Status of Zinc in the Water Column

As discussed in sections 4.1.1.5 and 4.1.1.6, a zinc impairment persists in the sediment; however, data collected through the Coordinated Monitoring Plan indicate that there is not currently a zinc impairment in the water column. Twenty four samples were analyzed for both total recoverable zinc and dissolved zinc in the water column. Zinc samples in the water column measured below CTR acute and chronic saltwater zinc criteria (90 µg/L and 81 µg/L, respectively) with the exception of both total recoverable and dissolved zinc sampled on January 11, 2012 at site MdRH B-2 (County of Los Angeles Department of Public Works 2012a, County of Los Angeles Department of Public Works 2012b). Sample site MdRH B-2 is located in Basin E. There is currently

no 303(d) listing for zinc in the water column in Marina del Rey Harbor, and the single exceedance of zinc at site MdRH B-2 is insufficient to identify Basin E as impaired due to zinc in the water column.

4.8.2 Sources of Zinc from Boats: Sacrificial Anodes

Concerns have been raised by local stakeholders that sacrificial anodes may be contributing to the zinc impairment in Marina del Rey Harbor. Sacrificial anodes are attached to boats in order to reduce the corrosion of other metals. The corroding of the sacrificial anodes releases metals into the water; however, the magnitude of their contribution to impairments in the sediment is uncertain. Zinc is commonly used as a sacrificial anode in Marina del Rey Harbor; the contribution of zinc from these sacrificial anodes to water quality impairments has not been investigated sufficiently to rule them out as a source. A study on marinas throughout California suggested sacrificial anodes to likely be the most significant source of zinc in salt marinas during dry weather (Singhasemanon 2009).

Implementation efforts to address sacrificial anodes may include measures to reduce faulty wiring on boats and docks to slow down the corrosion rates of sacrificial anodes consequently slowing their release of pollutants in the water column. Sacrificial anodes composed of aluminum alloys are becoming more widely available and can serve as replacement for zinc anodes in certain instances. Further study is warranted to quantify the contribution of various sources of zinc to the sediment impairment in Marina del Rey Harbor.

4.8.3 Sources of Zinc from Boats: Antifouling Paint

Zinc is a component of some currently applied antifouling paints (Singhasemanon 2009). There is concern that as new types of hull paint are considered for replacement of copper-based antifouling paints, that paints with higher concentrations of zinc will be employed. This potential outcome may exacerbate the zinc impairment in the sediment as well as result in a possible zinc impairment in the water column. For these reasons, it is recommended that zinc-based hull paints not be employed to replace copper-based hull paints.

4.9 Monitoring

The monitoring requirements in the original TMDL are separated into ambient and effectiveness components. Given that the ambient monitoring phase is expected to be completed before this reconsideration becomes effective, proposed changes will focus solely on effectiveness monitoring, also referred to as compliance monitoring. The ambient monitoring component of the TMDL will remain unchanged.

4.9.1 Sediment Quality Objectives

Sampling for SQOs, as specified in the EBE Plan Part 1 Sediment Quality, shall be required every five years. SQOs were analyzed in Marina del Rey Harbor during Bight ’08 and four sites have been sampled in Marina del Rey Harbor as part of Bight ’13. The results of these analyses may be used to meet SQO monitoring requirements of this TMDL.

Sediment Quality Objective analyses require a minimum of two toxicity tests: a short term survival test and a sublethal lethal sediment test. The current Coordinated Monitoring Plan (CMP) includes acceptable tests for both of these categories: *Eohausotrius estuarius* 10-day Survival and *Mytilus galloprovincialis* 48-hour Embryo Development. Results from neither of these test fall into the SQO category of High Toxicity; however, *Leptocheirus plumulosus* 28-day Survival, Growth, and Reproduction toxicity test conducted through the CMP all indicate toxicity. As the *L. pulumulosus* 10-day survival test is also an acceptable test for evaluating SQOs, it is recommended that this test be added to future CMP monitoring to ensure that future SQO analyses of Marina del Rey Harbor do not underestimate toxicity.

4.9.2 Toxicity Identification Evaluation

The original TMDL requires responsible parties to conduct a Toxicity Identification Evaluation (TIE) if accelerated toxicity testing results in less than 90% survival in two or more of the six required toxicity tests. To create consistency with the Sediment Quality Objectives, it is recommended that the requirement to perform a TIE be replaced with a requirement to perform stressor identification as detailed in the Water Quality Control Plan for Enclosed Bays and Estuaries (SWRCB 2009). The requirement to perform a stressor identification will be triggered based on results from Bight '08 SQO monitoring.

4.9.3 Water quality

In the original TMDL, no water quality monitoring was required during the effectiveness phase of the CMP. However, monitoring of copper in the water column is necessary to evaluate the status of the water column impairment identified in these revisions to the TMDL. It is recommended that water quality monitoring in Marina del Rey Harbor continue into the effectiveness/compliance portion of the monitoring plan in the same manner prescribed in the ambient phase.

4.9.4 Bioaccumulation Monitoring

With the exception of total PCBs, data regarding the fish tissue concentrations of pollutants addressed in this TMDL are unavailable. Sediment impairments in Marina del Rey Harbor may be resulting in bioaccumulation of toxic pollutants in aquatic organisms. In order to ensure the TMDL is protective of aquatic life, baseline data is needed. In conjunction with the annual bioaccumulation monitoring conducted through the CMP, analyses should be conducted for bioaccumulation of chlordane and DDTs.

4.10 Implementation

4.10.1 Sediment Quality Objectives Compliance Option for MS4s and Caltrans

The Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (SWRCB 2004) was adopted prior to the Water Quality Control Plan for Enclosed Bays and Estuaries Part 1 Sediment Quality (SWRCB 2009). As such, SQOs are not currently addressed in California's listing policy. The following language from the Water Quality Control Plan for Enclosed Bays and Estuaries states that without a stressor identification having been conducted, categories designated as Possibly Impacted, Likely Impacted, and Clearly Impacted should be considered as degraded while categories designated as Unimpacted and Likely Unimpacted shall be considered as having achieved the protective condition at that station:

4. Relationship to the Aquatic Life – Benthic Community Protection Narrative Objective.

*a. The categories designated as **Unimpacted** and **Likely Unimpacted** shall be considered as achieving the protective condition at the station. All other categories shall be considered as degraded except as provided in b. below.*

*b. The Water Board shall designate the category **Possibly Impacted** as meeting the protective condition if the studies identified in Section VII.F demonstrate that the combination of effects and exposure measures are not responding to toxic pollutants in sediments and that other factors are causing these responses within a specific reach segment or waterbody. In this situation, the Water Board will consider only the Categories Likely Impacted and Clearly Impacted as degraded when making a determination on receiving water limits and impaired water bodies described in Section VII.*

The original TMDL required that WLAs be met according to the implementation schedule in order for responsible parties to comply with the TMDL. In incorporating SQOs, the original means of compliance remains unchanged and additional compliance options should be made available as described below.

Compliance with sediment TMDLs may be demonstrated via any one of three different means:

1. Demonstrate that the sediment quality condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the EBE Plan Part 1, is met; or
2. Sediment numeric targets are met in bed sediments over a three-year averaging period; or
3. Final allocations in the discharge are met over a three-year averaging period.

In addition, the schedule for the MS4 and Caltrans Permittees draining to the front basins (Basins A, B, C, G, and H) has been extended. Interim WLAs must be met by March 22, 2019 and the final WLAs must be met by March 22, 2021.

4.10.2 Copper Load Allocation to Boats

The collaborative effort of an integrated state-wide or nation-wide approach to addressing copper antifouling paints would increase implementation options and ease the burden on individual boaters by encouraging source control and alternative paint options. Attempts are being made to address water quality impairments related to copper antifouling paints on a wider scale. Copper antifouling paints are addressed in U.S. EPA's vessel general permit adopted in 2008 and reissued in 2013 and, as discussed below, the Department of Pesticide Regulation (DPR) is currently reviewing the use of copper in antifouling paints.

Antifouling paints are considered pesticides and thus are registered in California by the Department of Pesticide Regulation (DPR). On October 5, 2013 the governor approved

AB 425, which requires the Department of Pesticide Regulations to determine a leach rate for copper-based antifouling paint used on recreational vessels and to make recommendations for appropriate mitigation measures that may be implemented to address the protection of aquatic environments from the effects of exposure to that paint if it is registered as a pesticide. This legislation could inform measures to address antifouling paints as a source of copper to Marina del Rey Harbor.

DPR has previously investigated the extent of copper pollution in freshwater and saltwater marinas throughout California and the relation of this pollution to antifouling paints (Singhasemanon 2009). The study concluded that during dry weather, antifouling paints are likely the most significant source of copper in saltwater and brackish marinas. The front and back basins of Marina del Rey Harbor were included in this study and found to have the greatest frequency of CTR CCC and CMC exceedances among all marinas included in the study. Toxicity identification evaluations (TIEs) conducted as part of the study found copper to be the likely cause of toxicity in two Marina del Rey samples.

U.S. EPA, in conjunction with the Port of San Diego and the Institute for Research and Technical Assistance, conducted a study on alternatives to copper antifouling paints (U.S. EPA 2011a). Alternative paints found to be optimal through field studies were analyzed for cost effectiveness. The final report includes antifouling paint recommendations and cleaning strategies for various boat types. The Port of San Diego has also made available a guide for boaters regarding selecting alternative hull paint (Unified Port of San Diego, n.d.1) and a calculator for estimating costs of replacing hull paint (Unified Port of San Diego, n.d.2). Broader approaches to antifouling, similar to integrated pest management in terrestrial environments provide alternatives for addressing antifouling that do not rely solely on hull paint (Culver et al. 2012). Integrated pest management incorporates chemical, biological, mechanical/physical, and cultural tactics to aid in minimizing fouling.

The efforts discussed above vary in their readiness for implementation and it is uncertain what outcomes can be anticipated. Therefore the Regional Board is addressing the copper impairment in Marina del Rey Harbor as a site-specific concern. Other Regional Boards in Southern California have already begun to address copper in antifouling paints and it is hoped that addressing the issue in multiple locations throughout the region will increase implementation options by providing incentive for increasing availability of alternative paints, reducing options for non-compliance such as relocation of boats, and allowing for further collaborative efforts. The California Regional Water Quality Control Board, San Diego Region has in place a TMDL addressing copper-based antifouling paints in Shelter Island Yacht Basin. A Toxics TMDL for Newport Bay has also been promulgated by U.S.EPA, which includes a copper TMDL and determined that copper antifouling paint was the highest source of copper to Newport Bay. The metals TMDLs are currently under revision by the Santa Ana Regional Water Quality Control Board, although copper antifouling paints remain the highest source of copper to the Bay, and an implementation plan is being developed to largely address copper-based antifouling paints in Newport Bay. Work in Newport Bay has included research regarding copper

concentrations and their relation to antifouling paints (Orange County Coastkeeper 2007). According to a Progress Report regarding the Shelter Island Yacht Basin TMDL, "the most successful copper reduction strategy is the conversion from copper-based anti-fouling hull coatings to "alternative" hull coatings containing little or no copper." This is confirmed by an analysis of boater surveys which concluded that "the most important policy instrument would be to require that new boats use only nontoxic coatings" (Johnson et al. 2004)

While the modeling discussed in section 4.4.3 has shown the contribution of copper from passive leaching to outweigh that from hull cleaning, abrasive hull cleaning techniques can dramatically increase the amount of copper released from hull cleaning. Communication with a professional diver in Marina del Rey Harbor indicated that hull cleaning BMPs being employed in Shelter Island Yacht Basin are not yet being widely utilized in Marina del Rey Harbor. Classes provided by the California Professional Divers Association are available in San Diego. Similar courses may be beneficial to professional divers in Marina del Rey. This would likely necessitate offering the classes in multiple languages to increase accessibility of the information.

4.10.2.1. Regulatory Mechanisms for Copper Load Allocation to Boats

The LAs for discharges of copper from boats in the Marina del Rey are assigned to the County of Los Angeles, individual anchorages, and persons owning boats moored in the Marina. LAs shall be implemented through waste discharge requirements (WDRs), waivers of WDRs, or other regulatory mechanisms in accordance with the Nonpoint Source Implementation and Enforcement Policy.

Compliance with LAs will be demonstrated with monitoring approved by the Executive Officer of the Regional Board through the monitoring program developed as part of the waiver, WDR, or other regulatory mechanism. Compliance may be demonstrated by monitoring receiving water in the Marina and comparing the results to the dissolved copper numeric target, demonstrating that 85% of boats in the harbor are using non-copper hull paints, or by other acceptable methods.

4.10.2.2. Compliance Schedule for Copper Load Allocation to Boats

Discharges of copper from boats shall achieve compliance with LAs by 2024. This schedule assumes that copper-based antifouling pants are replaced with non-toxic paints over an eleven-year period and takes into account time to develop a regulatory program, outreach to boat owners, and the time and resources needed to replace paint on 85% of boats in the Marina.

4.10.3 Load Allocations to Sediment

In addition to reducing pollutant loading to Marina del Rey Harbor sediments, the impairment in the existing sediment will need to be addressed in order to protect and restore beneficial uses. It is therefore recommended that load allocations are assigned to existing sediment in Marina del Rey Harbor.

4.10.3.1. Regulatory Mechanisms for Load Allocations to Sediment

The County of Los Angeles, the responsible party for the LA for in-situ contaminated sediment within the harbor, shall be given an opportunity within the timeline of the TMDL to develop a contaminated sediment management plan, agreed to through a Memorandum of Agreement (MOA), to address contaminated sediments in Marina del Rey Harbor. Such a MOA must be approved by the Regional Board's Executive Officer. In the event a MOA is not adopted within the time frame mandated by the TMDL, the Executive Officer will issue a cleanup and abatement or other regulatory order to ensure load allocations are met in harbor sediments.

The MOA shall meet requirements pursuant to the development of a non-regulatory implementation program as presented in the Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options (State Board Resolution 2005-0050) section 2 C ii and requirements of this TMDL. To be a valid non-regulatory implementation program adopted by the Regional Board, the MOA shall include the following requirements and conditions:

- The MOA shall direct development of a monitoring and reporting program plan that addresses the impaired waterbody as approved by the Regional Board's Executive Officer.
- The MOA shall contain conditions that require trackable progress on attaining load allocations and numeric targets. A timeline shall be included that identifies the point or points at which Regional Board regulatory intervention and oversight will be triggered if the pace of work lags or fails.
- The MOA shall contain a provision that it shall be revoked based upon findings by the Executive Officer that the program has not been adequately implemented, is not achieving its goals, or is no longer adequate to restore water quality.
- The MOA shall be consistent with the California Policy for Implementation and Enforcement of the Non-point Source Pollution Control Program, including but not limited to the "Key Elements of a Non-point Source Pollution Control Implementation Program".

Responsible parties entering into an MOA with the Regional Board shall submit and implement a contaminated sediment management plan. The plan must be approved by the Executive Officer and may be amended by Executive Officer approval, as necessary. The plan shall include a Monitoring and Reporting Program (MRP) plan to address appropriate monitoring and a clear timeline for the implementation of measures that will achieve the contaminated sediments load allocations. The contaminated sediment management plan shall include annual reporting requirements. In addition to the contaminated sediment management plan and MRP plan, a Quality Assurance Project Plan (QAPP) shall also be submitted to the Regional Board for approval by the Executive Officer to ensure data quality.

The implementation of the contaminated sediment management plan must result in attainment of the TMDL load allocations. Implementation of the MOA, contaminated sediment management plan, and progress toward the attainment of the TMDL load allocations shall be reviewed annually by the Executive Officer as part of the annual monitoring report submitted by the responsible party(ies). If the MOA and contaminated sediment management plan are not implemented such that the TMDL load allocations are achieved, the Regional Board shall revoke the MOA and the TMDL load allocations may be implemented through a CAO or other appropriate regulatory mechanism.

Described below are four potential measures to clean up the contaminated sediments in Marina del Rey.

- Sediment Capping

The objective of sediment capping is to cover contaminated sediment by a layer of clean sediment, clay, gravel, or other material. The cap reduces the mobility of the pollutants and places a physical barrier between the water column and the contaminated sediment. Capping can be an effective remediation action; however, it is most effective in large deep waterbodies under certain conditions. For example, the bottom sediments of the waterbody must be able to support the cap and the hydrologic conditions of the waterbody must not disturb the cap site. This option would require long term monitoring and maintenance to ensure that the contaminated sediments are not moving and that the cap is still in place.

- Dredging/Hydraulic Dredging

Dredging is the removal of accumulated sediments. In the case of Marina del Rey, the objective would be to remove the sediments that are contaminated with OC pesticides and PCBs. Therefore, it would be necessary to dredge to a depth that would ensure the removal of all contaminated sediments. A method of sediment removal is hydraulic dredging. A hydraulic dredge floats on the water and is approximately the size of a boat. It has a flexible pipe that siphons a mix of water and sediment from the bottom of the MArina. The flexible pipe is attached to a stationary pipe that extends to an-off site location. The sediment that is removed is pumped to a settling pond to dry prior to disposal. Hydraulic can cause damage to aquatic life, liberation of toxic pollutants, short term turbid conditions, and low dissolved oxygen. Hydraulic dredging does require careful planning and mitigation for non-target disturbances.

- Combination of Dredging and Capping

Responsible parties may consider combining the remediation measures of dredging and capping. For example, it may be possible to partially dredge and then cap either all of the Marina or particular areas of the Marina. Disposing of dredged contaminated sediment can be very expensive. The approach of combining dredging and capping may minimize the amount of dredge sediment for disposal and effectively remediate the sediments. A feasibility study would be required to determine if this approach is suitable for Marina del Rey.

- Monitored Natural Attenuation of Contaminants

Natural attenuation encompasses the physical, chemical, and biological processes that the sediment may undergo, which over time will attenuate (i.e., reduce concentration and bioavailability) the impacts of contamination. These are natural processes that will occur without other remediation actions. Monitoring would be required as part of this remediation strategy to demonstrate that contaminants are in fact attenuating and that human health and the environment are protected. A disadvantage of choosing natural attenuation as a remediation strategy is that it generally requires long periods of time to be effective given the long half lives of the pollutants of concern.

4.10.3.2. Compliance Schedule for Load Allocations to Sediment

The in-harbor sediment load allocations shall be achieved by March 22, 2029. This assumes that planning for sediment remediation activities will take place while watershed load reduction activities are being implemented, and that remediation of sediment will occur after pollutant sources to the Marina have been controlled. The timing of removal of sediments is dependent on the availability of a suitable location for disposal of dredged material. The Regional Board may reconsider the TMDL implementation schedule if necessary based on the availability of an appropriate sediment placement/disposal site.

4.10.4 Interim Compliance Determination for Stormwater Discharges

The implementation schedule in the TMDL includes interim compliance dates for the MS4 and Caltrans permittees. In the original TMDL interim compliance is determined through an area-based approach where the permittees must demonstrate a percentage of their drainage area meets the full waste load allocations. In order to increase flexibility in implementation and maintain consistency with other TMDLs, including those for Los Cerritos Channel and San Gabriel River, it is recommended that an alternative means of interim compliance be included in the TMDL. The alternative means of compliance would allow MS4 and Caltrans permittees to demonstrate compliance through a percent reduction of their full waste load allocation rather than through demonstration that a specific percentage of the watershed is meeting the final waste load allocation.

4.10.5 Integrated Water Resources Approach for Stormwater Discharges

The original TMDL offered two alternative implementation timelines for MS4 and Caltrans Permittees. The timeline options are dependent on whether or not an integrated resources approach is being applied in implementing the TMDL. Two implementation plans were submitted by MS4 and Caltrans permittees: one plan from the County of Los Angeles, one plan from the Marina del Rey Watershed Agencies (City of Los Angeles, Culver City, and Caltrans). During the process of submitting and accepting the implementation plans, the Regional Board denied requests for the optional extended timeline for applying an integrated resources approach. This decision was based on the BMPs proposed in the implementation plans. The small size of the watershed limits options for such an approach and the opportunities are further reduced by dividing the watershed into different areas between the two implementation plans. Some of the parties have subsequently submitted a Notice of Intent (NOI) to submit an Enhanced Watershed Management Program (EWMP) under the Los Angeles County MS4 permit.

While it is possible an integrated resources approach may eventually be applied, it does not seem feasible that this will be evident during the timeline of this TMDL. Therefore, it is recommended that the integrated resources approach timeline be removed from the TMDL and efforts focus on meeting the timeline for a TMDL specific implementation plan.

While, for the reasons discussed above, the proposed implementation does not support an integrated resources approach, an extension of the TMDL timeline is warranted due to the increased efforts necessitated by the findings of this reconsideration. It is recommended that an additional two years be added to each the interim compliance deadline and the final compliance deadline for the MS4 and Caltrans permittees. This will extend the interim compliance date to 10 years after the effective date of the TMDL and the final compliance date to 12 years after the effective date of the TMDL (Table 4-33). The front basin compliance dates for MS4 and Caltrans Permittees, discussed in section 4.10.1, are also included in Table 4-33.

Table 4-33. Implementation Schedule for MS4 and Caltrans Permittees

	Original TMDL	Revised TMDL
Back Basins		
Interim Compliance: 50%	8 years	10 years (March 22, 2016)
Full Compliance: 100%	10 years	12 years (March 22, 2018)
Front Basins		
Interim Compliance: 50%		March 22, 2019
Full Compliance: 100%		March 22, 2021

4.10.6 Oxford Flood Control Basin

The portion of the Marina del Rey watershed that drains to the Back Basins is largely discharged through the Oxford Flood Control Basin via storm drains and then into Basin E through a tidal gate. The Oxford Basin serves as a settling basin and detention basin for the major stormwater inflows to the back harbor. Many studies suggested that the Oxford Basin may be a significant contributor of contaminants in the back basins based on the high contamination levels in the drainage basin and the correlation between back harbor and Oxford Basin concentrations during storm events (LARWQCB 2005c).

The County of Los Angeles is currently planning the Oxford Basin Enhancement Project and expects to complete the project in 2015. The project involves removal of accumulated sediment, which will increase the Basin's sediment retention capabilities, as well as provide circulation improvements, that together will likely lead to a reduction in sediment loading to the back basins of the Marina. To ensure that the Oxford Basin continues to function as a detention basin and does not itself contribute to exceedances of sediment WLAs, the proposed TMDL revision includes the addition of the County of Los Angeles Flood Control District as a responsible party for the sediment WLAs as well as ongoing monitoring in conjunction with other WLA monitoring after the completion of the Oxford Basin Enhancement Project.

5. Additional Cost Considerations for Proposed Changes to the TMDL

The proposed changes to the TMDL, specifically increasing the geographic extent of the TMDL, the addition of load allocations for contaminated Marina sediments, and the addition of load allocations for discharges from copper-based antifouling paints, could result in additional costs for implementing parties and agencies beyond what was contemplated in the original TMDL. The revision of the PCB numeric target is not expected to affect the cost estimates provided in the original TMDL staff report. The use of EPA Method 1668 to achieve lower PCB detection levels may incur additional costs, but these costs would be offset by the reduction in monitoring frequency for other constituents.

5.1 Costs of Increasing the Geographic Extent of the TMDL

The cost analysis for the original TMDL focused on achieving the grouped waste load allocation assigned to the MS4 and Caltrans storm water permittees in the urbanized portion of the watershed that drains to the back basins (1.42 square miles), which could be applied to the general industrial and construction storm water permittees as well (LARWQCB, 2005c). The original analysis assumed that most permittees would likely implement a combination of the structural and non-structural BMPs to reduce sediment transported to the Marina in order to achieve their waste load allocations. The additional analysis here applies the same approach to the urbanized portion of the watershed draining to the front basins (0.4 square miles[2]).

The original TMDL estimated costs of a combination of infiltration trenches and sand filters using estimates provided by U.S. EPA and the Federal Highway Administration (FHWA). These costs were also compared to costs estimated in a region-wide cost study prepared for the Regional Board entitled "Alternative Approaches to Storm Water Quality Control, Prepared for the Los Angeles Regional Water Quality Board" (Devinny et al. 2004). The costs estimated from the original TMDL are presented in Table 5-1.

Table 5-1. Comparison of costs for storm water compliance on a per square mile basis

	Construction Costs ($ million/square mile)
Based on U.S. EPA estimate	2.62
Based on FHWA estimate	1.91
Maximum cost calculated by Devinny et al.	1.84 –2.39

Thus, the additional costs of treating stormwater from the urbanized portion of the watershed draining to the front basins could range from $736,000 to $1,048,000.

[2] The urbanized portion of the watershed draining to the front basins was determined by subtracting open space and water land uses from the total area of the watershed draining to the front basins (1.4 square miles) resulting in an area of 0.4 square miles.

5.2 Costs of Complying with Copper Boat Discharge Load Allocations

One reasonably foreseeable method of complying with the load allocations assigned to discharges of copper from boats is the replacement of copper-based antifouling paints with alternative coatings. Alternative, non-toxic antifouling coatings create a slick surface or hard protective layer that prevents fouling organisms from attaching to a boat's hull. Nontoxic hull coatings can be less effective at preventing the attachment of fouling organisms, so they should be used with a companion strategy to increase their efficacy. Such companion strategies may include in-water hull cleaning (to remove built-up organisms), storage in a slip liner, or storage out of water in order to control fouling organisms. Types of alternative coatings and their associated costs are presented in Table 5-2.

Table 5-2. Costs of alternative antifouling coatings

Type	Cost/gal	Coverage (square feet)
Epoxy	$89 - $140	315-1,574
Ceramic-Epoxy	$98	136
Siliconized Epoxy	$189-$350	144-220
Polymer Based	$40	400

Source: Gonzalez and Johnson, 2008. Prices and other information were effective as of July 2007.

In addition to coating application costs, there are stripping costs because old copper paint must be removed from boats prior to application of alternative coatings. Non-toxic paints are most cost efficient when applied to a new boat or to an existing boat that needs to be stripped of old copper paint as part of routine maintenance. Recent studies have reported stripping costs of approximately $150 per foot (Carson 2009). Thus for an average boat length of 40 feet, it would cost an additional $6,000 compared to a boat owner who includes stripping as part of routine boat maintenance. Although non-toxic antifouling paints cost more to apply and must be cleaned more often, they are more durable and can cost less than copper-based antifouling paints over the long term (Carson 2009, U.S. EPA 2011a). In addition, costs of alternative coatings appear to have decreased over the past several years (Johnson and Gonzalez 2004b, Johnson and Gonzalez 2008).

5.3 Costs of remediating Contaminated Sediments in the Marina

In-situ capping results in the containment of contaminated sediments rather than treatment. Due to the fact the contaminants remain on-site and potentially could be exposed after the capping layer is installed, monitoring is required to verify that contaminants are not mobilizing to the water column and food web. To calculate the cost of in-situ capping, it is assumed that the entire Marina (approximately 203 acres) would be covered with a sand cap approximately one foot thick. In-situ capping would cost about $19,311,762 for installation activities (Table 5-3).

Table 5-3. Installation costs for an in-situ capping approach at Marina del Rey Harbor

Cost Component	Unit Cost	Area, ft^2	Total Cost
Capping Activities[a]	$2.15/$ft^2$	8,842,680	$19,011,762
Total			**$19,311,762**

[a] U.S. EPA, 2002c

Another potential means of remediating the contaminated sediments in Marina del Rey is dredging. According to the County of Los Angeles Department of Beaches and Harbors, sediment disposal costs are $150 to $200 per cubic yard for inland disposal and about $15 per cubic yard for slip fill disposal. Assuming the entire Marina is dredged and the sediment is dredged to a depth of one foot, it would cost approximately $147,378,000 to $196,504,000 to dredge and dispose of contaminated sediments in an inland landfill and approximately $14,737,800 to dispose of contaminated sediments in a harbor slip fill project. This may be an overestimate of the area of sediment that needs to be dredged because it is assumed that the entire Marina will be dredged. Additional sediment characterization would need to be conducted prior to a dredging project to determine the location and amount of sediment that needed to be remediated. It is possible that a combination of dredging and capping will be used to remediate the contaminated sediments and comply with the load allocations, the County of Los Angeles will propose a contaminated sediment remediation/management plan as part of the MOA they will enter into with the Regional Board to implement the load allocations.

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Substitute Environmental Document for Toxic Pollutants in Marina del Rey Harbor Waters Total Maximum Daily Load

Prepared under the California Environmental Quality Act (CEQA)
Requirements of a Certified Regulatory Program

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November 5, 2013

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1. EXECUTIVE SUMMARY

The California Regional Water Quality Control Board – Los Angeles Region (Regional Board) is the Lead Agency for evaluating the environmental impacts of the proposed Total Maximum Daily Load (TMDL) for Toxic Pollutants in Marina del Rey Harbor Waters (hereafter referred as the Toxic Pollutants TMDL). This Substitute Environmental Document (SED) analyzes environmental impacts that may occur from reasonably foreseeable methods of implementing a Toxic Pollutants TMDL. This SED is based on a proposed Toxic Pollutants TMDL in that will be considered by the Regional Board, and if approved by the Regional Board, implemented through an amendment to the Water Quality Control Plan, Los Angeles Region (Basin Plan). The proposed Toxic Pollutants TMDL is described in the Staff Report, Tentative Board Resolution and Tentative Basin Plan Amendment available on the Regional Board's website. This SED analyzes foreseeable methods of compliance with the Toxic Pollutants TMDL and provides the public information regarding environmental impacts, mitigation, and alternatives in accordance with the California Environmental Quality Act (CEQA).

The SED will be considered by the Regional Board when the Regional Board considers adoption of the Toxic Pollutants TMDL as a Basin Plan amendment. Approval of the SED is separate from approval of a specific project alternative or a component of an alternative. Approval of the SED refers to the process of: (1) addressing comments, (2) confirming that the Regional Board considered the information in the SED, and (3) affirming that the SED reflects independent judgment and analysis by the Regional Board (Section 15090 of CEQA Guidelines (Title 14 of California Code of Regulations)).

The Regional Board has identified Marina del Rey Harbor as impaired due to copper, lead, zinc, chlordane, PCBs, DDT, fish consumption advisory, and sediment toxicity. The beneficial uses most likely to be impaired by these toxic pollutants are those associated with aquatic life, including wildlife habitat (WILD) and marine habitat (MAR). In addition, human beneficial uses impaired by the metals and organics are shellfish harvesting (SHELL), commercial and sport fishing (COMM), and water contact recreation (REC-1).

The Toxic Pollutants TMDL was originally adopted by the Regional Board on October 6, 2005 (Regional Board Resolution No. R05-2012), approved by the State Water Resources Control Board (State Board) on January 13, 2006 (State Board Resolution No. 2006-0006), and approved by U.S. EPA on March 16, 2006. The original Toxic Pollutants TMDL included substitute environmental documentation, which was filed with the Resources Agency on March 22, 2006. The proposed project is a revision of the original Toxic Pollutants TMDL, including changes such as the extension of the geographical area of the TMDL, the addition of a TMDL for DDT in the sediments, the addition of load allocations for the sediment impairments, and the addition of a copper water column TMDL.

These TMDL revisions alter the environmental analysis that was previously prepared for the establishment of the Toxic pollutants TMDL because the TMDL revisions will result in different implementation actions than those previously analyzed and different effects upon the environment. Moreover, additional reasonably foreseeable methods of compliance warrant environmental analysis pursuant to Public Resources Code section 21159 and California Code of Regulations, Title 14, section 15187.

The objective of the Toxic Pollutants TMDL is to restore the beneficial uses of Marina Del Rey Harbor Waters that are currently impaired by heavy metals and organic pollutants, in accordance with Clean Water Act section 303(d). Beneficial uses designated in these waters to protect aquatic life and wildlife include the marine habitat use (MAR) and the wildlife habitat (WILD). Beneficial uses associated with human use of these waters include recreational use for water contact (REC1), non-contact water recreation (REC2), commercial and sport fishing (COMM),

and shellfish harvesting (SHELL). Because of the impairments, these waterbodies fail to fully support the designated beneficial uses. The goal of the TMDL is to protect and restore fish tissue, water quality, and sediment quality in Marina del Rey Harbor Waters by reducing discharges of dissolved copper, removing contaminated sediment and controlling the sediment loading and accumulation of contaminated sediment in the Harbor.

The potential sources of a variety of toxic pollutants to Marina del Rey Harbor Waters include both point sources and nonpoint sources. The strategy for attaining water quality standards focuses on assigning Waste Load Allocations (WLAs) for point sources and Load Allocations (LAs) for nonpoint sources to designated responsible parties. The Toxic Pollutants TMDL establishes WLAs to point sources and LAs to nonpoint sources, and provides a 20-year implementation schedule. Stormwater WLAs will be implemented through the County of Los Angeles Municipal Separate Storm Sewer System (MS4) permits, the California Department of Transportation (Caltrans), Statewide Stormwater permit, general industrial storm water permits, general construction storm water permits, minor NPDES permits, and general NPDES permits. The implementation plan will be implemented directly at the harbor and throughout the watershed, including diversion or control of stormwater runoff during wet weather to reduce heavy metals and organic pollutants loadings to the Marina del Rey Waters. Potential adverse impacts to the environment stem principally from the removal of sediment from the harbor bottom, the removal of copper-based paints from boat hulls, the low-flow and storm first flush diversions, and the installation of infiltration systems, vegetated swales, stormwater capture systems, sand/media filters, oil/water separators, and catch basin inserts.

This SED analyzes three Program Alternatives and both Structural and Non-structural Implementation Alternatives (see Sections 4 and 5 of this SED for a description of the alternatives) that encompass actions within the jurisdiction of the Regional Board and implementing municipalities and agencies. A No Project Alternative is analyzed to allow decision makers to compare the impacts of approving a proposed alternative and its components compared with the impacts of not approving the proposed alternative. The SED analyzes the potential environmental impacts in accordance with significance criteria.

CEQA requires the Regional Board to conduct a program-level analysis of environmental impacts (Public Resources Code §21159(d)). This analysis is a program-level analysis. Public Resources Code Section 21159(c) requires that the Environmental Analysis take into account a reasonable range of:

(1) Environmental, economic, and technical factors,

(2) Population and geographic areas, and

(3) Specific sites.

A "reasonable range" does not require an examination of every site, but a reasonably representative sample of them. The statute specifically states that the section shall not require the agency to conduct a "project-level analysis" (Public Resources Code § 21159(d)). Rather, a project-level analysis must be performed by the local agencies that are required to implement the requirements of the TMDL (Public Resources Code §21159.2). Notably, the Regional Board is prohibited from specifying the manner of compliance with its regulations (Water Code §13360), and accordingly, the actual environmental impacts will necessarily depend upon the compliance strategy selected by the local agencies and other permittees.

Municipalities and agencies that will implement specific projects and Best Management Practices (BMPs) may use this SED to help with the selection and approval of project alternatives. The implementing municipality or agency will be the lead agency and has responsibility for environmental review of the projects to determine necessary strategies to implement this TMDL.

Approval of projects (i.e., project alternatives or components of project alternatives) refers to the decision of either the implementing municipalities or agencies to select and carry out an alternative or a component of an alternative. (Section 5 of this SED summarizes the components that comprise the project alternatives analyzed in this SED). The components assessed at a project level have specific locations that will be determined by implementing municipalities and agencies. The project level components will be subject to additional environmental review, including review by cities and municipalities implementing Toxic Pollutants TMDL projects.

Many of the specific projects and BMPs analyzed in this SED will involve small infrastructure maintenance and construction projects. Infrastructure maintenance and urban construction projects generate varying degrees of environmental impacts. The potential impacts can include, for example, noise associated with construction, air emissions associated with vehicles to deliver materials during construction, traffic associated with increased vehicle trips and where construction or attendant activities occur near or in thoroughfares. These foreseeable impacts are analyzed in detail in Section 6 of this SED.

To address the environmental impacts from routine and essential activities, responsible parties can employ a variety of techniques, BMPs, and other mitigation measures to minimize potential impacts on the environment. Mitigation measures for construction projects for maintenance projects include varying construction activities for certain times of the day to reduce the duration of traffic and noise impacts, developing detailed traffic plans in coordination with police or fire protection authorities, using less noisy equipment, using sound barriers, and using lower emission vehicles to reduce air pollutant emissions.

Many of the mitigation measures identified in the SED are common practices currently employed by agencies when planning and implementing stormwater BMPs. Agencies such as the California Stormwater Quality Association (CASQA), and the Water Environment Research Foundation (WERF) publish handbooks containing guidance on the selection, siting, design, installation, monitoring, and evaluation of stormwater BMPs (CASQA, 2003a, CASQA, 2003b, WERF, 2005). Manuals are also available, which describe engineering and administration policies and procedures for construction projects. These mitigation methods and BMPs are discussed in detail in Section 6 of this SED. Mitigation measures are suggested to minimize site specific impacts to less than significant levels. Mitigation of adverse environmental impacts is strictly within the discretion of the individual implementing agency. It is the obligation of responsible parties to mitigate adverse environmental impacts associated with reasonably foreseeable means of compliance when impacts are deemed significant (Title 14, California Code of Regulations, Section 15091(a)(2).)

This SED finds foreseeable methods to comply with the Toxic Pollutants TMDL to include both non-structural and structural BMPs in the Marina del Rey Waters. Most of these BMPs do not cause significant impacts that cannot be mitigated through commonly used construction and maintenance practices. The SED identifies mitigation methods for impacts with potentially significant effects and finds that these methods can mitigate potentially significant impacts to levels that are less than significant. To the extent that there are significant adverse effects on the environment due to the implementation of this TMDL, there are feasible alternatives and/or feasible mitigation measures that would substantially lessen significant adverse impacts. The SED can be used by implementing municipalities and agencies to expedite any additional environmental analysis of specific projects required to comply with the TMDL.

The implementation actions represent a range of activities that could be conducted to control the release of polluted stormwater and contaminated sediments to the Marina del Rey Harbor Waters, attain water and sediment quality standards, and protect beneficial uses. The lead agencies for proposed and subsequent projects would be obligated to mitigate any impacts they identify.

Many of the proposed actions, such as installation of infiltration systems, vegetated swales, sand/media filters, and oil/water separators, removal of contaminated sediment by dredging, diversion of low flows to sewer lines, monitoring natural attenuation of contaminants, capping of contaminated sediments, replacing of copper-based antifouling paints, and installation of catch basin inserts will improve water and sediment quality in Marina del Rey Waters.

The regulatory requirements and the program objectives for the Toxic Pollutants TMDL are provided in Section 2 and Section 3, respectively. Section 4 discusses the program level alternatives for this TMDL and presents implementation alternatives to achieve compliance with the final waste load allocations for copper, lead, zinc, chlordane, DDT, and PCBs. Section 5 provides a detailed description of implementation alternatives. Section 6 discusses environmental setting, impacts, and mitigation (Section 6.1), and the CEQA Checklist and Determination with in-depth analysis of each alternative (Section 6.2). Other environmental considerations are discussed in Section 7. The Statement of Overriding Considerations and Determination is discussed in Section 8. A list of references is included in Section 9 of this SED.

2. REGULATORY REQUIREMENTS FOR ENVIRONMENTAL IMPACT ANALYSIS OF THE TMDL

This section presents the regulatory requirements for assessing environmental impacts of a TMDL implemented through a Basin Plan amendment at the Regional Board. This TMDL for toxic pollutants in Marina del Rey Harbor Waters is evaluated at a program level of detail under a *Certified Regulatory Program* and the information and analyses are presented in this Substitute Environmental Document (SED) as discussed in this section.

2.1 EXEMPTION FROM CERTAIN CEQA REQUIREMENTS

The California Secretary of Resources has certified the State and Regional Boards' basin planning process as exempt from certain requirements of the California Environmental Quality Act (CEQA), including preparation of an initial study, negative declaration, and environmental impact report (California Code of Regulations, Title 14, Section 15251(g)). As the proposed amendment to the Basin Plan is part of the basin planning process, the environmental information developed for and included with the amendment is considered a substitute for an initial study, negative declaration, and/or environmental impact report.

2.2 CALIFORNIA CODE OF REGULATIONS AND PUBLIC RESOURCES CODE REQUIREMENTS

While the "certified regulatory program" of the Regional Board is exempt from certain CEQA requirements, it is subject to the substantive requirements of California Code of Regulations, Title 23, Section 3777(a), which requires a written report that includes a description of the proposed activity, an analysis of reasonable alternatives, and an identification of mitigation measures to minimize any significant adverse environmental impacts. Section 3777(a) also requires the Regional Board to complete an environmental checklist as part of its substitute environmental document. This checklist is provided in section 6 of this document.

In addition, the Regional Board must fulfill substantive obligations when adopting performance standards such as TMDLs, as described in Public Resources Code section 21159. Section 21159, which allows expedited environmental review for mandated projects, provides that an agency shall perform, at the time of the adoption of a rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement, an Environmental Analysis of the reasonably foreseeable methods of compliance. The statute further requires that the environmental analysis at a minimum, include, all of the following:

(1) An analysis of the reasonably foreseeable environmental impacts of the methods of compliance.

(2) An analysis of reasonably foreseeable feasible mitigation measures to lessen the adverse environmental impacts.

(3) An analysis of reasonably foreseeable alternative means of compliance with the rule or regulation that would have less significant adverse impacts. (Pub. Resources Code, § 21159(a).)

Section 21159(c) requires that the Environmental Analysis take into account a reasonable range of:

(1) Environmental, economic, and technical factors,

(2) Population and geographic areas, and

(3) Specific sites.

2.3 PROGRAM AND PROJECT LEVEL ANALYSES

Public Resources Code § 21159(d) specifically states that the public agency is not required to conduct a "project level analysis." Rather, a project level analysis must be performed by the local agencies that are required to implement the requirements of the TMDL (Pub. Res. Code § 21159.2.) Notably, ***the Regional Board is prohibited from specifying the manner of compliance with its orders*** (Water Code § 13360), and accordingly, the ***actual*** environmental impacts will necessarily depend upon the compliance strategy selected by the local agencies and other permittees.

This Substitute Environmental Document identifies the reasonably foreseeable environmental impacts of the ***reasonably foreseeable*** methods of compliance (Pub. Res. Code, § 21159(a)(1).), based on information developed before, during, and after the CEQA scoping process that is specified in California Public Resources Code section 21083.9. This analysis is a program level (i.e., macroscopic) analysis. CEQA requires the Regional Board to conduct a program level analysis of environmental impacts. (Pub. Res. Code, § 21159(d).) Similarly, the CEQA substitute document does not engage in speculation or conjecture (Pub. Res. Code, § 21159(a).) When the CEQA analysis identifies a potentially significant environmental impact, the accompanying analysis identifies reasonably foreseeable feasible mitigation measures. (Pub. Res. Code, § 21159(a)(2).) Because responsible agencies will most likely use a combination of structural and non-structural BMPs, the SED has identified the reasonably foreseeable alternative means of compliance. (Pub. Res. Code, § 21159(a)(3).)

2.4 PURPOSE OF CEQA

CEQA's basic purposes are to: 1) inform the decision makers and public about the potential significant environmental effects of a proposed project, 2) identify ways that environmental damage may be mitigated, 3) prevent significant, avoidable damage to the environment by requiring changes in projects, through the use of alternative or mitigation measures when feasible, and 4) disclose to the public why an agency approved a project if significant effects are involved. (Cal. Code Regs., tit. 14, § 15002(a).)

To fulfill these functions, a CEQA review need not be exhaustive, and CEQA documents need not be perfect. They need only be adequate, complete, and good faith efforts at full disclosure. (Cal. Code Regs., tit.14, § 15151.) The Court stated in River Valley Preservation Project v. Metropolitan Transit Development Board (1995) 37 Cal.App.4th 154, 178:

"[a]s we have stated previously, "[our] limited function is consistent with the principle that [t]he purpose of CEQA is not to generate paper, but to compel government at all levels to make decisions with environmental consequences in mind…" (City of Santee v. County of San Diego (1989) 214 Cal.App.3d 1438, 1448 [263 Cal. Rptr. 340]; quoting Laurel Heights I, supra, 47 Cal.3d at p. 393.) "We look 'not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.' (Guidelines, §§ 15151.)" (City of Fremont v. San Francisco Bay Area Rapid Transit Dist., supra, 34 Cal.App.4th at p. 1786.)

Nor does a CEQA require unanimity of opinion among experts. The analysis is satisfactory as long as those opinions are considered. (Cal. Code Regs., tit. 14, § 15151.)

In this document, the Regional Board staff has performed a good faith effort at full disclosure of the reasonably foreseeable environmental impacts that could be attendant with the proposed Toxic Pollutants TMDL.

3. TMDL OVERVIEW AND PROGRAM OBJECTIVES

3.1 INTRODUCTION – LEGAL BACKGROUND

The Total Maximum Daily Load (TMDL) for toxic pollutants in Marina del Rey Harbor Waters sets forth an implementation plan to attain the water quality standards for a variety of toxic pollutants in these waterbodies. The TMDL was prepared pursuant to state and federal requirements to preserve and enhance water quality in Marina del Rey Harbor Waters. The adoption of a TMDL is not discretionary and is compelled both by section 303(d) of the federal Clean Water Act (33 USC 1313(d)) and by a federal consent decree, Heal the Bay Inc., et al. v. Browner, et al. C 98-4825 SBA (United States District Court, Northern District of California, 1999) approved on March 22, 1999.

The California Water Quality Control Plan, Los Angeles Region, also known as the *Basin Plan*, sets water quality standards for surface waters and ground waters in the region. These standards are comprised of designated beneficial uses for surface and ground waters, and numeric and narrative objectives necessary to support beneficial uses and the state's antidegradation policy. Such standards are mandated for all waterbodies within the state under the Porter-Cologne Water Quality Act. In addition, the Basin Plan describes implementation programs to protect all waters in the region. The Basin Plan implements the Porter-Cologne Water Quality Control Act (commencing at Section 1300 of the "California Water Code") and serves as the State Water Quality Control Plan applicable to Marina del Rey Harbor Waters, also requiring water quality standards for all surface waters as required pursuant to the federal Clean Water Act (CWA).

Section 305(b) of the CWA mandates biennial assessments of the nation's water resources. These water quality assessments are used, with any other available data and information, to identify and prioritize waters not attaining water quality standards. The resulting amalgamation of waters is referred to as the "303(d) list" or the "Impaired Waters List." CWA section 303(d)(1)(C) and (d)(1)(D) require that the state establish TMDLs for each listed water. Those TMDLs, and the 303(d) list itself, must be submitted to USEPA for approval under section 303(d)(2). Section 303(d)(3) requires that the state also develop TMDLs for all waters that are not on the 303(d) list as well, however TMDLs for waters that do not meet the criteria for listing are not subject to approval by USEPA.

TMDLs must be established at a level necessary to attain water quality standards, considering seasonal variations and a margin of safety. TMDLs must also include an allocation of parts of the total allowable load (or loading capacity) to all point sources, nonpoint sources, and natural background in the form of waste load and load allocations, accordingly. Waste load and load allocations must be assigned for all sources of the impairing pollutant, irrespective of whether they are discharged to the impaired reach or to an upstream tributary. TMDLs are generally established in California through the basin planning process, i.e., an amendment to the basin plan to incorporate a new or revised program of implementation of the water quality standards, pursuant to Water Code section 13242. The process that the Regional Board uses for establishing TMDLs is the same whether under section 303(d)(1) or 303(d)(3).

USEPA's authority over the 303(d) program includes the obligation to approve or disapprove the identification of impaired waters. If any list or TMDL is disapproved, USEPA must establish its own list or TMDL.

As part of California's 1996, 1998, 2002, 2006, and 2008 303(d) list submittals, the Regional Board identified Marina del Rey Harbor Waters as being impaired due to toxic pollutants. More specifically, each of these water bodies are included on the 303(d) list for one or more of the following pollutants: copper, lead, zinc, chlordane, DDT, and PCBs. These impairments may exist in one or more environmental media—water, sediments, or tissue.

The Toxic Pollutants TMDL for Marina del Rey Harbor Waters is a Basin Plan amendment and is subject to the provision of the Public Resources Code Section 21083.9 that requires a CEQA Scoping to be conducted for Regional Projects. CEQA Scoping involves identifying a range of project/program related actions, alternatives, mitigation measures, and significant effects to be analyzed in an EIR or its functionally equivalent document.

The Toxic Pollutants TMDL was originally adopted by the Regional Board on October 6, 2005 (Regional Board Resolution No. R05-2012), approved by the State Board on January 13, 2006 (State Board Resolution No. 2006-0006), and approved by U.S. EPA on March 16, 2006. The original Toxic Pollutants TMDL included substitute environmental documentation, which was filed with the Resources Agency on March 22, 2006. The proposed project is a revision of the original Toxic Pollutants TMDL, including changes such as the extension of the geographical area of the TMDL, the addition of a TMDL for DDT in the sediments, the addition of load allocations for the sediment impairments, and the addition of a copper water column TMDL.

These TMDL revisions alter the environmental analysis that was previously prepared for the establishment of the Marina del Rey Harbor Toxics TMDL because the TMDL revisions will result in different implementation actions than those previously analyzed and different effects upon the environment. Moreover, additional reasonably foreseeable methods of compliance warrant environmental analysis pursuant to Public Resources Code section 21159 and California Code of Regulations, Title 14, section 15187.

This SED is being released for public comments accompanying the TMDL staff report, Basin Plan amendment, and tentative resolution for adoption by the Regional Board; these documents should be considered as a whole when evaluating the environmental impacts of implementing the TMDL. Regional Board staff will respond to public comments received on these documents and these comments and responses and the documents will all be considered by the Regional Board when considering whether to adopt the TMDL.

3.2 PROJECT PURPOSE, TMDL GOALS, AND WATER QUALITY OBJECTIVES

3.2.1 PROJECT PURPOSE

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) proposes an amendment to the Water Quality Control Plan for the Los Angeles Region to incorporate a Total Maximum Daily Load (TMDL) to reduce toxic pollutants such copper, lead, zinc, chlordane, DDT, and PCBs in Marina del Rey Harbor Waters.

As further set forth herein, this project's purpose is twofold:

- To adopt a regulation that will guide Regional Board permitting, enforcement, and other actions to require responsible parties to take appropriate measures to restore and maintain applicable water quality standards pertaining to toxic pollutants throughout the Marina del Rey Harbor Waters; and
- To establish a Toxic Pollutants TMDL in compliance with the requirements of CWA section 303(d).

Section 303(d) of the CWA requires states to identify waters not meeting state water quality standards, and establish TMDLs for those waters, at levels necessary to resolve the impairments and maintain water quality standards. The purpose of this project is to both comply with the requirements of section 303(d) and to resolve the impairments and maintain compliance with water quality standards in the relevant water bodies.

3.2.2 TMDL GOALS

The Basin Plan designates beneficial uses of waterbodies, establishes water quality objectives for the protection of these beneficial uses, and outlines a plan of implementation for maintaining and enhancing water quality. The proposed amendment would incorporate into the Basin Plan a TMDL for toxic pollutants in Marina del Rey Harbor Waters.

The beneficial uses likely to be impaired by toxic pollutants include: Water Contact Recreation (REC-1), Non-contact Water Recreation (REC-2), Commercial and Sport Fishing (COMM), Marine Habitat (MAR), Wildlife Habitat (WILD), and Shellfish Harvesting (SHELL).

The Regional Board's goals in adopting the TMDL are to eliminate the significant water quality impacts caused by toxic pollutants in water, sediment, and/or fish tissue.

3.2.3 WATER QUALITY OBJECTIVES

As stated in the Basin Plan, Water Quality Objectives (WQOs) are intended to protect the public health and welfare and to maintain or enhance water quality in relation to the designated existing and potential beneficial uses of the water. The Basin Plan specifies both narrative and numeric WQOs. The following narrative WQOs are most pertinent to the Toxic Pollutants TMDL.

Chemical Constituents: *Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.*

Bioaccumulation: *Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels, which are harmful to aquatic life or human health.*

Pesticides: *No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.*

Toxicity: *All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.*

The protocols used for this assessment are consistent with those outlined in the State's 303(d) listing policy (SWRCB, 2004). The benchmarks used in this assessment are consistent with those identified in the policy's supporting Functional Equivalency Document (FED) document. The state's policy was developed by the State for purposes of water quality assessments, and the State applied this policy to develop its decisions for the 303(d) list. This assessment builds on the data record evaluated by the State and compiled in the 303(d) list factsheets; it also includes more recent information. This is consistent with procedures provided in the State's Impaired Waters Guidance (SWRCB, 2005, section 2) to produce an assessment more accurately reflecting current water conditions. As described above, this assessment is generally consistent with protocols and benchmarks provided in the State's 303(d) listing policy and supporting (FED) document.

4. DESCRIPTION OF ALTERNATIVES

This substitute environmental document analyzes three program alternatives that encompass actions within the jurisdiction of the Regional Board and implementing municipalities and agencies. The program alternatives include (1) the revised Toxic Pollutants TMDL as it is proposed for Regional Board adoption; (2) a revised Toxic Pollutants TMDL with only reconsideration elements specified in the original TMDL; and (3) a No Program Alternative in which the Toxic Pollutants TMDL is not revised. The specifics of the many projects which would make up a program alternative are discussed in detail in Section 5 and include structural and non-structural Best Management Practices (BMPs) that are reasonably foreseeable to be implemented under the Toxic Pollutants TMDL program alternatives.

The components assessed at a program level generally are program elements that would be implemented as part of the Toxic Pollutants TMDL, but these elements do not have specific locations or design details identified. The components assessed at a project level have specific locations which will be determined by implementing municipalities and agencies. The project level components will be subject to additional future environmental review, including review by cities and municipalities implementing Toxic Pollutants TMDL projects.

4.1 PROGRAM ALTERNATIVES

4.1.1 ALTERNATIVE1 - REVISED TMDL AS PROPOSED

The Toxic Pollutants TMDL was originally adopted by the Regional Board on October 6, 2005 (Regional Board Resolution No. R05-2012), approved by the State Board on January 13, 2006 (State Board Resolution No. 2006-0006), and approved by U.S. EPA on March 16, 2006. The proposed project includes several changes to the original Toxic Pollutants TMDL, including the extension of the geographical area of the TMDL, the addition of a TMDL for DDT in the sediments, the addition of load allocations for the sediment impairments, and the addition of a copper water column TMDL.

This program alternative is based on the TMDL revision that is presently proposed for Regional Board consideration. The proposed TMDL focuses on the reduction of toxic pollutants in Marina del Rey Waters.

The TMDL waste load allocations (WLAs) and load allocations (LAs) are established through an amendment to the Basin Plan. The WLAs focus on reductions in sources of heavy metals and organic pollutants from municipal storm drains and discharges associated with regional, state, and federal discharge permittees. The TMDL LAs focus on reductions of local sources associated with runoff and drainage, copper-based antifouling paints, and contaminated sediments. The LAs will be implemented primarily through regulatory mechanisms that implement the State Board's 2004 Nonpoint Source Policy, including Conditional Waivers, Waste Discharge Requirements (WDRs), or Discharge Prohibitions.

This alternative provides a program for addressing the adverse impacts of toxic pollutants through progressive controls in discharges to Marina del Rey Harbor Waters through a 20-year schedule. This schedule is both reasonable and as short as practicable. The WLAs and the implementation schedule, once they are incorporated into the Basin Plan, will be considered by NPDES permit writers when developing permit limits that are adopted in separate subsequent actions by the Regional Board.

Although the Regional Board cannot mandate the manner of compliance, foreseeable environmental impacts from methods of compliance are well known. They include structural methods such as installing infiltration systems, vegetated swales, stormwater capture systems,

sand/media filters, and oil/water separators; replacing copper-based antifouling paints; removing contaminated sediments in the harbor by dredging; and upgrading storm drains.

This TMDL program alternative anticipates compliance through installation of structural BMPs, and non-structural BMPs as discussed in Section 5. Potential adverse impacts to the environment stem principally from the installation, operation, and maintenance of these structural BMPs. This document analyzes these impacts and concludes that installation of implementation projects are of relatively short duration and typical of "baseline" construction and maintenance projects that occur presently in the TMDL area. It also concludes that significant impacts can be mitigated or there are alternative means of compliance available, and the addition of a copper water column TMDL, the revision of final water column, fish tissue, and sediment numeric targets for PCBs.

4.1.2 ALTERNATIVE 2 – REVISED TMDL WITH ONLY RECONSIDERATION ELEMENTS SPECIFIED IN ORIGINAL TMDL

The implementation plan that was adopted as a part of the original TMDL includes a mandatory reconsideration six years after the effective date of the TMDL to re-evaluate waste load allocations and the implementation schedule. The two specific components required to be addressed by the Regional Board are Sediment Quality Objectives and toxicity hotspots.

This alternative would focus only on the reconsideration items specified in the original TMDL, and would not include the extension of the geographical area of the TMDL to include the front basins, the addition of a TMDL for DDT in the sediments, or the addition of a copper water column TMDL.

The WLAs and LAs that would be implemented are similar to those in Alternative 1, and the implementation schedule would remain the same. However, this alternative would not include additional implementation measures in the front basins, or the replacement of copper-based antifouling paints. Thus, the environmental impacts would be less under this alternative. However, this alternative does not accomplish the project's purposes of restoring and maintaining water quality standards throughout the Marina del Rey waters. The TMDL identifies additional impairments in the sediment in the front basins and additional impairments due to copper in the water column. All waterbodies identified as impaired whether or not they are listed on the 303(d) List require a TMDL pursuant to the CWA under section 303(d)(1)(C). Furthermore, Alternative 2 amounts to the unlawful segmenting or piecemealing of the project to ostensibly lessen environmental impacts. If Alternative 2 were adopted, and a smaller project occurred as a result, the remainder of the project would eventually be required when TMDLs are established to implement standards related to the newly identified impairments. Piecemealing a project to contend it will result in fewer impacts is unlawful under CEQA, and is therefore not a legal or feasible alternative. Since section 303(d) will require the state to establish TMDLs for the impaired but not yet listed reaches, the impacts delayed by focusing only upon the listed reaches will still occur when TMDLs for them are subsequently implemented. Accordingly, this alternative is not recommended.

4.1.3ALTERNATIVE 3 –NO PROGRAM ALTERNATIVE

This program alternative assumes that the original Toxic Pollutants TMDL remains unchanged. While cities and municipalities would implement BMPs according to the original TMDL, this CEQA analysis is based on the assumption that no additional toxic pollutants reduction BMPs would be implemented.

While impacts to the environment from additional construction or maintenance of structural BMPs, remediation of sediments, and removal of copper-based antifouling paints would be avoided in this No Program alternative, No Program would not fully restore beneficial uses in Marina del Rey Waters. Alternative 1 will fully restore beneficial uses and attain water quality standards by removing toxic pollutants from Marina del Rey Waters and represents a benefit to the environment.

4.1.3 RECOMMENDED PROGRAM ALTERNATIVE

This environmental analysis finds that program alternative 1 is the most environmentally feasible alternative.

Alternatives 2 and 3 are not feasible alternatives. Because while they would avoid impacts due to additional implementation projects associated with the extension of the geographical area of the TMDL, the addition of a TMDL for DDT in the sediments, the addition of load allocations for the sediment impairments, and the addition of a copper water column TMDL, toxic pollutants impairment of the Marina del Rey Harbor Waters will continue. Alternatives 1 will comply with the law and remove the toxic pollutants impairment from Marina del Rey Harbor Waters.

4.2 PROJECT LEVEL ALTERNATIVES

The program alternatives above present many alternatives and options, but do not require any specific projects to achieve compliance. Rather, a project level analysis must be performed by the local agencies that are required to implement the requirements of the TMDL. (Pub. Res. Code § 21159.2.) Notably, the Regional Board is prohibited from specifying the manner of compliance with its regulations (Water Code § 13360), and accordingly, the actual environmental impacts will necessarily depend upon the compliance strategy selected by the local agencies and other permittees.

Although the Regional Board cannot mandate the manner of compliance, foreseeable environmental impacts from methods of compliance are well known, as are feasible mitigation measures. Structural implementation alternatives include: installing infiltration systems, vegetated swales, sand/media filters, and oil/water separators, and catch basin inserts; removing contaminated sediments in the harbor by dredging; upgrading storm drains, monitoring natural attenuation of contaminants, capping of contaminated sediments, replacing of copper-based antifouling paints, and diverting the low flow runoff. Non-structural BMPs include housekeeping practices, public education and outreach, trash collection/street sweeping, reducing effects of Copper –Based paints, conducting boater education program, imposing controls on Marina del Rey boat owners, implementing financial incentives, storm drain cleaning and commercial demonstrations and scientific studies.

The components assessed at a project level have specific locations which will be determined by implementing municipalities and agencies. The project level components will be subject to additional future environmental review, including review by cities and municipalities implementing Toxic Pollutants TMDL projects. Section 5 of this SED includes an extensive discussion of the project alternatives.

5. DESCRIPTION OF IMPLEMENTATION ALTERNATIVES

This Section of the SED provides a description of structural and non-structural implementation alternatives and the type of sites where they might be placed in compliance with the Toxic Pollutants TMDL.

The Regional Board is prohibited from specifying the manner of compliance with its orders (Water Code § 13360), and accordingly, the actual compliance strategies will be selected by the local agencies and other permittees. Although the Regional Board does not mandate the manner of compliance, foreseeable methods of compliance are well known. The most likely measures of compliance include structural BMPs such as 1) infiltration systems, 2) vegetated swales, 3) stormwater capture and reuse, 4) sand/media filters, 5) oil/water separators, 6) sediment dredging, 7) sediment capping, 8) switching from copper-based antifouling paints. 9) low flow diversions, and 10) catch basin inserts; as well as non-structural BMPs such as monitored natural attenuation. housekeeping practices, public education, street cleaning, and storm drain cleaning.

The project level components will be subject to additional future environmental review. A project level environmental analysis must be performed by the local agencies that are required to implement the requirements of the TMDL (Pub. Res. Code § 21159.2.).

5.1 STRUCTURAL IMPLEMENATION ALTERNATIVES (BMPS)

Structural BMPs involve the use of engineered systems and methods to treat or divert water at either the point of generation or point of discharge to either the storm system or to receiving waters. These controls can require construction and operation activities that create potentially significant environmental impacts.

5.1.1 INFILTRATION SYSTEMS

Infiltration is the process where water enters the ground and moves downward through the unsaturated soil zone. Infiltration is ideal for management and conservation of runoff because it filters pollutants through the soil and restores natural flows to groundwater and downstream water bodies. For example, an infiltration trench is a long, narrow, rock-filled trench with no outlet that receives stormwater runoff. Runoff is stored in the void space between the stones and infiltrates through the bottom and into the soil matrix. Infiltration trenches perform well for removal of fine sediment and associated pollutants. Pretreatment using buffer strips, swales, or detention basins is important for limiting amounts of coarse sediment entering the trench which can clog and render the trench ineffective (CASQA, 2003a).

5.1.2 VEGETATED SWALES

Vegetated bioswales are constructed drainage ways used to convey stormwater runoff. Vegetation in bioswales allows for the filtering of pollutants, and infiltration of runoff into groundwater. Broad swales on flat slopes with dense vegetation are the most effective at reducing the volume of runoff and pollutant removal. Bioswales planted with native vegetation offer higher resistance to flow and provide a better environment for filtering and trapping pollutants from stormwater. Vegetated bioswales generally have a trapezoidal or parabolic shape with relatively flat side slopes. Individual vegetated bioswales generally treat small drainage areas (five acres or less). A properly designed vegetated swale may achieve a 25 to 50 percent reduction in particulate pollutants conservatively, including sediment and sediment-attached metals. The hydrocarbons, lead, and zinc removal efficiencies for vegetated swales are 62%, 67%, and 71%, respectively (USEPA, 1999).

5.1.3 STORMWATER CAPTURE AND RE-USE

Stormwater capture systems contribute to the control of toxic pollutants in the watershed and harbor by reducing volume of runoff and reducing peak flows. BMPs within this category

include rain barrels, cisterns, and other containers used to hold rainwater for reuse or recharge. These systems are usually designed to capture runoff from relatively clean surfaces such as roofs, such that the water may be reused without treatment. Tank capacities range from around 55 gallons to several thousand cubic feet and can be above or below ground.

5.1.4 SAND/MEDIA FILTERS

A typical sand/media filter system contains two or more chambers. The first is the sedimentation chamber for removing floatables and heavy sediments. The second is the filtration chamber, which removes additional pollutants by filtering the runoff through a sand bed or absorptive filtering media. This type of treatment system provides high removal efficiency for sediment (CASQA, 2003a).

5.1.5 SEDIMENT CAPPING

The objective of sediment capping is to cover contaminated sediments by a layer of clean sediment, clay, gravel, or other material. The cap reduces the mobility of the pollutants and places a physical barrier between the water column and the contaminated sediment. Capping can be an effective remediation action; however it is most effective in large deep waterbodies under certain conditions. For example, the bottom sediments of the waterbody must be able to support the cap and the hydrologic conditions of the waterbody must not disturb the cap site. This option would require long term monitoring and maintenance to ensure that the contaminated sediments are not moving and that the cap is still in place.

5.1.6 REPLACEMENT OF COPPER-BASED ANTIFOULING PAINTS

Effective alternatives to copper-based antifouling paints should be considered to reduce copper levels in both sediments and harbor waters. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. In general, less toxic and non-toxic alternative coatings require more frequent cleaning in order to remove the buildup of fouling growth and prevent increased fuel consumption. If increased frequency of hull cleaning isn't adequate to prevent significant air pollution due to increased drag caused by fouling organisms, additional measures such as putting pollution control devices on boat engines may be necessary.

5.1.7 OIL/WATER SEPARATORS

Oil/water separators may remove oils and greases (and sometimes solids) from industrial waste streams and stormwater discharges. They operate by employing various physical or chemical separation methods, including gravity separation, filters, coagulation/flocculation, and flotation. They are typically installed in industrial and maintenance areas and receive oily wastewater generated during processes such as vehicle and equipment maintenance and washing. The effluent from oil/water separators may be useful for reuse or discharged to a sanitary sewer system.

5.1.8 REMOVE CONTAMINATED SEDIMENT - DREDGING

Dredging is the removal of contaminated sediments from both the Inner and Outer Harbor areas. In general, surface layers of loose rich organic material and contaminated sediments are removed from targeted areas. The dredge area would be separated by a silt curtain to isolate the work area and prevent mixing with other parts of the harbor. Dredges may be used in areas that contain contaminated sediments. Hydraulic dredging involves a dredge that floats on the water and pumps the material through a temporary pipeline to an off-site location or carriers. Grab dredges are typically mounted on crane ships or a dragline. The dredge is lowered into the material and the grab is closed while the bucket is being raised. The material maybe stored temporary within

the harbor or transported by barges and potentially sent to proposed offshore disposal facilities. Dredged-up sediment may also be temporarily stored nearby on the disposal area; once dry, the sediment would be trucked to an appropriate disposal area. This sediment would then be transported to a Class 1 hazardous waste disposal facility, or the dredged sediment may be recycled — beneficially reused within the Marina del Rey to create new land area. In some cases, sites may be capped or a combination of dredging and sediment capping may be used.

5.1.9 LOW FLOW DIVERSION

The redirection of non-stormwater flow will reduce the dry weather pollutant loading into receiving waters. Under this implementation alternative a low flow diversion device would be used to divert non-stormwater flows Marina del Rey Harbor Waters to the sanitary sewer. A low flow diversion is a device that routes non-stormwater runoff away from the storm drain system or waterbody to the sanitary sewer system for treatment. Low flow diversion devices could be installed a short distance upstream from the storm drain discharge point in order to divert flows prior to discharge. The diversion device may be designed with a storm flow bypass, so that stormwater flows may continue to directly discharge into the harbor. As part of this implementation alternative a wet well and pump station would also be constructed in order to temporarily store the diverted flow until it can be conveyed to the sanitary sewer system.

5.1.10 CATCH BASIN AND CATCH BASIN INSERTS

A catch basin or storm drain inlet is an inlet to the storm drain system that typically includes a grate or curb opening where stormwater enters the catch basin and a sump to reduce sediment, debris, and associated pollutants. A catch basin insert is any device that can be inserted into an existing catch basin design to provide some level of runoff contaminant removal. Currently, there are many different catch basin insert models available, with applications ranging from trash and debris removal to carbon adsorption of aliphatic and aromatic hydrocarbons and heavy metals removal. These catch basin inserts should also have an overflow outlet, through which water exceeding the treatment capacity can escape without flooding the adjacent area.

5.1.11 MONITORED NATURAL ATTENUATION

Natural attenuation encompasses the physical, chemical, and biological processes that the sediments may undergo, which over time will attenuate (i.e. reduce concentration and bioavailability) the impacts of contamination. These are natural processes that will occur without other remediation actions. Monitoring would be required, as part of this remediation strategy, to demonstrate that contaminants are in fact attenuating and that human health and the environment are protected. A disadvantage of choosing natural attenuation as a remediation strategy is that it generally requires long periods of time to be effective given the long half-lives of the pollutants of concern.

5.2 NON-STRUCTURAL BMPS

Non-structural BMPs include educational and pollution prevention practices designed to improve water quality by reducing a variety of toxic pollutants, including metals, organic compounds, and sediment toxicity. They do not involve fixed, permanent facilities, and they usually work by changing behavior through control programs that include, but are not limited to prevention, education, and regulation. Less significant adverse impacts on the environment are anticipated for these controls. These programs are described below:

5.2.1 HOUSEKEEPING BMPS

The enhancement or addition of housekeeping BMPs in areas with demonstrated deficiencies in existing BMPs or a high probability of contributing to stormwater pollution may prevent or reduce overall pollutant loading from port activities into harbor waters. Housekeeping BMPs may include: more rigorous spill prevention procedures for mobile fueling operations, equipment maintenance and storage procedures, cargo, and hazardous materials storage; improved hazardous material management procedures; and enhanced dust and runoff control at recyclable metal terminals (POLA and POLB, 2009). New BMPs detailed in the Water Resources Action Plan (POLA and POLB, 2009) to be instituted where appropriate may include: requiring periodic zero-discharge pavement cleaning in key areas; providing covered storage of materials and idle equipment where necessary and feasible; instituting operational controls such as modified cargo storage, cargo loading/unloading, and materials handling and storage protocols; employing dust and runoff controls at auto dismantling and boat yards where they are not already employed; employing sustainable landscaping materials and practices to reduce water, fertilizer, and pesticide use; and introducing sustainable materials and practices in building and structure maintenance.

5.2.2 PUBLIC EDUCATION AND OUTREACH

Education and outreach to residents, port tenants, and trucking firms may minimize the potential for contamination of stormwater runoff by encouraging residents and business operators to pick up litter, minimize runoff from residential and commercial facilities, and control excessive irrigation. The public is often unaware of the fact that contamination is caused by polluted runoff as excess water discharged on streets and lawns ends up in Marina del Rey Harbor Waters.

Local agencies can provide educational materials to the public via signs, internet, television, radio, and other media, and by distributing brochures, flyers, and community newsletters, creating information hotlines to educate the targeted groups, developing community events, and supporting volunteer monitoring and cleanup programs.

5.2.3 TRASH COLLECTION/STREET SWEEPING

Trash collection and street sweeping may minimize trash and pollutants on street surfaces that may impact stormwater and dry-weather runoff. Trash collection includes management of trash receptacles, and removal of trash on land and in water. Street sweeping involves employing pavement cleaning practices such as street sweeping on a regular basis to minimize trash, sediment, debris, and other pollutants that are potential sources of pollution which can end up in receiving waters. There are three types of street sweepers: mechanical, vacuum filter, and regenerative air sweepers (USEPA, 2010).

5.2.4 STORM DRAIN CLEANING

Routine cleaning of the storm drain system reduces the amount of trash entering the receiving waters, prevents clogging, and ensures the flood control capacity of the system. Cleanings may occur manually or with evacuators, vacuums, or bucket loaders. A successful storm drain cleaning program includes regular inspection and cleaning of catch basins and storm drain inlets, increased inspection and cleaning in areas with high trash accumulation, accurate recordkeeping, cleaning immediately prior to the rainy season to remove accumulated trash, and proper storage and disposal of collected material. (CASQA, 2003a)

5.2.5 CONDUCT BOATER EDUCATION PROGRAM

In order to build a consensus supporting the need and rationale for the transition from traditional toxic antifouling paints to nontoxic alternatives that will entail higher costs for initial application, the County of Los Angeles and the marina owner/operators should conduct boater

education programs. The education programs would be designed to educate the Marina del Rey boating community about the water quality problem associated with copper leaching in Marina del Rey and the nontoxic or less toxic coatings and strategies that can be implemented by individual boaters to resolve the problem. The education programs should include information on the economics and tradeoffs between the use of copper-based paints and nontoxic or less toxic alternatives.

5.2.6 COMMERCIAL DEMONSTRATIONS AND SCIENTIFIC STUDIES

The County of Los Angeles and marina owners/operators in Marina del Rey could coordinate and oversee commercial and scientific studies to confirm and demonstrate the efficacy and longevity of available nontoxic and less toxic boat hull coating products. The demonstrations and studies would also allow boat repair yards and underwater hull cleaners the opportunity to develop expertise and acquire special equipment needed for the application and maintenance of nontoxic and less toxic boat hull coatings. The Regional Board may support efforts by the County of Los Angeles to seek grant funding for the commercial demonstrations and scientific studies from a variety of sources including the State Board, the USEPA, and the California Department of Boating and Waterways (DBW). Scientific research work should be conducted by qualified scientific or academic organizations.

5.2.7 IMPOSE CONTROLS ON MARINA DEL REY BOAT OWNERS

Marina owners/operators in Marina del Rey could impose and enforce controls on boat owners via conditions in lease or license agreements. For example: restrictions on the use of copper-based paints, such as a requirement that all new boats have nontoxic or less toxic coatings, or a requirement that boat owners convert to nontoxic or less toxic coatings during routine stripping; proof of hull coating composition; restrictions on hull cleaning; restrictions on number of boats; and requirements that hull cleaners use BMPs.

5.2.8 IMPLEMENT FINANCIAL INCENTIVES

Marina owners and operators in Marina del Rey could implement financial incentives to encourage the use of nontoxic and less toxic hull coatings. For example, the marina owner/operators could impose differential lease fees for individual boat owners which consider the hull coating composition of boats within the marina leaseholds with higher fees for traditional copper-based antifouling paints and lower fees for less toxic hull bottom coatings.

5.2.9 IMPOSE CONTROLS ON MARINA DEL REY MARINA OWNERS AND OPERATORS TO LIMIT USE OF COPPER-BASED HULL PAINTS

The County of Los Angeles could impose and enforce controls on Marina del Rey marinas via conditions in lease agreements and ordinances. For example, the County of Los Angeles could require restrictions on the use of copper-based paints, such as requiring that all new boats have nontoxic or less toxic coatings and requiring conversion to nontoxic or less toxic coatings during routine stripping; proof of hull coating composition; restrictions on hull cleaning; and/or restrictions on the number of boa

5.2.10 IMPLEMENT FINANCIAL INCENTIVES TO ENCOURAGE THE USE OF ALTERNATIVE ANTIFOULING STRATEGIES

The County of Los Angeles could implement financial incentives to encourage the use of nontoxic and less toxic hull coatings. For example, the County of Los Angeles may impose differential lease fees for Marina del Rey marina owners/operators which control the hull coating composition of boats within the marina leaseholds: higher fees for traditional copper-based antifouling paints and lower fees for less toxic hull bottom coatings. Additionally, the Port could impose the same types of controls and financial incentives on marinas throughout Marina del Rey to “level the economic playing field.”

5.2.11 REDUCE EFFECTS OF COPPER-BASED PAINTS THROUGH MANAGEMENT PRACTICES

Efforts should be made to reduce the amount of copper discharged from boat hulls with copper based paints by implementing the BMPs listed below.

- Boat owners could use slip liners to isolate boat hulls from waters;
- Boat owners could use dry storage (e.g., hoists, lifts) or landside boat storage facilities for smaller boats;
- Hull cleaners could use less abrasive hull cleaning methods and materials on boats with copper-based antifouling paints; and
- Hull cleaners could train in the maintenance of nontoxic and less toxic hull coatings and purchase the necessary special equipment

6. SETTING, IMPACTS, AND MITIGATION

6.1 INTRODUCTION

This section presents the environmental setting, impacts, and mitigation, where applicable, for the proposed implementation alternatives evaluated in this draft Substitute Environmental Document (SED). The implementation alternatives for achieving compliance with the Toxic Pollutants TMDL are described in detail in Section 5 of this document and in the TMDL Staff Report. Each of these implementation alternatives has been independently evaluated in this draft SED. The environmental setting for the Toxic Pollutants TMDL is discussed in Section 6.1.3, as well as the installation, operation, and maintenance activities associated with the Toxic Pollutants TMDL. There is also a discussion of the site-specific and device-specific environmental impacts from implementing the Toxic Pollutants TMDL. The environmental checklist, which includes the potential negative environmental impacts of the Implementation Alternatives (see Section 5 for a detailed description of the TMDL Implementation Alternatives), is also included in Section 6.2.

6.1.1 APPROACH TO ENVIRONMENTAL SETTING AND IMPACT ANALYSIS

Any potential environmental impacts associated with the waterbodies of concern in the Toxic Pollutants TMDL depend upon the specific compliance projects selected by the responsible jurisdictions, most of whom are public agencies subject to their own CEQA obligations (see Pub. Res. Code § 21159.2). This CEQA substitute environmental document identifies broad mitigation approaches that could be considered at the program level. Consistent with PRC§21159, the SED does not engage in speculation or conjecture, but rather considers the reasonably foreseeable environmental impacts of the foreseeable methods of compliance, the reasonably foreseeable feasible mitigation measures, and the reasonably foreseeable alternative means of compliance, which would avoid or reduce the identified impacts.

This draft SED evaluates the impacts of each implementation alternative relative to the subject resource area. The physical scope of the environmental setting and the analysis in this SED is the Marina del Rey Harbor area (Figure 6-1). This area is the geographic area for assessing impacts of the different implementation alternatives, because the discharge of heavy metals and organic compounds to this area would be controlled and/or eliminated by any one of or a combination of the implementation alternatives. Also, any potential impacts of implementing the proposed alternatives would be focused in this area.

The implementation alternatives in this draft SED are evaluated at a program level for impacts for each resource area. An assumption is made that a more detailed project level analysis will be conducted by all responsible agencies and jurisdictions once their mode of achieving compliance with the Toxic Pollutants TMDL has been determined. The analysis in this draft SED assumes that, project proponents will design, install, and maintain implementation measures following all applicable laws, regulations, ordinances, and formally adopted municipal and/or agency codes, standards, and practices. Several handbooks are available and currently used by municipal agencies that provide guidance for the selection and implementation of BMPs (Caltrans, 2010, CASQA, 2003a, CASQA, 2003b, WERF, 2005).

Figure 6- 1. Marina del Rey Watershed

6.1.2 PROGRAM LEVEL VERSUS PROJECT LEVEL ANALYSIS

As previously discussed, the Regional Board is the lead agency for the TMDL program, while the responsible agencies are the lead agencies for any and all projects implemented, within their jurisdiction, to comply with the program. The Regional Board does not specify the actual means of compliance by which responsible agencies choose to comply with the TMDL. Therefore, the implementation alternatives are mostly evaluated at a program level in this draft SED. The alternatives assessed at a program level generally are projects that would be implemented as part of the TMDL compliance. PRC §21159 places the responsibility of project level analysis on the agencies that will implement the Regional Board's TMDL.

6.1.3 ENVIRONMENTAL SETTING

The Marina del Rey watershed is approximately 2.9 square miles located in the Santa Monica Bay, California. It is south of Venice and north of Playa del Rey, and approximately 15 miles southwest of downtown Los Angeles. The watershed includes the City of Los Angeles, Culver City and unincorporated areas of Los Angeles County. The climate is warm and dry most of the year with intermittent wet weather events typically between November and March.

Marina del Rey Harbor was developed in the early 1960s on degraded wetlands that formed part of the estuary of Ballona Creek Wetlands. Marina del Rey Harbor, which opens into Santa Monica Bay, was constructed by the Army Corps of Engineers and is the largest artificial small-craft harbor in the United States. Marina del Rey harbors more than 6,000 wet berthed slips for privately owned pleasure craft, dry storage of approximately 3,000 boats, and launch facilities, which can accommodate approximately 240 trailered boats. The back basins (Basins D, E and F) house approximately 2,000 slips (Joseph Chesler, Los Angeles County Department of Beaches and Harbors, personal communication).

The Corps of Engineers maintains the harbor entrance channel and main channel for navigation by dredging. Since the late 1980's, the Corps of Engineers has not been able to use open water disposal for sediments dredged from the entrance channel due to the elevated levels of contaminants deposited from adjacent Ballona Creek. Based on Corps of Engineers' hydrodynamic numerical modeling (RMA4 model) results, the contaminant influence from Ballona Creek does not travel to nor affect the back basins (USACE 1999). Therefore, the back basins of the Marina del Rey Harbor are assumed to be outside any significant influence from Ballona Creek.

The Marina del Rey watershed is highly developed with high-density single family residence (HDSFR), multiple family residence (MFR), and mixed residential comprising the primary land use in the watershed (46.6%) followed by retail, commercial, and general office representing the second largest land use (12.2%). The receiving waters of Marina del Rey Harbor constitute 11.6% of the land area and marina facilities cover 9.2% of the land use. Open space and recreation represents 4.8% of the land use in the watershed. Light industrial and vacant/urban vacant each represent 4.7% of the land use. The remaining 6% of land area is covered by educational institutions (3.8%), under construction (1.2%), institutional and military installations (0.6%), transportation (0.3%), and mixed urban (0.2%).

6.1.4 BENEFICIAL USES OF MARINA DEL REY HARBOR WATERS

The various uses of waters in the Los Angeles Region, referred as beneficial uses, are designated in the Basin Plan (LARWQCB, 1994). These beneficial uses are the cornerstone of the State and Los Angeles Regional Water Quality Control Board's effort to protect water quality, as water quality objectives are set at levels that will protect the most sensitive beneficial use of a waterbody. Brief descriptions of the beneficial uses most likely to be impaired due to heavy metals and organic pollutants in Marina del Rey Harbor Waters are provided in this section.

The Basin Plan for the Los Angeles Regional Board (CRWQCB, 1994) defines 7 existing (E), beneficial uses for Marina del Rey Harbor (Table 6-1).

- **Navigation (NAV)**
  Navigation (NAV) beneficial uses are defined as uses of water for shipping, traveling, or other transportation by privet, military, or commercial vessels.

- **Habitat-Related Uses (MAR and WILD)**
  Several habitat-related beneficial uses are designated for Marina del Rey Harbor Waters. These uses include: the marine (MAR) habitat; estuarine habitat (EST); wetland land habitat (WET); rare, threatened, or endangered species habitat (RARE); warm freshwater habitat (WARM); and wildlife habitat (WILD).

- **Human Consumption of Aquatic Organisms (COMM and SHELL)**
  Beneficial uses of Marina del Rey Harbor Waters include commercial or recreational collection of fish, shellfish, or other organisms including, but not limited to, uses involving organisms intended for human consumption or bait purposes.

- **Recreational Uses (REC-1 and REC-2)**
  Water Contact Recreation (REC-1) and Non-Contact Water Recreation (REC-2) are defined as uses of water for recreational activities involving body contact and proximity to water. Some of these activities include swimming and fishing, and where the ingestion of water is reasonably possible.

Table 6- 1. Beneficial Uses of Marina del Rey Harbor Waters (LARWQCB, 2005)

Coastal Feature	Hydro Unit #	NAV	REC1	REC2	COMM	MAR	WILD	SHELL
Marina del Rey Harbor	405.13	E	E	E	E	E	E	E

Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.
E: Existing beneficial use

6.2. CEQA CHECKLIST AND DETERMINATION

6.2.1 ENVIRONMENTAL CHECKLIST

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
1.	**Earth. Will the proposal result in:**				
	a. Unstable earth conditions or in changes in geologic substructures?	X			
	b. Disruptions, displacements, compaction or overcoming of the soil?	X			
	c. Change in topography or ground surface relief features?				X
	d. The destruction, covering or modification of any unique geologic or physical features?				X
	e. Any increase in wind or water erosion of soils, either on or off the site?	X			
	f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?	X			
	g. Exposure of people or property to geologic hazards, such as earthquakes, landslides, mudslides, ground failure, or similar hazards?				X
2.	**Air. Will the proposal result in:**				
	a. Substantial air emissions or deterioration of ambient air quality?	X			
	b. The creation of objectionable odors?	X			
	c. Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?	X			
3.	**Water. Will the proposal result in:**				
	a. Changes in currents, or the course of direction or water movements, in either marine or fresh waters?	X			

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	b. Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?	X			
	c. Alterations to the course of flow of flood waters?	X			
	d. Change in the amount of surface water in any water body?	X			
	e. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity?	X			
	f. Alteration of the direction or rate of flow of ground waters?	X			
	g. Change in the quantity or quality of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	X			
	h. Substantial reduction in the amount of water otherwise available for public water supplies?				X
	i. Exposure of people or property to water related hazards such as flooding or tidal waves?	X			
4.	**Plant Life. Will the proposal result in:**				
	a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, microflora and aquatic plants)?	X			
	b. Reduction of the numbers of any unique, rare or endangered species of plants?	X			
	c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	X			
	d. Reduction in acreage of any agricultural crop?				X
5.	**Animal Life. Will the proposal result in:**				

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, insects or microfauna)?	X			
	b. Reduction of the numbers of any unique, rare or endangered species of animals?	X			
	c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	X			
	d. Deterioration to existing fish or wildlife habitat?	X			
6.	**Noise. Will the proposal result in:**				
	a. Increases in existing noise levels?	X			
	b. Exposure of people to severe noise levels?	X			
7.	**Light and Glare. Will the proposal:**				
	a. Produce new light or glare?	X			
8.	**Land Use. Will the proposal result in:**				
	a. Substantial alteration of the present or planned land use of an area?	X			
9.	**Natural Resources. Will the proposal result in:**				
	a. Increase in the rate of use of any natural resources?				X
	b. Substantial depletion of any nonrenewable natural resource?				X

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
10.	**Risk of Upset. Will the proposal involve:**				
	a. A risk of an explosion or the release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?	X			
11.	**Population. Will the proposal:**				
	a. Alter the location, distribution, density, or growth rate of the human population of an area?				X
12.	**Housing. Will the proposal:**				
	a. Affect existing housing, or create a demand for additional housing?				X
13.	**Transportation/Circulation. Will the proposal result in:**				
	a. Generation of substantial additional vehicular movement?	X			
	b. Effects on existing parking facilities, or demand for new parking?	X			
	c. Substantial impact upon existing transportation systems?	X			
	d. Alterations to present patterns of circulation or movement of people and/or goods?	X			
	e. Alterations to waterborne, rail or air traffic?	X			
	f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	X			
14.	**Public Service. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:**				

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	a. Fire protection?	X			
	b. Police protection?	X			
	c. Schools?				X
	d. Parks or other recreational facilities?	X			
	e. Maintenance of public facilities, including roads?	X			
	f. Other governmental services?	X			
15.	**Energy. Will the proposal result in:**				
	a. Use of substantial amounts of fuel or energy?	X			
	b. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?	X			
16.	**Utilities and Service Systems. Will the proposal result in a need for new systems, or substantial alterations to the following utilities:**				
	a. Power or natural gas?	X			
	b. Communications systems?				X
	c. Water?				X
	d. Sewer or septic tanks?	X			
	e. Storm water drainage?	X			
	f. Solid waste and disposal?	X			
17.	**Human Health. Will the proposal result in:**				
	a. Creation of any health hazard or potential health hazard (excluding mental health)?	X			
	b. Exposure of people to potential health hazards?	X			

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
18.	**Aesthetics. Will the proposal result in:**				
	a. The obstruction of any scenic vista or view open to the public?	X			
	b. The creation of an aesthetically offensive site open to public view?	X			
19.	**Recreation. Will the proposal result in:**				
	a. Impact upon the quality or quantity of existing recreational opportunities?	X			
20.	**Archeological/Historical. Will the proposal:**				
	a. Result in the alteration of a significant archeological or historical site structure, object or building?	X			
21.	**Mandatory Findings of Significance**				
	Potential to degrade: Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X			
	Short-term: Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time, while long-term impacts will endure well into the future.)				X

	ENVIRONMENTAL CHECKLIST	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant	No Impact
	Cumulative: Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)	X			
	Substantial adverse: Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X			

6.2.2 Discussion of Environmental Evaluation

The analysis of potential environmental impacts is based on the numerous alternative means of compliance available for controlling toxic pollutants in Marina del Rey Harbor Waters in response to the proposed Basin Plan amendment. These structural BMPs include installing infiltration systems, vegetated swales, sand/media filter, oil/water separators, and catch basin inserts; removing contaminated sediments in the harbor, monitoring natural attenuation of contaminants, capping of contaminated sediments, replacing of copper-based antifouling paints; and diverting the low flow runoff. Non-structural BMPs include housekeeping BMPs, public education and outreach, trash collection/street sweeping, storm drain cleaning, reducing effects of copper-based paints through management practices, commercial demonstrations and scientific studies, imposing controls on marina del Rey boat owners, implementing financial incentives, imposing controls on marina del Rey marina owners and operators to limit use of copper-based hull paints, implementing financial incentives to encourage the use of alternative antifouling strategies, and conducting boater education programs. Potential impacts are discussed below. Many of the mitigation measures identified are common practices currently employed by agencies when planning and implementing storm water BMPs. Agencies such as Caltrans, CASQA, and WERF publish handbooks containing guidance on the selection, siting, design, installation, monitoring, and evaluation of stormwater BMPs (Caltrans, 2010, CASQA, 2003a, CASQA, 2003b, WERF, 2005).

Pursuant to section 13360 of the Water Code, the Regional Board cannot dictate which compliance measures responsible agencies may choose to adopt or which mitigation measures they would employ to implement the Toxic Pollutants TMDL. However, the Regional Board does recommend that appropriate compliance and mitigation measures as discussed herein, which are readily available and generally considered to be consistent with industry standards, be applied in order to reduce, and if possible avoid, potential environmental impacts, such that there is no significant impact. Since the decision to perform these measures is strictly within the responsibility and jurisdiction of the individual implementing agencies, such measures can and should be adopted by these agencies. (Title 14, California Code of Regulations, Section 15091(a)(2).)

Potential reasonably foreseeable impacts were evaluated with respect to earth, air, water, plant life, animal life, noise, light, land use, natural resources, risk of upset, population, housing, transportation, public services, energy, utilities and services systems, human health, aesthetics, recreation, and archeological/historical concerns. Additionally, mandatory findings of significance regarding short-term, long-term, cumulative and substantial impacts were evaluated. The evaluation considered whether the construction or implementation of the BMPs would cause a substantial, adverse change in any of the physical conditions within the area affected by the BMP. In addition, the evaluation considered environmental effects in proportion to their severity and probability of occurrence.

The following analysis considers a range of structural and non-structural BMPs that might be used, but is by no means an exhaustive list of available BMPs. When BMPs are selected for implementation, a project level and site-specific CEQA analysis must be performed by the responsible agencies.

1. **Earth. a.** Will the proposal result in unstable earth conditions or in changes in geologic substructures?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

These implementation alternatives could potentially result in unstable earth conditions if loose or compressible soils are present, or if such BMPs were to be located where infiltrated stormwater flowing as groundwater could destabilize existing slopes. Proper sizing and siting is necessary to ensure that BMPs are installed away from areas with loose or compressible soils, areas with slopes that could destabilize from increased groundwater flow. Geological surveys can be conducted prior to installation to aid in siting the devices.

Stormwater Capture Systems

Installation of stormwater capture systems would not be of the size or scale to result in unstable earth conditions or in changes in geologic substructures (tank capacities range from around 55 gallons to several thousand cubic feet).

Sand/Media Filters

Media filters would not be of the size or scale to result in unstable earth conditions or in changes in geologic substructures (see Section 5.1.4). Media filters, including those with underground storage vaults, require relatively shallow earthwork, as they are typically less than 10 feet deep and have a footprint of approximately 700 square feet (to treat 2 acres).

Sediment Capping

Sediment capping would not be of the depth or scale to result in unstable conditions or changes in the geological substructures.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not anticipated to result in adverse impacts to geologic substructures or result in unstable earth conditions.

Oil/Water Separators

Oil/Water Separators would not be of the size or scale to result in unstable earth conditions or in changes in geologic substructures.

Remove Contaminated Sediments - Dredging

Dredging involves the removal of contaminated sediments from the harbor, but would not be to the depth or scale which would cause unstable conditions or changes in the geological substructures. At this depth and scale, dredging should not result in unstable earth conditions.

Low Flow Diversion

Construction of diversion and treatment facilities requires relatively shallow earthwork, as they are surface structures and would not cause changes in geologic substructures. However, the installation of diversion and/or treatment devices may potentially result in unstable earth conditions, if loose or compressible soils are present. These impacts can be avoided by proper studying, monitoring, and siting measures of compliance away from areas with loose or compressible sands.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas and require no construction or ground disturbance. There is therefore no potential to impact earth conditions or geologic substructures from this alternative means of compliance.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not anticipated to result in adverse impacts to geologic substructures or result in unstable earth conditions.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact on earth conditions or geologic substructures.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

1. Earth. b. Will the proposal result in disruptions, displacements, compaction or overcoming of the soil?

Answer: Potentially Significant Impact

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, and Oil/Water Separators

These implementation alternatives may involve soil excavation or ground disturbance that may potentially cause disruptions, displacements, compaction or overcoming of the soil. Notably, the project areas have already suffered soil compaction and hardscaping. Impacts would be similar to those caused by typical temporary capital improvement construction and maintenance activities currently performed by responsible agencies, and no long-term impacts to the soil are expected. However, to the extent that any soil is disturbed during construction, the impacts can be minimized by proper siting, design, and construction practices. Standard construction techniques, including but not limited to, shoring, piling, and soil stabilization can also mitigate potential short-term impacts. It is anticipated that the potential impact may be mitigated by adhering to seismic and geotechnical codes and requirements for the TMDL area.

Sediment Capping

Sediment capping would not be of the depth or scale to result in disruptions, compaction or overcoming of the soil. Contaminated layers of sediment and soil in the harbor bottom will be covered; however, this displacement is considered a positive impact.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not anticipated to result in disruptions, compaction or overcoming of the soil.

Remove Contaminated Sediments - Dredging

Dredging will involve the removal of the top layers of contaminated sediment; however this will not be to the depth or scale which would result in disruptions, compactions, or overcoming on the soil. Contaminated layers of sediment and soil in the harbor bottom will be removed and displaced. However, this displacement is considered a positive impact.

Low Flow Diversion

Diversion and/or treatment facilities would be sited in the urbanized portions of the watershed, which have already suffered soil compaction and hardscaping. However, to the extent that any soil is disturbed during construction, the impacts can be minimized by proper siting, design, and standard construction techniques, including but not limited to, shoring, piling and soil stabilization.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas and require no construction or ground disturbance. There is therefore no potential to cause disruptions, displacements, compaction or overcoming of the soil from this alternative means of compliance.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in disruptions, displacements, compaction, or overcoming of the soil.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no potential to cause disruptions, displacements, compaction or overcoming of the soil.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

1. **Earth. c.** Will the proposal result in change in topography or ground surface relief features?

Answer: No Impact

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, and Oil/Water Separators

These alternatives will require soil excavation or ground disturbance. However, it is not expected that they would be of the size or scale that would impact topography or ground surface relief features.

Sediment Capping

Sediment capping would not be of the depth or scale to result in an impact to topography or ground surface relief features.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in change in topography or ground surface relief features.

Remove Contaminated Sediment - Dredging

Dredging and sediment disposal operations will require sediment excavation or ground disturbance. However, it is not expected that they would be of the size or scale that would impact topography or ground surface relief features.

Low Flow Diversion

BMPs associated with diverting and or treating runoff would not be of the size or scale to result in unstable earth conditions, changes in geologic substructures, topography or ground surface relief features.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas and require no construction or ground disturbance. Therefore, there is no potential to impact topography or ground surface relief features from this alternative means of compliance.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in change in topography or ground surface relief features.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact on topography or ground surface relief features.

1. Earth d. Will the proposal result in the destruction, covering or modification of any unique geologic or physical features?

Answer: No Impact

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, Sediment Capping, and Oil/Water Separators.

These alternatives would not be of the size or scale to result in destruction, covering or modification of any unique geologic or physical features.

Remove Contaminated Sediment - Dredging

Dredging will remove contaminated sediments from the harbor bottom and will also require temporary storage of the dredge material near the harbor prior to disposal. However, these activities are not expected to be of the size or scale that would result in the destruction, covering, or modification of any unique geological or physical features. Moreover, dredging will be a temporary activity taking place in the harbor; it will not permanently change the features of the landscape in the area.

Low Flow Diversion

BMPs associated with diverting and or treating runoff would not be of the size or scale to result in destruction, covering or modification of any unique geologic or physical features.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas and require no construction or ground disturbance. Therefore, there is no potential to result in the destruction, covering or modification of any unique geologic or physical features from this alternative means of compliance.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no potential to result in the destruction, covering or modification of any unique geologic or physical features.

1. Earth. e. Will the proposal result in any increase in wind or water erosion of soils, either on or off the site?

Answer: Potentially Significant Impact

There is the potential for soil erosion to occur under the implementation alternatives. Large volumes of soils and sediments may be dredged and excavated, which will expose areas of soil to wind and water erosion. However, upon the completion of dredging, installation of the infiltration systems, vegetated swale, stormwater capture systems, media filters, and/or oil/water separators, erosion potential will be minimal. The potential for soil erosion will be temporary and is expected to cease with the cessation of construction and dredging activities. To mitigate soil erosion once projects are completed, all soils used in the project should be properly compacted in accordance with the County's specifications, dredge material should be properly disposed, and slopes of the open channel can be stabilized with native vegetation. The implementation alternatives are subject to Standard Urban Storm Water Mitigation Plan (SUSMP) requirements for erosion and sedimentation control during construction. BMPs should be undertaken to control runoff and erosion from earth-moving activities such as excavation, recontouring, and compaction. All trenching and recontouring activities should be performed under the observation of a qualified engineer. These measures will reduce the potential for wind or water erosion of soil from the area.

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, and Oil/Water Separators

These implementation alternatives may result in soil excavation during construction, which could introduce the potential for soil to be eroded. Erosion of soils may occur as a short-term impact during construction. Construction BMPs should be used to minimize sediment runoff. Responsible agencies may plant cover crops or buffer strips to increase soil infiltration and reduce runoff in order to reduce soil erosion. Construction plans should also minimize clearing and grading activities and phase construction to limit soil exposure, stabilize exposed soils immediately, protect steep slopes and cuts, and install sediment controls. Greater utilization of low impact development (LID) can further mitigation the potential for erosion. Construction sites are required to retain sediment on site, both under general construction storm water permits and through the construction program of the applicable MS4, both of which are designed to minimize or eliminate erosion impacts on receiving water.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in any increase in wind or water erosion of soils, either on or off the site.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or sediment capping will include the temporary storage of dredge materials prior to disposal, and these materials may be subject to erosion processes. This can be mitigated by covering the dredge materials during rainy or windy conditions. Once the dredge material is dry and disposed of, the potential for erosion at the site will cease. Erosion may occur as a short-term impact but can be mitigated.

Low Flow Diversion

Diversion and/or treatment BMPs may result in soil excavation during construction which could introduce the potential for soil to be eroded. Wind or water erosion of soils may occur as a potential short-term impact. In urbanized areas, on-site soil erosion during construction activities will be similar to typical temporary capital improvement projects and maintenance activities currently performed by the municipalities. Typical established construction BMPs should be used during implementation to minimize offsite sediment runoff. Construction sites are required to retain sediment on site, both under general construction storm water permits and through the construction program of the applicable MS4 permits, both of which are designed to minimize or eliminate erosion impacts on receiving water. Over the long term, off-site erosion of natural channels could potentially be reduced if the structural BMPs divert storm water from entering the receiving waters, or reduce the runoff flow velocity, which may be considered a beneficial impact.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas and require no construction or ground disturbance. There is therefore no potential to result in any increase in wind or water erosion of soils, either on or off the site from this alternative means of compliance.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in any increase in wind or water erosion of soils, either on or off the site.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in increase in wind or water erosion of soils, either on or off the site.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

1. Earth. f. Will the proposal result in changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Deposition of significant volumes of sediment to the Marina del Rey Harbor Waters occurs mostly during wet-weather flows. Infiltration systems, vegetated swales, and media filters that remove sediment load could impact deposition of sand in the Marina del Rey harbors. These facilities are designed to treat, retain, filter, and or infiltrate runoff. Therefore, these BMPs that capture sediment, resulting in possible changes in deposition or erosion, can be mitigated if it becomes necessary through sand replacement and importation.

Stormwater Capture Systems

Stormwater Capture Systems are small on-site systems used to capture rainwater and on-site runoff and would not result in changes in siltation, deposition or erosion.

Sand/Media Filters

Media filters may impact siltation or deposition of sand in the Harbors. Reduction in siltation in the Marina del Rey Harbors may be considered a positive impact as fine sediments may contain pollutants. However, sediment release is important for beach replenishment. Impacts to deposition of beach sand may be mitigated by further study at the project level and by on-going monitoring to determine the amount and quality of sediment retained by filters that would otherwise enter the Marina del Rey Harbors.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in changes in or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the bed of the ocean or the bay.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or sediment capping will modify the harbor bed by removing or adding material that has been deposited in the harbor from years of sedimentation processes. Dredging will not increase sedimentation in the harbor. There will be a change in the harbor bed under this implementation alternative, but it is a positive change and improves the harbor by removing contaminated sediments. There may be increased sediment resuspension in the harbor during the actual dredging or capping process. However, this impact is considered short term and temporary.

Low Flow Diversion

BMPs that divert and/or treat are designed to divert low-flows from urbanized areas to treatment facilities rather than directly discharging into surface waters. Low-flows do not carry much sediment or silt. Therefore, these BMPs would not result in changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas. There is no potential to result in changes in siltation, deposition or erosion which may modify the bed of the channel or harbor.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in changes in or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the bed of the ocean or the bay.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in changes in siltation, deposition, or erosion which may modify the bed of the ocean or bay.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

1. Earth. g. Will the proposal result in exposure of people or property to geologic hazards, such as earthquakes, landslides, mudslides, ground failure, or similar hazards?

Answer: No Impact

Southern California is recognized as a seismically active area. Reasonably well-established historical records of earthquakes in California have been compiled for approximately the past 200 years. The project site is not expected to experience primary surface fault rupture or related ground deformation.

It is not reasonably foreseeable that responsible agencies would choose to comply with the TMDL through structural means in areas where doing so would result in exposure of people or property to geologic hazards including earthquakes, landslides, mudslides, ground failure, or similar hazards.

2. Air. a. Will the proposal result in substantial air emissions or deterioration of ambient air quality?

Answer: Potentially Significant Impact

The Toxic Pollutants TMDL area is located within Los Angeles County. Los Angeles County is part of the South Coast Air Basin (SCAB) and is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The potential implementation alternatives may result in short-term construction impacts related to air quality. Once construction of the project has been completed, the on-site activities would return to preexisting levels. The following analysis focuses on air quality impacts associated with the construction of the potential implementation alternatives.

<u>Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, Oil/Water Separators, and Low Flow Diversion</u>

Short term increases in traffic during the construction and installation of these implementation BMPs, and long-term increases in traffic caused by ongoing maintenance of these devices (e.g., delivery of materials) are potential sources of increased air pollutant emissions, including greenhouse gas emissions. Mitigation measures for increased air emissions due to increased vehicle trips or for construction equipment due to the installation of divert and or treat BMPs may include, but are not limited to, the following: 1) use of construction, and maintenance vehicles with lower-emission engines, 2) use of soot reduction traps or diesel particulate filters, 3) use of emulsified diesel fuel, and 4) proper maintenance of vehicles so they operate cleanly and efficiently.

<u>Replacement of copper-based antifouling paints</u>

Increased growth of fouling organisms could occur as a result of boat owners converting from copper-based antifouling paints to alternative coatings and strategies which may prove to be less effective. Less effective antifoulant coatings may result in increased fouling community growth on boat hulls. Increased fouling community growth will resulted in increased hull bottom drag and corrosion, and a subsequent decrease in safety, maneuverability, and fuel efficiency. A decrease in fuel efficiency would lead to an increase in gasoline consumption for motorized boats, which in turn could have adverse effects on air quality because of increased gasoline combustion. To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. In general, less toxic and non-toxic alternative coatings require more frequent cleaning in order to remove the buildup of fouling growth and

prevent increased fuel consumption. If increased frequency of hull cleaning isn't adequate to prevent significant air pollution, additional measures such as putting pollution control devices on engines may be necessary.

In order to replace copper-based paints with non-toxic antifouling coatings, boats will have to be stripped prior to application of the new coatings, which could generate particulate emissions if mechanical stripping is employed. This impact can be mitigated by controlling dust through the use of particle pollution controls and reducing exposure of workers to dust by requiring respirators.

Non-toxic antifouling coatings may pose impacts to air quality due to increased levels of volatile organic compounds in the coatings' formulations, which may be added to improve the application of the non-toxic materials. To avoid this impact, alternative coatings should comply with California requirements for VOC levels in coatings.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or sediment capping requires the use of heavy equipment (i.e., the dredge itself and trucks to transport dredge material). The adverse impacts to ambient air quality may result from short-term operation of the dredge and an increase in truck and boat traffic for dredge material transportation. These impacts are temporary and can be mitigated. Mitigation measures for increased air emissions due to increased aquatic and terrestrial vehicle trips or for heavy equipment due to dredging operations may include, but are not limited to, the following: 1) use of construction and maintenance vehicles with lower-emission engines, 2) use of soot reduction traps or diesel particulate filters, 3) use of emulsified diesel fuel, 4) proper maintenance of vehicles and equipment so they operate cleanly and efficiently, 5) construction equipment should be turned off when not in use 6) use of electric dredging equipment whenever possible.

Catch Basin Inserts

Long-term increases in traffic caused by ongoing maintenance of catch basin inserts (e.g., delivery of materials, street sweeping) are potential sources of increased air pollutant emissions. Potential impacts that result in substantial air emissions or deterioration of ambient air quality could occur where facilities are located. Nonetheless, mitigation measures are available to mitigate any potential impacts to air quality due to increased traffic. Mitigation measures could include 1) use of construction, maintenance, and street sweeper vehicles with lower-emission engines, 2) use of soot reduction traps or diesel particulate filters, 3) use of emulsified diesel fuel, 4) use of vacuum-assisted street sweepers to eliminate potential re-suspension of sediments during sweeping activity, and 5) the design of trash removal devices to minimize the frequency of maintenance trips (e.g., design for smaller drainage areas and adjusting screen size to prevent clogging).

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in substantial air emissions or deterioration of ambient air quality.

The generation of fugitive dust and particulate matter during construction or maintenance activities could also impact ambient air quality. An operation plan for the specific construction and/or maintenance activities could be completed to address the variety of available measures to limit the ambient air quality impacts. These could include vapor barriers and moisture control to reduce the transfer of particulates and dust to air. These impacts are temporary and localized to construction activities alone. Construction BMPs can be implemented to mitigate air quality

impacts along with the use low emission vehicles as well as other SCAQMD recommended mitigation measures.

Non-structural BMPs

It is possible that workers and vehicles may be required to implement non-structural BMPs. However, other non-structural BMPs are not expected to have significant impact on air quality for the level of effort that would be required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

2. Air. b. Will the proposal result in creation of objectionable odors?

Answer: Potentially Significant Impact

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, Oil/Water Separators, and Low Flow Diversion

Construction and installation of these implementation alternatives may result in objectionable odors in the short-term due to exhaust from construction equipment and vehicles. Implementation BMPs may also be a source of objectionable odors if they allow for water stagnation or collection of water with sulfur-containing compounds. Storm water runoff is not likely to contain sulfur containing compounds, but stagnant water could create objectionable odors. For example, improper design or maintenance of Vegetated Swales may lead to clogging and stagnation of water creating objectionable odors. Vegetated systems require inspection and maintenance, replacing diseased and dead or dying plants to prevent build-up of detritus, and replacement of existing plants to increase efficiency.

Mitigation measures to eliminate odors caused by stagnation could include proper BMP design to eliminate standing water with covers, aeration, filters, barriers, and/or odor suppressing chemical additives. BMPs should be inspected regularly to ensure that systems are not clogged, pooling water, or odorous. During maintenance, odorous sources should be uncovered for as short of a time period as possible. Systems should be designed to minimize stagnation of water and installed in such a way so as to increase the distance to sensitive receptors in the event of any stagnation. To the extent possible, BMPs could be designed to minimize stagnation of water (e.g., allow for complete drainage within 48 hours) and installed to increase the distance to sensitive receptors in the event of any stagnation.

Sediment Capping

Sediment capping will require the use of heavy equipment; for example, capping equipment and trucks to transport capping material. Objectionable odors may be created due to exhaust from the operation of equipment and vehicles, but these impacts are temporary and localized to the area of operation of heavy equipment. BMPs such as those recommended by the SCAQMD can be implemented to mitigate air quality impacts.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in creation of objectionable odors.

Remove Contaminated Sediments – Dredging

Dredging requires the removal of contaminated sediment from the harbor. This may result in objectionable odors due to the anaerobic nature of sediments. The drying of the dredged materials is also part of the overall dredging measures. The dredge sediment will contain organic material and the decomposition of this organic matter may generate unpleasant odors. It is difficult to anticipate the nature or rate of odor emission form organic decomposition and anaerobic sediments; thus this impact may be unavoidable.

Objectionable odors may also be created due to exhaust from the operation of equipment and vehicles for dredging or sediment capping, but these impacts are temporary and localized to the operation of heavy equipment. BMPs such as those recommended by the SCAQMD can be implemented to mitigate air quality impacts. The use of electric dredging equipment whenever possible may help to mitigate ground-level odors.

Catch Basin Inserts

To the extent improper disposal of, for instance, household or food wastes result in them being kept on the street or in inserts, and potentially allowing a release of odors, local residents could be exposed to those effects. On balance, however, it is not unfair that the residents of the localities where improper disposal of such materials occurs should suffer those risks rather than allowing the wastes to be conveyed to expose downstream citizens to the cumulative risks of them instead. Nevertheless, to the extent the locality that originated the risk would become newly potentially exposed instead of downstream receptors, those impacts could be potentially significant in those locales. Such impacts could be avoided or mitigated by educating the local community of the effects of improper disposal of such wastes, enforcing litter ordinances, and timely cleaning out inserts.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in creation of objectionable odors.

Non-Structural BMPs

It is possible that workers and vehicles may be required to implement other non-structural BMPs. However, non-structural BMPs are not expected to have noticeable impact on air quality for the level of effort that would be required for this waterbody.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

2. Air. c. Will the proposal result in alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?

Answer: Potentially Significant Impact

It is not anticipated that reasonably foreseeable methods of compliance with non-structural and structural BMPs will result in an impact to air in the alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally. Installation, construction, and maintenance of various structural and non-structural BMPs could cause an increase in air pollutant emissions, including greenhouse gas emissions, but these activities would be the same as typical construction and maintenance activities in urbanized areas, such as ordinary road and infrastructure maintenance and building activities, and would not be significant to cause climate change.

In 2006, California passed AB 32, the Global Warming Solutions Act of 2006, which set the 2020 greenhouse gas emissions reduction goal into law. In December 2007, CARB approved the 2020 emission limit of 427 million metric tons of CO_2 equivalents (CO_2e) of greenhouse gases. The 2020 target of 427 million metric tons of CO_2e requires the reduction of 169 million metric tons of CO_2e, or approximately 30 percent, from the State's projected 2020 emissions of 596 million metric tons of CO_2e.

Also in December 2007, CARB adopted regulations which require mandatory reporting for certain types of facilities that make up the bulk of the stationary source emissions in California. Currently, the draft regulation language identifies major facilities as those that generate more than 25,000 metric tons/year of CO_2e. Cement plants, oil refineries, fossil-fueled electric-generating facilities/providers, cogeneration facilities, and hydrogen plants and other stationary combustion sources that emit more than 25,000 metric tons/year CO_2e, make up 94 percent of the point source CO_2e emissions in California. In June, 2008, CARB published its Climate Change Scoping Plan (CARB, 2008). The Proposed Scoping Plan proposes a comprehensive set of actions designed to reduce overall carbon emissions in California.

Several of the reasonable foreseeable methods of compliance will require the production of energy. The production of the energy will create greenhouse gases that might contribute to climate changes.

When compared to the estimated greenhouse gas reduction goal of 174 million tons CO_2e by 2020 (and in comparison to major facilities that are required to report greenhouse gas emissions (25,000 metric tons of CO_2e/year)), the relative contributions of the implementation program are small and would not conflict with the state's ability to meet the AB32 goals.

In addition, the implementation of this TMDL will not conflict with implementation of State's recommended greenhouse gas reduction measures (CARB, 2008) and emissions from implementation will not have a significant negative effect on global climate change.

3. Water. a. Will the proposal result in changes in currents, or the course of direction or water movements, in either marine or fresh waters?

Answer: Potentially Significant Impact

<u>Infiltration Systems, Vegetated Swales, Media Filters, and Oil/Water Separators</u>

These implementation measures may impede or slow overland flow to storm drains if not properly designed and maintained. Devices should be designed to allow adequate drainage of water and maintained to remove clogged material to mitigate this impact.

Stormwater Capture Systems

Stormwater capture systems are designed to reduce runoff thereby decreasing stormwater flow. However, the affects are not significant enough to result in changes in currents, or the course of direction or water movements, in either marine or fresh waters. No impact is anticipated. No mitigation measures are required.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in changes in currents, or the course of direction or water movements in either marine or freshwaters.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or sediment capping in the harbor to remove or cover sediment could potentially alter the direction of water movement. Dredging operations may promote additional mixing in the vicinity of dredging activity. Changes in the shape of the bottom of the harbor may change circulation patterns within the harbor, resulting in uncertain impacts. Adequate modeling, siting, and planning can help mitigate any possible negative impacts.

Low Flow Diversion

Diversions of dry and wet-weather flow from storm drains to the wastewater treatment plant could have potential negative impacts on minimum flows required to support aquatic life in the Marina del Rey Harbor Waters. Potential impacts to dry and wet-weather flow should be considered at the project level. Mitigation measures to maintain minimal flow to support habitat related beneficial uses should be reviewed and approved by the California Department of Fish and Wildlife (CDFW) and United States Fish and Wild Life Service (USFWS). Diverted run-off can be discharged back into the Marina del Rey Harbor Waters following treatment to maintain minimum flow. Adequate modeling and planning can help mitigate any possible negative impacts.

Catch Basin Inserts

Catch basin inserts are manufactured frames that typically incorporate filters or fabric and placed in a curb opening or drop inlet to remove trash, sediment, or debris. They can also be perforated metal screens placed horizontally or vertically within a catch basin. The impacts that result in changes in currents, or the course of direction or water movements, in fresh waters are not significant. Overland flow in the urbanized portion of the watershed is directed primarily to storm drains. Catch basin inserts may alter overland flow to storm drains, but this impact can be mitigated through proper design and maintenance of these inserts.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in changes in currents, or the course of direction or water movements in either marine or freshwaters.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in changes in currents, or the course of direction or water movements, in marine or fresh waters. No impact is anticipated. No mitigation measures are required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However,

implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. b. Will the proposal result in changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

These implementation measures collect and/or inhibit stormwater flow, which would likely alter drainage patterns, and also decrease the rate and amount of surface water runoff. For example, vegetated swales would change drainage patterns by increasing absorption rates, which would reduce the amount of surface runoff to the receiving waters. However, increased imperviousness in the watersheds has increased stormwater flows, so a partial reduction in stormwater flow would not be a negative environmental effect.

Stormwater Capture Systems

Stormwater capture systems collect and/or inhibit stormwater flow, which would likely alter drainage patterns, and also decrease the rate and amount of surface water runoff. For example, capture systems such as rain barrels would change drainage patterns by collecting stormwater, which would reduce the amount of surface runoff to receiving waters.

Media Filters and Oil/Water Separators

Media filters and oil/water separators are flow-through devices that may cause a change in the rate of surface water runoff. These units may impede or slow overland flow to the storm drain system. Any device installed on-line, especially an older, under-capacity storm drain could have a negative effect on the drain's ability to convey surface waters, including flood waters. This negative impact can be mitigated through design of media filters or separators with overflow/bypass structures and by performing regular maintenance of these devices and if necessary enlargement of the storm drain upstream of the device.

Remove Contaminated Sediments –Dredging and Sediment Capping

Dredging operation involves the removal of contaminated sediments from the harbor bottom and has minimal affect on surface sediments. Temporary staging, use of construction equipment, and maintenance or other vehicles for dredging or sediment capping may cause significant compaction, which may impact absorption rates of surface water runoff. Construction BMPs and mitigation measures are available to mitigate the potential impact.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paint is not expected to change the adsorption rate, drainage pattern, or rate and amount of surface runoff.

Low Flow Diversion

Flow diversions have the potential to impact the amount of surface water runoff. These diversions are designed for dry-weather and wet-weather flows. Any device installed in a storm drain, especially an older, under-capacity drain could have a negative effect on the drain's ability to convey surface waters, including flood waters. This negative impact can be mitigated by

designing the diversion units with overflow/bypass structures, by performing regular maintenance of these devices, and if necessary, by enlarging the storm drain upstream of the device.

Catch Basin Inserts

Catch basin inserts are manufactured frames that typically incorporate filters or fabric and placed in a curb opening or drop inlet to remove trash, sediment, or debris. They can also be perforated metal screens placed horizontally or vertically within a catch basin. These units may impede or slow overland flow to the storm drain system. Any device installed in a storm drain, especially an older, under-capacity drain could have a negative effect on the drain's ability to convey surface waters including flood waters. This negative impact can be mitigated through design of the catch basin inserts with overflow/ bypass structures and by performing regular maintenance of these devices and if necessary enlargement of the storm drain upstream of the device.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to change the adsorption rate, drainage pattern, or rate and amount of surface runoff.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly, and would not result in changes in the drainage patterns, or the rate and amount of surface water runoff. No impact is anticipated. No mitigation measures are required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. c. Will the proposal result in alterations to the course of flow of flood waters?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Infiltration systems and vegetated swales could alter the volume of flood waters by diverting a portion of the flood waters, but this is unlikely to alter the course of flood waters. Potential effects can be mitigated through proper design (including flood water bypass systems), sizing, and maintenance of these types of vegetated treatment and infiltration systems. Installation of these implementation measures could result in positive environmental benefits like flood mitigation and upstream flow volume reduction.

Stormwater Capture Systems

Stormwater capture systems would not result in altering the course of flow of flood waters because installation of these BMPs would not introduce any physical change to the river channel that could impact the flow of flood waters. No mitigation measures are required.

Media Filters

Alterations to the course of flow of flood waters will occur if a portion of stormwater is treated with media filters. Any device into a storm drain, especially an older, under-capacity drain could have a negative effect on the drain's ability to convey waters, including flood waters. This

negative impact can be mitigated through proper design and maintenance of these devices. The size of the contributing drainage area should not exceed standard specifications (e.g., surface sand filters should treat no more than 25 acres and underground sand filters should treat no more than 2 acres (CASQA, 2003b). Devices should be designed to allow bypass of flows that exceed the design capacity. Enlargement of the drain upstream of the device may be required.

Oil/Water Separators

Oil/water separators would not result in altering the course of flow of flood waters because installation of these BMPs would not introduce any physical change to the river channel that could impact the flow of flood waters. No mitigation measures are required.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging operations or capping affect circulation and waters in the harbor, and do not affect flood waters. This would not result in altering the course of flow of flood waters. No mitigation measures are required.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paint is not expected to result in alterations to the course of flow of flood waters.

Low Flow Diversion

BMPs designed to divert and/or treat have the potential to impact the course of flow of flood waters. These structural BMPs are designed to divert low-flow water to local Publicly Owned Treatment Works (POTWs). Impacts to the flow of flood waters can be mitigated with proper design and siting. Flow diversions should all be designed with high flow bypasses. During high flow events, usually during storms, waters entering the storm drain will bypass the diversion to prevent flooding and overtaxing of the POTWs treatment capacity.

Catch Basin Inserts

Catch basin inserts have less hydraulic effect than in-line treatment devices, however, flooding is still a potential hazard if the filters or screens became blocked by trash and debris and prevent the discharge of storm water. This would be of particular concern in areas susceptible to high leaf-litter rates. This potential impact can be mitigated through the use of inserts that are designed with automatic release mechanisms or retractable screens that allow flow-through during wet-weather and by performing regular maintenance to prevent the build up of trash and debris. Any device into a storm drain, especially an older, under-capacity drain could have a negative effect on the drain's ability to convey waters including flood waters. Enlargement of the drain upstream of the device may be required. Certain devices such as trash racks or mesh screens may have less hydraulic effect than in-line treatment devices.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants paint is not expected to result in alterations to the course of flow of flood waters.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in alterations to the course of flow of flood waters. No impact is anticipated. No mitigation measures are required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However,

implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. d. Will the proposal result in change in the amount of surface water in any water body?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Stormwater runoff may be retained and/or diverted for groundwater infiltration and/or to vegetated swales or bioretention areas. Water that is retained or diverted would not flow into the Marina del Rey Harbor Waters. Reduction in the amount of water in the stream channels may affect the ecology of the streams; these affects can be mitigated as discussed below in the answers to questions 4 and 5 on Plant Life and Animal Life.

Stormwater Capture Systems

Stormwater capture systems are designed to collect stormwater runoff. Because the reduction of nuisance flows would return the watersheds to a more natural, predevelopment condition, this impact is not significant.

Media Filters and Oil/Water Separators

Media filters and oil/water separators may impede or slow overland flow to storm drains if not properly designed and maintained and could change the amount of surface water. Devices should be designed to allow adequate drainage of water and maintained to remove clogged material to mitigate this impact.

Sediment Capping

Sediment capping may reduce ocean depth and would result in a change in the amount of surface water in the harbor. This impact could be mitigated by conducting studies to determine the harbor water level needed to support the navigation, aquatic, wildlife, and recreational uses of the harbor waters and to design any potential capping project accordingly.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in change in the amount of surface water in any waterbody.

Remove Contaminated Sediments - Dredging

The goal of hydraulic dredging is to remove sediment and restore the harbor to a level that will improve water quality. The increase in harbor depth would provide greater storage area for water in the harbor. This would be considered to be a positive impact and would help to improve water quality. Sediment capping would not be of a scale to result in change in the amount of surface water in any water body

Low Flow Diversion

Flow diversions are designed to divert dry-weather and wet-weather flows in storm drains to local Publicly Owned Treatment Works (POTWs). Reductions in dry and wet-weather flows could have potential negative impacts on minimum flows required to support aquatic life. Potential impacts to dry and wet-weather flow should be considered at the project level. Mitigation measures to maintain minimal flow to support habitat related beneficial uses should be reviewed

and approved by the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS).

Catch Basin Inserts

Catch basin inserts do not divert water for other uses and the amount of water in storm drains is not changed.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in change in the amount of surface water in any waterbody.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in change in the amount of surface water in any water body.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. e. Will the proposal result in discharge to surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

During wet-weather discharges, infiltration and vegetated swale BMPs would reduce turbidity and increase dissolved oxygen, because these BMPs would remove sediment and bioavailable oxygen demanding substances from the surface water. Reduced turbidity and increased dissolved oxygen are beneficial to the environment. No mitigation measures are required.

Stormwater Capture Systems

Stormwater capture systems would not result in discharge to surface waters, or in any negative change to surface water quality. No mitigation measures are required.

Media Filters and Oil/Water Separators

The use of media filtration or oil/water separators to treat dry-weather and stormwater runoff will result in a change in the quality of surface water. This will positively impact water quality and associated aquatic life and water supply beneficial uses of surface waters.

Sediment Capping

Sediment capping does disturb the sediments and can cause increased turbidity during capping activities. However, this is a generally a localized effect. Sediment capping will not create permanent increased turbidity conditions and will improve harbor water quality in the long term.

Replacement of copper-based antifouling paints

An increase in the use of alternatives coatings to copper-based antifouling paints is anticipated because of the required reduction in emissions of dissolved copper to harbor waters. Alternative

coatings currently available consist of both "nontoxic" and "less toxic" coatings. In order to accurately evaluate the potential environmental impacts of these coatings, scientific studies are needed to accurately characterize the toxicity of the coatings. Because of these potential implications, caution should be exercised when alternatives to copper based antifouling paints are selected. At present, there are a number of available alternatives that have been demonstrated to be nontoxic in nature. Additionally, an increase in the demand for alternatives to copper-based antifouling paints will probably result. The alternative coatings could prove as toxic or more toxic than copper-based paints. This could potentially lead to violations of the water quality standards for the antifouling agent in the alternative coating.

In addition, there is a potential for the future transport of dissolved copper from sediment to the water column as a result of TMDL implementation. Although sediment may currently act as a net sink for copper in the water column, it has the potential to act as a net source in the future. During a period of low external loading, sediment that once acted as a net sink for copper can become a long-term net source through exchange with historically contaminated sediment that are re-suspended in the water column. As copper in sediment is re-suspended, it may act as a buffer to slow down the reductions in copper concentrations in the water column that would be expected from decreased loading of other sources to Marina del Rey Harbor Waters. However, the overall result of decreasing copper loading to the harbor should result in both the water column and the sediment over time.

In order to replace copper-based paints with non-toxic antifouling coatings, boats will have to be stripped prior to application of the new coatings. Wastes (e.g., blasting residue, paint chips, spillage, sanding, sand blasting, or scraping) generated from paint removal can have negative impacts on the environment.. Lead and other compounds from the waste may be discharged into nearby surface waters or may contaminate the soil at a facility (USEPA, 2000).To avoid this impact, waste generated from paint stripping should be properly contained and disposed of.

Remove Contaminated Sediments - Dredging

Dredging and sediment disposal operations are expected to degrade water quality in the harbor. Dredging or capping would disturb and resuspended bottom sediments in the vicinity of the dredging activity. This would increase the turbidity of the water above background levels. If enough decayed organic matter is suspended or dissolved in the water column, it may produce odors or change the chemical composition of the water, including decreasing pH and oxygen concentrations, increasing nitrogen and sulfide concentrations, and causing other chemical changes. During dredging activities, sediment, pesticides, metals, and other pollutants may be suspended in the water column and degrade water quality. The use of small cutterhead dredges designed for minimizing sediment disturbance would reduce the impacts of turbidity. Sediment curtains or other barriers would be used, as needed, to isolate areas being dredged from ambient conditions. Water quality monitoring will be conducted during dredging and placement of dredging materials to reduce adverse effects. However, these impacts would be temporary during dredging operations.

Low Flow Diversion

Flow diversions are designed to divert low flows in storm drains to the sanitary sewer systems. Reductions in low flows could have potential positive impacts on surface water quality. No mitigation measures are required.

Catch Basin Inserts

Catch basin inserts will alter surface water quality by reducing the amount of trash that enters the Marina del Rey Harbor Waters. This reduction will positively impact water quality and associated recreational beneficial uses of surface waters, including water contact and non-contact recreation,

and other beneficial uses. Catch basin inserts will not foreseeably result in negative impacts to temperature, dissolved oxygen, or turbidity.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in discharge into surface waters, or any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity. However, it would allow continued contamination of the waters.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in discharge to surface waters, or in any alteration of surface water quality.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. f. Will the proposal result in alteration of the direction or rate of flow of ground waters?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Over the long term, infiltration of stormwater runoff via vegetated treatment and infiltration systems such as permeable paving and vegetated swales could alter the direction or rate of flow of groundwater. This could result in unstable earth conditions if such BMPs were to be located where infiltrated stormwater flowing as groundwater could destabilize existing slopes. Also, infiltration could alter groundwater movement and cause a change of hydrology by redistributing areas of recharge, which could impact water rights. The impacts can be minimized by proper siting, design, and monitoring practices.

Stormwater Capture Systems

Stormwater capture systems would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

Media Filters

Media filters are flow through devices to treat stormwater and will have no impact on the direction or rate of flow of ground waters. They would be installed in areas that are already developed and installation activities would occur at depths that would not impact ground waters.

Oil/Water Separators

Oil/water separators would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or sediment capping activities would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in alteration of the direction or rate of flow of ground waters.

Low Flow Diversion

BMPs associated with diversion and/or treatment would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

Catch Basin Inserts

Catch basin inserts would not likely change the direction or rate of flow of ground waters because systems would not be installed in areas that are not already developed or at depths that could impact the ground water table.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in alteration of the direction or rate of flow of ground waters.

Non-Structural BMPs

Non-structural BMPs would not result in alteration of the direction or rate of flow of ground waters. No mitigation measures are required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. g. Change in the quantity or quality of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Infiltration systems and vegetated swales involve the infiltration of stormwater runoff into the ground. If infiltration stormwater BMPs are improperly designed, sited, and constructed, ground water quality could be adversely impacted. For instance, flow above designed capacity of biofiltration devices may lead to groundwater contamination from untreated stormwater. Infiltration of stormwater could mobilize groundwater contaminants.

The potential for adverse impacts may be mitigated through proper design and siting of infiltration devices, pretreatment prior to infiltration, and groundwater monitoring. Proper design and siting includes providing adequate groundwater separation with soils suitable for infiltration, and complying with any applicable groundwater permitting requirements. It is recommended that media filters or other treatment devices be used instead of infiltration where soils or groundwater contamination are a concern (CASQA, 2003b). However, where separation to groundwater is adequate, there is a low probability of groundwater contamination by infiltrated runoff because the soils attenuate pollutants and soil amendments can increase metals removal (CASQA, 2003b).

When properly managed, increased groundwater recharge would be considered a positive impact, as it would contribute to replenishing local water supplies and reducing reliance on imported water.

Stormwater Capture Systems

Stormwater capture systems would not result in a change in the quantity or quality of ground waters. No mitigation measures are required.

Media Filters

Media filters are flow through devices to treat stormwater and will have no impact on the quantity or quality of ground waters. They would be installed in areas that are already developed and installation activities would occur at depths that would not impact ground water.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints would not result in a change in the quantity or quality of ground waters.

Oil/Water Separators

Oil/water separators would not result in a change in the quantity or quality of ground waters. No mitigation measures are required.

Remove Contaminated Sediments – Dredging and Sediment Capping

BMPs associated with dredging or capping would not result in a change in the quantity or quality of ground waters. No mitigation measures are required.

Low Flow Diversion

BMPs associated with diversion and/or treatment would not result in a change in the quantity or quality of ground waters. No mitigation measures are required.

Catch Basin Inserts

Catch basin inserts would not result in a change in the quantity or quality of ground waters. No mitigation measures are required.

Monitored Natural Attenuation of Contaminants

Monitored Natural Attenuation of Contaminants would not result in a change in the quantity or quality of ground waters.

Non-Structural BMPs

Non-structural BMPs would not result in a change in the quantity or quality of ground waters. No mitigation measures are required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

3. Water. h. Will the proposal result in substantial reduction in the amount of water otherwise available for public water supplies?

Answer: No Impact

The structural and non-structural BMPs will not reduce public water supplies. Implementation of the TMDL would result in an increase in the amount of water available for public water supplies if compliance with the TMDL is achieved through significant infiltration of stormwater or treatment and reuse of stormwater.

3. Water. i. Will the proposal result in exposure of people or property to water related hazards such as flooding or tidal waves?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Infiltration systems and vegetated swales may result in flooding hazards if these devices are not properly designed and constructed to allow for bypass of stormwater during storms that exceed design capacity. This potential impact can be mitigated through proper design. Potential risks of flooding due to clogging of devices with debris can be avoided by regular maintenance and inspection prior to storms. Pretreatment devices such as trash screens and biofiltration strips should be installed to minimize sediment load and clogging potential. Infiltration basins should be equipped with an observation well to monitor drain time and allow access if drainage is required. Bioswale devices may also reduce flooding hazards by reducing the peak storm flows in the watershed by diverting and retaining water on-site.

Stormwater Capture Systems

If stormwater capture systems are not properly designed and constructed, maintained, and regularly emptied to allow for bypass of stormwater during storms that exceed design capacity, local capture systems such as rain barrels can potentially contribute to minor small scale flooding. However, this potential impact can be mitigated through proper maintenance procedures.

Media Filters and Oil/Water Separators

Implementation may result in flooding hazards if media filters or oil/water separators are not properly designed and constructed to allow for bypass of stormwater during storms that exceed design capacity. This potential impact can be mitigated through proper design. Potential risks of flooding due to clogging of devices with debris can be avoided by regular maintenance and inspection prior to storms.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or capping would not be of size or scale to contribute to hazards such as flooding or tidal waves.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to contribute to hazards such as flooding or tidal waves.

Low Flow Diversion

If low flow diversions are not properly designed and constructed to allow for bypass of stormwater during storms that exceed design capacity, low-flow diversions can potentially contribute to flooding. However, this potential impact can be mitigated through proper design features such as high-flow bypass, and maintenance procedures such as cleaning out diversions at an appropriate frequency.

Catch Basin Inserts

The devices may result in a potentially significant impact due to flooding hazards if the screens become blocked by trash and debris and prevent the discharge of stormwater to the receiving waters, or if the devices are not properly designed and constructed to allow for bypass of storm water during storm events that exceed the design capacity. This potential impact can be mitigated through the use of inserts that are designed with automatic release mechanisms or retractable screens that allow flow-through during wet-weather and by performing regular maintenance to prevent the build up of trash and debris. Therefore, the exposure of people and property to flooding hazards after mitigation should be less then significant.

Monitored Natural Attenuation of Contaminants

Monitored Natural Attenuation of Contaminants would not contribute to hazards such as flooding or tidal waves.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in exposure of people or property to water related hazards such as flooding or tidal waves. No impact is anticipated. No mitigation measures are required.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

4. Plant Life. a. Will the proposal result in change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, microflora and aquatic plants)?

Answer: Potentially Significant Impact

Infiltration Systems

The installation of infiltration systems, permeable paving, bioretention areas, or retention ponds could increase the diversity or number of plant species, which is beneficial to the environment by increasing available habitat. However, during storm events, infiltration systems could also divert, reduce, and/or eliminate surface water runoff discharge, which may reduce the number and/or diversity of plant species within the streams, by modifying the hydrology of the channel, which could be adverse. This can be mitigated through proper project modeling, siting, and planning so that the resulting creek hydrology mimics natural conditions.

Vegetated Swales

Vegetated swales will use a variety of vegetation types. Vegetation is required to cover the whole width of the swale, be capable of withstanding design flows and be of sufficient density to prevent preferred flow paths and scour of deposited sediments. Vegetated swales may introduce new species of plants into the area. This results in a change of the diversity of species, or number of any species of plants. In addition, vegetated swales could result in reduced flows, particularly during dry weather, and may adversely impact downstream plant life. Potential impacts to dry-weather flow should be considered at the project level.

Stormwater Capture Systems

Stormwater capture systems would not result in change in the diversity of species, or number of any species of plants. No mitigation measures are required.

Media Filters and Oil/Water Separators

These implementation measures would not result in change in the diversity of species, or number of any species of plants. No mitigation measures are required.

Sediment Capping

Sediment capping may have the potential to reduce aquatic plant species. Particularly in shallow areas, there may impacts to aquatic vegetation. Recolonization of capping areas is typically gradual, but provides the opportunity to improve the vegetative habitat to enhance the ecology of the harbor waters.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species.

To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

Remove Contaminated Sediments - Dredging

Dredging or capping operations may result in change in the diversity of species, or number of any species of plants. Increased dredging activity could temporarily increase turbidity of the water and suspended solids in the vicinity of dredging operation. This would reduce water clarity and decrease light penetration, possibly causing a decline in photosynthesis by nearby aquatic plants and phytoplankton. Dredging does not disturb the shoreline and will not impact aquatic or terrestrial vegetation directly along the shore. Proper project modeling, siting, and planning, such as limiting extent and duration of the dredging, can help mitigate impacts to the plant life. Dredging may also be conducted in portions and phases to allow species to reestablish, recover, and propagate. Use of sediment curtains may help to reduce sediment migration to habitat adjacent to current dredge site.

Low Flow Diversion

Flow diversions, diverting the surface water runoff, may result in a change of the diversity of species, or number of any species of plants, especially in the dry-weather season. A decrease in flow may decrease plant diversity downstream of the diversion by reducing the number of species (including trees, shrubs, grass, crops, microflora, and aquatic plants) of plants that require a more

constant water supply. No adverse impacts are expected because the elimination of nuisance flows would return the stream bed's dry-weather flows to a more natural, pre-development condition. This in turn would facilitate the return of the stream's plant community to a more natural, pre-development condition and could impede the propagation of water-loving nonnative and invasive plant species. Impeding the propagation of invasive species is not a negative impact.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas where native habitat or special-status species usually are absent. As such, impacts to species diversity and number of species would be avoided. Furthermore, installation of catch basin inserts requires no construction or ground disturbance which could impact species diversity and number of species.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in change in the diversity of species, or number of any species of plants.

Non-Structural BMPs

Non-structural BMPs would not result in a change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, microflora and aquatic plants) because these BMPs would not introduce any physical effects that could impact plant life.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

4. Plant life. b. Will the proposal result in reduction of the numbers of any unique, rare or endangered species of plants?

Answer: Potentially Significant Impact

Mitigation measures could be implemented to ensure that potential impacts to unique, rare or endangered plant species are eliminated. When the specific projects are developed and sites identified, a search of the California Natural Diversity Database could be employed to confirm that any potentially sensitive plant species or biological habitats in the site area are properly identified and protected as necessary. Focused protocol plant surveys for special-status-plant species could be conducted at each site location, if appropriate. If sensitive plant species occur on the project site mitigation should be required in accordance with the Endangered Species Act. Mitigation measures should be developed in consultation with the California Department of Fish and Wildlife (CDFW) and the United States Fish and Wildlife Service (USFWS). Responsible agencies should endeavor to avoid compliance measures that could result in reduction of the numbers of any unique, rare or endangered species of plants, and instead opt for such measures and/or identify and install structural BMPs in areas that will not reduce the numbers of such plants.

Infiltration Systems and Vegetated Swales

It is unlikely that activities during and after construction of infiltration systems and vegetated swales in urbanized areas would result in a reduction of the numbers of any unique, rare or endangered species of plants. Mitigation measures, discussed in Plant Life 4.a., could be implemented to ensure that potential impacts on unique, rare or endangered plant species are less than significant.

Stormwater Capture Systems

Stormwater capture systems would involve no change to the physical environment either directly or indirectly and would have no impact to unique, rare or endangered species of plants.

Media Filters and Oil/Water Separators

These implementation measures would not result in reduction of the numbers of any unique, rare or endangered species of plants.

Remove Contaminated Sediments – Dredging and Sediment Capping

Increased dredging or capping activity could temporarily increase turbidity of the water and suspended solids in the vicinity of dredging operation. This would reduce water clarity and decrease light penetration, possibly causing a decline in photosynthesis by nearby aquatic plants and phytoplankton. Dredging does not disturb the shoreline and will not impact aquatic or terrestrial vegetation directly along the shore. Proper project modeling, siting, and planning, such as limiting extent and duration of the dredging, can help mitigate impacts to the plant life. Dredging may also be conducted in portions and phases to allow species to reestablish, recover, and propagate. Use of sediment curtains may help to reduce sediment migration to habitat adjacent to current dredge site.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species.

To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

Low Flow Diversion

Flow diversions could reduce dry-weather flows and may impact downstream plant life. Potential impacts to dry-weather flow should be considered at the project level. Mitigation measures to maintain minimal flow to support downstream plant life-related beneficial uses should be reviewed and approved by the CDFW and National Marine Fisheries Service.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas where native habitat or special-status species usually are absent. As such, impacts to unique, rare or endangered species of plants would be avoided. Furthermore, installation of catch basin inserts requires no construction or ground disturbance which could impact biological resources.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact to unique, rare or endangered species of plants.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

4. Plant life. c. Will the proposal result in introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

For infiltration systems and vegetated swales that may include the use of plants, such as vegetated swales, new species of plants may possibly be introduced into the area. However, in cases where plants or landscaping is incorporated into the specific project design, the possibility of disruption of resident native species could be avoided or minimized by using only plants native to the area. The use of exotic invasive species or other plants listed in the California Invasive Plant Inventory (Cal-IPC, 2006) should be prohibited.

Stormwater Capture Systems

Stormwater capture systems collect stormwater runoff. This would not result in introduction of new species of plants into an area. However, the decrease in flow could be a barrier to the normal replenishment of existing species that require a more constant water supply. No adverse impacts are expected because the reduction of nuisance flows would return the stream bed's dry-weather flows to a more natural, pre-development condition. This in turn would facilitate the return of the stream's plant community to a more natural, pre-development condition and could impede the propagation of water-loving nonnative and invasive plant species. Impeding the propagation of invasive species is not a negative impact. Proper project siting and planning can help mitigate impacts to the plant life.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or capping in the harbors would not result in introduction of new species of plants into an area. However, dredging could potentially cause a minor barrier to the normal replenishment

of existing species. Dredging would temporarily increase turbidity and suspended solids in the water, which would decrease light penetration, causing a decline in photosynthesis by aquatic plants and phytoplankton. Proper project modeling, siting, and planning, such as limiting extent and duration of the dredging, can help mitigate impacts to the plant life. Dredging may also be conducted in portions and phases to allow species to reestablish, recover, and propagate. Use of sediment curtains may help to reduce sediment migration to habitat adjacent to current dredge site. In addition, dredge equipment should be through inspected and proper sanitation and operation should be follow for the prevention and establishment of exotic and invasive species. Aquatic transportation vehicle should also follow existing and proposed federal, state, and regional ordinances, plans, and guidance regarding ballast water and its potential role in the transportation of exotic and invasive species.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species.

To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

Low Flow Diversions

Flow diversions divert the surface water runoff discharge. This would not result in the introduction of new species of plants into an area. However, the decrease in flow could be a barrier to the normal replenishment of existing species that require a more constant water supply. No adverse impacts are expected because the elimination of nuisance flows would return the stream bed's dry weather flows to a more natural, pre-development condition. This in turn would facilitate the return of the stream's plant community to a more natural, pre-development condition and could impede the propagation of water-loving nonnative and invasive plant species. Impeding the propagation of invasive species is not a negative impact. Proper project siting and planning can help mitigate impacts to the plant life.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas where native habitat or special-status species usually are absent. As such, impacts that result in introduction of new species of plants, or in a barrier to the normal replenishment of existing species would be avoided. Furthermore, installation of catch basin inserts requires no construction or ground disturbance which could result in introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result the introduction of new species of plants, or in a barrier to the normal replenishment of existing species.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact resulting in the introduction of new species of plants, or in a barrier to the normal replenishment of existing species.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

4. Plant life. d. Will the proposal result in reduction in acreage of any agricultural crop?

Answer: No impact

No impact is foreseeable. The project site is not used for agricultural production and is not designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The surrounding area is fully developed and generally characterized by park, commercial, industrial, and residential uses. Therefore, the structural and non-structural BMPs will not result in reduction in acreage of any agricultural crop in the Marina del Rey Watershed.

5. Animal Life. a. Will the proposal result in change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, insects or microfauna)?

Answer: Potentially Significant Impact

Depending on the implementation method chosen, it is possible that direct or indirect impact to animal life may occur. Responsible parties should consult with the CDFW and the USFWS prior to implementing compliance strategies that pose a potentially significant impact to animal life for both protected and non-protected species. Responsible parties may also choose to implement compliance strategies that incur less impact on animal life.

Infiltration Systems and Vegetated Swales

The installation of vegetated swales and infiltration systems with vegetated biofiltration systems could increase the diversity or number of animal species, which is beneficial by creating habitat for those species. However, these types of structural BMPs could also increase the likelihood of vectors and pests. For example, vegetated swales may develop locations of pooled standing water that would increase the likelihood of mosquito breeding. Mitigation includes the prevention of standing water through the construction and maintenance of appropriate drainage slopes and through the use of aeration pumps. The introduction of mosquito larvae eating fish can help mitigate and reduce mosquito breeding in surface flow wetlands. Mitigation for vectors and pests should involve the use of appropriate vector and pest control strategies, maintenance, and frequent inspections.

Installation of non-vector producing structural BMPs can help mitigate vector production from standing water. Netting can be installed over vegetated swales to further mitigate vector

production. Structural BMPs can be designed and sites can be properly protected to prevent accidental vector production. Vector control agencies should be involved for other types of mitigation. Proper project siting and planning can help mitigate impacts to the animal life.

Also see "Plant." 2 a.

Stormwater Capture Systems

Stormwater capture systems are designed to capture rainwater using structural BMPs such as rain barrels and cisterns. However, these types of local capture systems could also increase the likelihood of vectors and pests. For example, rain barrels and cisterns may develop locations of pooled standing water that would increase the likelihood of mosquito breeding. Mitigation for vectors and pests should involve the use of appropriate vector and pest control strategies, maintenance, and frequent inspections.

Media Filters and Oil/Water Separators

In general, the activities that will take place with the implementation of media filters or oil/water separators will be similar in nature to current urban activities that are already occurring in the watershed. Their implementation will not foreseeably:

- Cause a substantial reduction of the overall habitat of a wildlife species
- Produce a drop in a wildlife population below self-sustaining levels
- Eliminate a plant or animal community

It is not reasonably foreseeable that either the construction/implementation or maintenance phase of potential projects will result in a significant long term impact to general wildlife species adapted to developed environments.

Sediment Capping

Sediment capping represents a significant project and, in general, impacts are expected; however; with proper planning and care, some impacts can be short lived and mitigated. The goal of a capping project is normally to change the nature of the harbor substrate. As a result, after the capping is complete, the new substrate can be inhospitable to the previous benthic community and a reestablishment of the organisms is typically gradual.

Moreover, other species (fish or birds) often rely upon the benthic community for food. A considerable reduction in the food source for this species may cause an adverse impact. Bird species may be required to travel to other areas in search of food; this may reduce the diversity of bird observed at the harbor. Fish populations would be subject to in harbor waters conditions, however their food source may temporarily supplemented in order to mitigate this impact.

Sediment capping would be a large project taking place at the harbor and will create noise and may require the removal of some shallow water vegetation that is often used as bird habitat. It is expected that this would impact bird species at the harbor. Mitigation measures will be required to ensure the least disturbance possible. These measures could include a bird and habitat survey to identify sensitive species and suitable habitat areas. Nesting surveys could also be conducted to ensure that disturbing activities do not take place during the nesting season. Due to the potential impacts, a sediment capping operation should be fully analyzed at the project level. The long term benefits to animal life by implementation of the TMDL outweighs short term negative impacts.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species.

To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

Remove Contaminated Sediments - Dredging

Dredging processes would disrupt activities of wildlife, such as birds, fish and shellfish, benthic organisms, insects or microfauna in the harbor. The presence of the pipeline and barge, as well as tugboat and barge movements, could affect animal species in the harbor for the duration of the dredging. Noise, human disturbance, and mechanical barriers from equipment and boats, all would affect wildlife, fish, and birds in the harbor. Some sediment in the harbor may contain toxic compounds that, when suspended, could affect water quality, which in turn could affect animal species.

The goal of a dredging or capping project is normally to change the nature of the harbor substrate. As a result, even after the dredging is complete the new substrate can be inhospitable to the previous benthic community and a reestablishment of the organisms is typically gradual. Moreover, other species (fish or birds) often rely upon the benthic community for food. A considerable reduction in the food source for this species may cause an adverse impact. Bird species may be required to travel to other areas in search of food; this may reduce the diversity of birds observed at the harbor. Fish populations would be subject to in harbor conditions, however their food source may temporarily supplemented in order to mitigate this impact. Proper project modeling, siting, and planning, such as limiting extent and duration of the dredging, can help mitigate impacts to the animal life.

Low Flow Diversion

Flow diversions in dry weather could eliminate some animal habitats dependant on those flows. These changes may result in a change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, insects or microfauna) discussed above. Proper project modeling, siting, and planning can help mitigate impacts to the animal life.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas. As such, impacts that result in change in the diversity of species, or numbers of any species of animals would be avoided. Furthermore, installation of catch basin inserts requires no construction or ground disturbance which could impact biological resources.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in change in diversity of species, or numbers of any species of animals from the current condition. However, it would allow sediments to remain contaminated for longer periods of time.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact that results in a change in the diversity of species, or numbers of any species of animals.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

5. Animal Life. b. Will the proposal result in reduction of the numbers of any unique, rare or endangered species of animals?

Answer: Potentially Significant Impact

Depending on the structural BMPs selected, direct or indirect impacts to special-status animal species may possibly occur during and after construction. If special-status species are present during activities such as ground disturbance, construction, operation and maintenance activities associated with the potential projects, direct impacts to special-status species could result, including the following:

- Direct loss of a special-status species
- Increased human disturbance in previously undisturbed habitats
- Mortality by construction or other human-related activity
- Impairing essential behavioral activities, such as breeding, feeding or shelter/refugia
- Destruction or abandonment of active nest(s)/den sites
- Direct loss of occupied habitat

In addition, potential indirect impacts may include but are not limited to, the following:

- Displacement of wildlife by construction activities
- Disturbance in essential behavioral activities due to an increase in ambient noise levels and/or artificial light from outdoor lighting around facilities

Mitigation measures, however, could be implemented to ensure that special-status animals are not negatively impacted, nor their habitats diminished. For example, when the specific projects are developed and sites identified, a focus protocol animal survey and/or a search of the California Natural Diversity Database should be performed to confirm that any potentially special-status animal species in the site area are properly identified and protected as necessary.

If special-status animal species are potentially near the project site area, as required by the Endangered Species Act (ESA), two weeks prior to grading or the construction of facilities and per USFWS and/or CDFW protocols, pre-construction surveys to determine the presence or absence of special-status species would be conducted. The surveys should extend an appropriate distance (buffer area) off site to determine the presence or absence of any special-status species adjacent to the project site. If special-status species are present on the project site or within the buffer area, mitigation would be required under the ESA. To this extent, mitigation measures shall be developed with the USFWS and CDFW to reduce potential impacts.

Infiltration Systems and Vegetated Swales

Vegetated swales and infiltration systems such as vegetated biofiltration systems could increase the diversity or number of animal species, by creating habitat for those species. The installation of vegetated treatment and infiltration systems may result in a temporary impact on the numbers of any unique, rare or endangered species of animals if they are found at the site of the installation. Proper project siting, and planning, discussed, above, can help mitigate impacts to the animal life. Vegetated swales and infiltration systems could eliminate in-stream habitats dependant on flows associated with stormwater runoff. These changes may result in reduction of the numbers of any unique, rare or endangered species of animals. Proper project modeling, siting, and planning as discussed above can help mitigate impacts to the animal life. However reduction of nuisance flows may help return the flow to a more natural state.

Stormwater Capture Systems

Stormwater capture systems could eliminate in-stream habitats dependant on flows associated with stormwater runoff. These changes may result in reduction of the numbers of any unique, rare or endangered species of animals. Proper project modeling, siting, and planning as discussed above can help mitigate impacts to the animal life. However reduction of nuisance flows may help return the flow to a more natural state.

Media Filters and Oil/Water Separators

Even though it is expected that potential projects would occur in previously developed areas it is possible for special-status species to occur in urban areas. The installation of media filters and oil/water separators may result in a temporary impact on the numbers of any unique, rare or endangered species of animals if they are found at the site of the installation. Proper project siting, and planning, discussed, above, can help mitigate impacts to the animal life.

Sediment Capping

The installation of a sediment cap is not expected to cause a reduction in unique, rare or endangered animal species. The installation process may cause temporary and short term disturbance to bird species at the harbor. However, these can be mitigated by conducting appropriate bird surveys and selecting appropriate times for the work to be conducted. However, sediment capping should not be conducted during nesting season as even minor disturbance can cause a nest to be abandoned.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An

increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species. To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

If sensitive plant and animal species occur on the project site mitigation shall be required in accordance with the Endangered Species Act. Mitigation measures shall be developed in consultation with the CDFG and the USFWS. Responsible agencies should endeavor to avoid compliance measures that could result in reduction of the numbers of any unique, rare or endangered species of plants and instead opt for such measures as enforcing litter ordinances in sensitive habitat areas.

Remove Contaminated Sediments - Dredging

Dredging activities could temporarily disturb sensitive bird species using the Harbor. For example, depending on the extent of the disturbance, temporary loss of resting and foraging habitat by the state and federal endangered California least tern could be a significant impact. California least terns use quiet areas in the Harbor such as Terminal Island to nest. Therefore, mitigation measures, such as performing activities such as dredging outside the nesting season of the least tern, may be necessary to protect this species. The responsible agencies should consult with the USFWS and CDFW regarding potential impacts to California least tern.

Also see “Plant.” 2 b.

Low Flow Diversions

Flow diversions in dry weather could eliminate some animal habitats dependant on those flows. These changes may result in reduction of the numbers of any unique, rare or endangered species of animals. Proper project modeling, siting, and planning as discussed above can help mitigate impacts to the animal life.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas where native habitat or special-status species usually are absent. As such, impacts that result in reduction of the numbers of any unique, rare or endangered species of animals would be avoided. Furthermore, installation of catch basin inserts requires no construction or ground disturbance which could impact biological resources.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in a reduction of the numbers of any unique, rare, or endangered species of animals.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly, and would have no impact that results in the reduction of the numbers of any unique, rare or endangered species of animals.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

5. Animal Life. c. Will the proposal result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals?

Answer: Potentially Significant Impact

It is not reasonably foreseeable that implementation of structural BMPs will result in the introduction of a new animal species. In addition, because potential projects would be established in previously heavily developed areas it is not expected that potential project sites would act as a travel route or regional wildlife corridor.

A travel route is generally described as a landscape feature (such as a ridgeline, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g. water, food, den sites). Wildlife corridors are generally an area of habitat, usually linear in nature, which connect two or more habitat patches that would otherwise be fragmented or isolated from one another. It is unlikely that structural BMPs would be constructed in areas such as these. Structural BMPs would be sited in urbanized areas.

However, structural BMPs may potentially impact wildlife crossings. A wildlife crossing is a small narrow area relatively short and constricted, which allows wildlife to pass under or through obstacles that would otherwise hinder movement. Crossings are typically manmade and include culverts, underpasses, and drainage pipes to provide access across or under roads, highways, or other physical obstacles.

Construction activities are associated with the implementation of structural BMPs and may impact migratory avian species. These avian species may use portions of potential project sites, including ornamental vegetation, during breeding season and may be protected under the Migratory Bird Treaty Act (MBTA) while nesting. The MBTA includes provisions for protection of migratory birds under the authority of the CDFW and USFWS. The MBTA protects over 800 species including, geese, ducks, shorebirds, raptors, songbirds, and many other relatively common species.

If structural BMPs are implemented at locations where they would cause foreseeable adverse impacts on species migration or movement patterns, mitigation measures could be implemented to ensure that impacts which may result in a barrier to the migration or movement of animals is less than significant. Any site-specific wildlife crossings should be evaluated in consultation with CDFW. If a wildlife crossing would be significantly impacted in an adverse manner, then the design of the project should include a new wildlife crossing in the same general location. If construction occurs during the avian breeding season for special status species and/or MBTA-

covered species, generally February through August, then prior (within 2 weeks) to the onset of construction activities, surveys for nesting migratory avian species would be conducted on the project site following CDFW and/or USFWS guidelines. If no active avian nests are identified on or within 200 feet of construction areas, no further mitigation would be necessary.

Alternatively, to avoid impacts, the agencies implementing the TMDL may begin construction after the previous breeding season for covered avian species and before the next breeding season begins. If a protected avian species was to establish an active nest after construction was initiated and outside of the typical breeding season (February – August), the project sponsor, would be required to establish a buffer of 200 feet or as required by USFWS between the construction activities and the nest site.

If active nests for protected avian species are found within the construction footprint or within the 200-foot buffer zone, construction would be required to be delayed within the construction footprint and buffer zone until the young have fledged or appropriate mitigation measures responding to the specific situation are developed in consultation with CDFW or USFWS. These impacts are highly site specific, and assuming they are foreseeable, they would require a project-level analysis and mitigation plan.

Finally, to the extent feasible, responsible agencies should endeavor to avoid compliance measures that could result in significant barriers to the beneficial migration or movement of animals, and instead opt for such measures as non-structural BMPs in sensitive areas.

Infiltration Systems and Vegetated Swales

Construction of reasonably foreseeable infiltration systems and vegetated swales likely would not restrict wildlife movement because the sizes of infiltration systems and vegetated swales are generally too small to obstruct a corridor. In some cases, detention/retention ponds, vegetated swales, and surface flow wetlands may actually provide important habitat. Proper project siting and planning, discussed above, mitigate impacts to the animal life.

Stormwater Capture Systems

Stormwater capture systems would not result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals.

Sediment Capping

Sediment capping is not expected to result in the introduction of new animal species to the harbor. Sediment capping, however, may potentially impact the movement and/or migration of animals. If capping activities take place during migration, the noise and associated activities may adversely impact the migration patterns of some birds. It is anticipated that this could be mitigated by conducting capping activities outside of the migration season.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species.

To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth.

Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

Media Filters and Oil/Water Separators

Media filters and oil/water separators would be located in urbanized areas and would not be of the size to result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals.

Remove Contaminated Sediments - Dredging

Dredging or capping in the Harbor would not result in introduction of new species of animals into an area. However, dredging could potentially cause a minor barrier to the migration or movement of animals. The presence of the pipeline and barge, as well as tugboat and barge movements, could affect the migration or movement of animals in the Harbor during the dredging. Noise, human disturbance, and mechanical barriers from equipment and boats may adversely impact the migration or movement of animals in the Harbor. Proper project modeling, siting, and planning, such as limiting extent and duration of the dredging, can help mitigate impacts to the migration or movement of animals.

Also see "Plant." 2 c.

Low Flow Diversions

Flow diversions would not result in the introduction of new species of animals into an area. However, construction activities could potentially cause a minor barrier to the movement of animals. No impact is anticipated.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas where native habitat or special-status species usually are absent. As such, impacts that result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals would be avoided. Furthermore, installation of catch basin inserts requires no construction or ground disturbance which could impact biological resources.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in an introduction of a new species of animals into an area, or result in a barrier to migration or movement of animals.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impacts that result in introduction of new species of animals into an area, or in a barrier to the migration or movement of animals.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should

implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

5. Animal Life. d. Will the proposal result in deterioration to existing fish or wildlife habitat?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Swales

Infiltration systems and vegetated swales increase infiltration rates of stormwater runoff which may potentially change the fish and wildlife habitat within the stream channels by changing the flow regime of the channels. Infiltration systems and vegetated swales could impact in-stream species dependant on those flows. Animal species that thrived in the water channels in the absence of nuisance flows should not be adversely impacted by habitat changes if the flows are eliminated. No adverse impacts are expected because the elimination of nuisance flows would return the stream bed's wet weather flows to a more natural, pre-development condition. This in turn would facilitate the return of the stream's animal community to a more natural, pre-development condition and could impede the propagation of water-loving non-native and invasive animal species. Impeding the propagation of invasive species is not a negative impact.

Stormwater Capture Systems

Stormwater capture systems collect stormwater runoff which may potentially change the fish and wildlife habitat within the stream channels by changing the flow regime of the creeks. Local capture systems could impact in-stream species dependant on those flows. Animal species that thrived in the creeks in the absence of nuisance flows should not be adversely impacted by habitat changes if the flows are eliminated. No adverse impacts are expected because the elimination of nuisance flows would return the stream bed's wet-weather flows to a more natural, pre-development condition. This in turn would facilitate the return of the stream's animal community to a more natural, pre-development condition and could impede the propagation of water-loving non-native and invasive animal species. Impeding the propagation of invasive species is not a negative impact.

Sediment Capping

Sediment capping may require the removal and covering of some aquatic vegetation. The removal and covering of aquatic vegetation would reduce wildlife habitat primarily for birds; however, it is expected that enough vegetation would remain in place to prevent a significant impact. Moreover, the habitat areas reduced by capping operations would gradually re-colonize.

Sediment capping will cover the sediments where benthic aquatic invertebrates reside with clay sediment, clay, gravel, or other material. This impact would be unavoidable and the cover of contaminated sediment material is the goal of a capping operation. It is expected that the benthic community will gradually re-colonize as well.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners switching from copper-based antifouling paints to alternative coatings, which may prove to be less effective. An increase in abundance and species diversity of fouling organisms on a boat previously moored in a different location could lead to the transport of invasive species into the Marina del Rey Harbor Waters. Certain invasive species have been known to cause disruptions in ecosystems by a variety of mechanisms, such as through competition with native biota for food and resources. The natural community, if one exists in the Marina del Rey Harbor, could be negatively affected by the introduction and establishment of invasive species.

To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. Furthermore, underwater hull cleaning should be performed particularly on vessels prior to leaving an area known or suspected to support species that could become invasive if brought into the Marina del Rey Harbor Waters. Additionally, the formal mandate for copper load reduction in this TMDL Basin Plan amendment will in and of itself increase the market demand for innovative solutions including nontoxic, effective hull coatings. This in turn will create greater market demand for the development of new products.

Remove Contaminated Sediments - Dredging

Dredging or capping would increase suspended sediment in the vicinity of dredging activity, increasing turbidity of the water. This would reduce water clarity in the Harbor, which would result in the deterioration of existing fish or wildlife habitat. The increased turbidity would affect survival of phytoplankton and zooplankton, which form the prey basis for many of the wildlife, fish, and bird species in the Harbor. Dredging processes would disrupt activities of wildlife in the Harbor, and the presence of the pipeline and barge, as well as tugboat and barge movements, would affect biological resources in the Harbor for the duration of the dredging. Noise, human disturbance, and mechanical barriers from equipment and boats, all would affect wildlife, fish, and birds in the harbors. Some sediment in the Harbor contains toxic compounds that, when suspended, could affect water quality, which in turn could affect existing fish or wildlife habitat.

Also see "Plant." 2 a, b, and c.

Low Flow Diversions

Flow diversions divert dry-weather runoff and first flush storm runoff which may potentially change the fish and wildlife habitat in the Harbor. Existing fish and wildlife that thrived in the Harbor in the absence of nuisance flows should not be adversely impacted by habitat changes if the flows are eliminated. No adverse impacts are expected because the elimination of nuisance flows would return the harbors bed to its more natural, pre-development condition.

Catch Basin Inserts

Catch basin inserts fit directly into curbside catch basins in urbanized areas. As such, impacts that result in deterioration to existing fish or wildlife habitat would be avoided.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in deterioration to existing fish or wildlife habitat from the current condition. However, it would allow sediments to remain contaminated for longer periods of time, impacting habitat.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly, and would have no impacts that result in deterioration to existing fish or wildlife habitat.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should

implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

6. Noise. a. Will the proposal result in increases in existing noise levels?

Answer: Potentially Significant Impact

Installation of structural BMPs would potentially involve removal of asphalt and concrete from streets and sidewalks, excavation and shoring, installation of reinforced concrete pipe, installation of the unit, and repaving of the streets and sidewalks. It is anticipated that installation activities would occur in limited, discrete, and discontinuous areas over a short duration. No major construction activities are anticipated. It is anticipated that excavation, for the purpose of installation, and repaving would result in the greatest increase in noise levels during the period of installation. Table 6-2 provides noise levels generated by different machinery that may be used in installing the structural BMPs units.

Table 6- 2 Typical Installation Equipment Noise Emission Levels

Equipment	Maximum Noise Level, (dBA) 50 feet from source	Equipment Usage Factor	Total 8-hr Leq exposure (dBA) at various distances	
			50ft	100ft
Foundation Installation			83	77
Concrete Truck	*82*	*0.25*	76	70
Front Loader	*80*	*0.3*	75	69
Dump Truck	*71*	*0.25*	65	59
Generator to vibrate concrete	*82*	*0.15*	74	68
Vibratory Hammer	*86*	*0.25*	80	74
Equipment Installation			83	77
Flatbed truck	*78*	*0.15*	70	64
Forklift	*80*	*0.27*	74	69
Large Crane	*85*	*0.5*	82	76

Source; Caltrain, 2004

Contractors and equipment manufacturers have been addressing noise problems for many years, and through design improvements, technological advances, and a better understanding of how to minimize exposures to noise, noise effects can be minimized. An operations plan for the specific construction and/or maintenance activities could be developed to address the variety of available measures to limit the impacts from noise to adjacent homes and businesses. To minimize noise and vibration impacts at nearby sensitive sites, installation activities should be conducted during daytime hours to the extent feasible. There are a number of measures that can be taken to reduce intrusion without placing unreasonable constraints on the installation process or substantially increasing costs. These include noise and vibration monitoring to ensure that contractors take all reasonable steps to minimize impacts when near sensitive areas; noise testing and inspections of equipment to ensure that all equipment on the site is in good condition and effectively muffled; and an active community liaison program. A community liaison program should keep residents informed about installation plans so they can plan around noise or vibration impacts; it should also provide a conduit for residents to express any concerns or complaints.

The following measures would minimize noise and vibration disturbances at sensitive areas during installation:

- Use newer equipment with improved noise muffling and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine covers, and engine vibration isolators intact and operational. Newer equipment will generally be quieter in operation than older equipment. All installation equipment should be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices (e.g., mufflers and shrouding).
- Perform all installation in a manner to minimize noise and vibration. Use installation methods or equipment that will provide the lowest level of noise and ground vibration impact near residences and consider alternative methods that are also suitable for the soil condition. The contractor should select installation processes and techniques that create the lowest noise levels.
- Perform noise and vibration monitoring to demonstrate compliance with the noise limits. Independent monitoring should be performed to check compliance in particularly sensitive areas. Require contractors to modify and/or reschedule their installation activities if monitoring determines that maximum limits are exceeded at residential land uses.
- Conduct truck loading, unloading and hauling operations so that noise and vibration are kept to a minimum by carefully selecting routes to avoid going through residential neighborhoods to the greatest possible extent. Ingress and egress to and from the staging area should be on collector streets or higher street designations (preferred).
- Turn off idling equipment.
- Temporary noise barriers shall be used and relocated, as practicable, to protect sensitive receptors against excessive noise from installation activities. Consider mitigation measures such as partial enclosures around continuously operating equipment or temporary barriers along installation boundaries.
- The installation contractor should be required by contract specification to comply with all local noise and vibration ordinances and obtain all necessary permits and variances.

These and other measures can be classified into three distinct approaches as outlined in Table 6-3.

Table 6- 3 Noise Abatement Measures

Type of Control	Description
Source Control	*Time Constraints* – Prohibiting work during sensitive nighttime hours *Scheduling* – performing noisy work during less sensitive time periods *Equipment Restrictions* – restricting the type of equipment used *Substitute Methods* –using quieter equipment when possible *Exhaust Mufflers* – ensuring equipment have quality mufflers installed *Lubrication and Maintenance* – well maintained equipment is quieter *Reduced Power Operation* – use only necessary power and size Limit equipment on-site – only have necessary equipment on-site *Noise Compliance Monitoring* – technician on-site to ensure compliance
Path Control	*Noise barriers* – semi-portable or portable concrete or wooden barriers *Noise curtains* – flexible intervening curtain systems hung from supports *Increased distance* – perform noisy activities further away from receptors
Receptor Control	*Community participation* –open dialog to involve affected parties *Noise complaint process* – ability to log and respond to noise complaints

Adapted from Thalheimer, 2000

Increases in ambient noise levels are expected to be less than significant once mitigation measures have been properly applied.

Infiltration Systems and Vegetated Swales

Implementation of these BMPs would result in temporary increases in existing noise levels, but this would be short term and only exist until maintenance or construction is completed. Therefore, this noise impact is less than significant.

Stormwater Capture Systems

The construction and installation of stormwater capture systems would result in temporary increases in existing noise levels, but this would be short term and only exist until construction is completed.

Media Filters and Oil/Water Separators

The construction and installation of media filters and oil/water separators would result in temporary increases in existing noise levels, but this would be short term and only exist until construction is completed.

Replacement of copper-based antifouling paint

Replacement of copper-based antifouling paints is not expected to result in increases in existing noise levels.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging and excavation or sediment capping activities would result in increases in existing noise levels. Noise levels from the hydraulic or clamshell dredge equipment exceeding a CNEL level of 60 dBA or more would indicate a significant noise impact. Noise mitigation measure for dredging are similar to those listed for installation of structural BMPs. Implementing measures such as these may reduce dredging noise impacts. Table 6-4 provides noise levels generated by different machinery that may be used in dredging.

Table 6- 4 Typical Dredge Equipment Noise Emission Levels

Equipment	Noise Level at 50 Feet From Source
Diesel-Powered Clamshell Dredge	*85*
Tugboat	*87*
Support Boat	*87*
Barge	*87*
Crane (Barge-Mounted)	*87*
Backhoe	*84*
Bulldozer	*88*

Adopted from USACE and LAHD 2009b.

Low Flow Diversions

The construction and installation of flow diversions would result in temporary increases in existing noise levels, but this would be short term and only exist until construction is completed. Therefore, this noise impact would reduce to less than significant level.

Catch Basin Inserts

Installation of catch basin inserts would not involve any construction activity or the use of major equipment therefore no significant increase in ambient noise levels is anticipated. Catch Basin Inserts need to be cleaned regularly. Frequency of cleaning depends on the amount of trash flowing into the insert. Increased street sweeping can decrease the amount of trash, caught by catch basin inserts. Catch basins are cleaned out on varying schedules at a minimum frequency as a requirement of the MS4 permit. This implementation measure does not require an increase in cleaning frequency above what is already required for existing permits, therefore no significant increase in noise levels are anticipated.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in increases in existing noise levels.

Non-Structural BMPs

Non-structural BMPs could result in increases in existing noise levels due to increased traffic from maintenance vehicles which may increase the noise level temporarily as the vehicles pass through an area. However, the increase in noise levels would be no greater than typical infrastructure maintenance activities currently performed by municipalities.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However,

implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

6. Noise. b. Will the proposal result in exposure of people to severe noise levels?

Answer: Potentially Significant Impact

There will be noise associated with structural and non-structural BMPs (see 6 Noise a). Personnel conducting the operation and/or working in the general area may be exposed to severe noise levels. This would require that all personnel be required to wear ear protection in order to mitigate this exposure. The noise mitigation measures have been previously described in response to 6. Noise. a.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

7. Light and Glare. Will the proposal produce new light or glare?

Answer: Potentially Significant Impact

Structural BMPs

The construction and installation of structural BMPs could potentially be performed during evening or night time hours. If this scenario were to occur, night time lighting would temporarily be required to perform the work. Also, lighting could possibly be used to increase safety around structural BMPs. A lighting plan should be prepared to include mitigation measures. Mitigation measures can include shielding on all light fixtures and limiting light trespass and glare through the use of directional lighting methods. Other potential mitigation measures may include the use of screening and low-impact lighting, performing construction during daylight hours, or designing security measures for installed structural BMPs that do not require night lighting. Certain BMPs may employ solar panels for electricity to operate. The potential glare from these solar panels can be mitigated by siting them away from receptors, using shielding, or using alternative photovoltaic panels, which absorb light and do not produce glare.

Non-Structural BMPs

Non-structural BMPs will not produce new light or glare because none of the BMPs would introduce any physical effects that could impact light and glare.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section

15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

8. Land Use. a. Will the proposal result in substantial alteration of the present or planned land use of an area?

Answer: Potentially Significant Impact

Structural BMPs

The installation of infiltration systems, vegetated swales, stormwater capture systems, media filters, oil/water separators, diversion and/or treatment BMPs, and catch basin inserts are not expected to result in substantial alterations or adverse impacts to present or planned land use. To the extent that there could be land use impacts at a specific location, these potential land use conflicts are best addressed at the project level. Since the Regional Board cannot specify the manner of compliance with the TMDL, the Regional Board can not specify the exact location of structural treatment devices. The various agencies that might install such structural BMPs such as vegetated swales and detention basins will need to identify local land use plans as part of a project-level analysis to ensure that projects comply with permitted use regulations and are consistent with land use plans, general plans, specific plans, conditional uses, or subdivisions.

Notably, structural BMPs can be suitable for an ultra-urban setting and can be specifically designed to accommodate limited land area.

Construction of structural treatment devices will not result in permanent features such as above-ground infrastructure that would disrupt, divide, or isolate existing communities or land uses. Projects can incorporate public education and aesthetically pleasing design with functional water quality treatment. Projects may be designed to increase parks and wildlife habitat areas and to improve water quality. Construction activities could follow standard mitigation methods and BMPs to reduce any potential impact on surrounding land uses and access to all adjacent land uses could be provided during the construction period.

Non-Structural BMPs

Non-structural BMPs and source reduction efforts would involve no change to the physical environment either directly or indirectly and would have no impact on land use.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

9. Natural Resources. a. Will the proposal result in increase in the rate of use of any natural resources?

Answer: No Impact

Structural and/or non-structural BMPs will not increase the rate of use of any natural resources. Implementation of structural and/or non-structural BMPs should not require quarrying, mining,

dredging, or extraction of locally important mineral resources. Operation of construction and maintenance vehicles could increase the use of fossil fuels, and some types of structural BMPs may consume electricity to operate pumps. Fuel and energy consumption are discussed in greater detail in item 15 Energy, listed below.

9. Natural Resources. B. Will the proposal result in substantial depletion of any non-renewable natural resource?

Answer: No Impact

See 9. Natural Resources. a.

10. Risk of Upset. Will the proposal involve a risk of an explosion or the release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?

Answer: Potentially Significant Impact

There is the possibility that hazardous materials (e.g. oil and gasoline) may be present during implementation and/or operation of the structural and non-structural BMPs. Potential risk of exposure and explosion can be mitigated with proper handling and storage procedures. Compliance with the requirement of California Occupational Health and Safety Administration (Cal OSHA) and local safety regulations during installation, operations, and maintenance of these alternatives would help to prevent any worksite accidents or accidents involving the release of hazardous materials into the environment. Mitigation may include properly storing hazardous materials in protected areas with fencing and signs to prevent health hazards.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

11. Population. Will the proposal alter the location, distribution, density, or growth rate of the human population of an area?

Answer: No Impact

It is not anticipated that reasonably foreseeable methods of compliance will result in an impact to population in the altering the location, distribution, density, or growth rate of human population of an area.

12. Housing. Will the proposal affect existing housing, or create a demand for additional housing?

Answer: No Impact

<u>Structural BMPs</u>

It is not anticipated that reasonably foreseeable methods of compliance will result in an impact to existing housing, or create a demand for additional housing. Small infrastructure projects like low flow diversions, vegetated swales, and the use of porous pavement, would be placed in urbanized areas, so no additional space would be necessary. Some BMPs such as additional

detention and infiltration basins could require space, but such BMPs are small, and responsible agencies would not need to impact existing housing in any way to site them.

Non-Structural BMPs

It is not reasonably foreseeable that non-structural BMPs would affect existing housing, or create a demand for additional housing.

13. Transportation/Circulation. a. Will the proposal result in generation of substantial additional vehicular movement?

Answer: Potentially Significant Impact

Structural BMPs

Structural BMPs will not result in generation of substantial additional long-term vehicular movement. There may be additional vehicular movement during construction of structural BMPs and during maintenance activities. However, vehicular movement during construction, and excavation and disposal of dredge materials would be temporary during the duration of those activities, and vehicular movement during maintenance activities would be periodic and only as the vehicle passes through the area. This may generate minor additional vehicular movement.

In order to reduce the impact of traffic related to construction and disposal of dredge material, a construction traffic management plan could be prepared for traffic control during any street closure, detour, or other disruption to traffic circulation. The plan could identify the routes that construction vehicles would use to access the site, hours of construction traffic, and traffic controls and detours. The plan could also include plans for temporary traffic control, temporary signage and stripping, location points for ingress and egress of construction vehicles, staging areas, and timing of construction activity which appropriately limits hours during which large construction equipment may be brought on or off site.

Non-Structural BMPs

Non-structural BMPs could result in increases in vehicular movement due to increased traffic from maintenance vehicles. However, the increase in vehicular movement would be no greater than typical infrastructure maintenance activities currently performed by municipalities.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible parties listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These parties have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

13. Transportation/Circulation. b. Effects on existing parking facilities, or demand for new parking?

Answer: Potentially Significant Impact

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, and Oil/Water Separators

Compliance with the TMDL may result in alterations to existing parking facilities to incorporate infiltration stormwater BMPs or other structural BMPs to treat stormwater. Structural BMPs can be designed to accommodate space constraints or be placed under parking spaces and would not

significantly decrease the amount of parking available in existing parking facilities. If structural BMPs did create an impact on parking, available parking spaces can be reconfigured to provide equivalent number of spaces or a functionally similar parcel can be provided to mitigate potential adverse parking impacts.

Maintenance of structural BMPs could reduce available parking in an area during certain times of the day, week, and/or month, depending on frequency of operation and/or maintenance events. Maintenance events should be scheduled to be performed at the same time as other maintenance activities performed by the municipalities, and/or at times when these activities have lower impact, such as periods of low traffic activity and parking demand.

Sediment Capping

The installation of a sediment cap may result in temporary impacts to parking facilities. Parking areas may temporarily be required for the staging of the installation of the sediment cap. All parking effects from this activity should be limited and temporary only.

The TMDL will improve sediment and surface water quality with respect to toxic pesticides and PCBs. This may result in increased patron visitation of the park which could lead to an increased demand for parking. Available parking spaces can be reconfigured to provide equivalent number of spaces or a functionally similar parcel can be provided for use as offsite parking to mitigate potential adverse parking impacts.

Replacement of copper-based antifouling paints

Replacement of copper-based antifouling paints is not expected to result in effects on existing parking facilities, or demand for new parking.

Remove Contaminated Sediments - Dredging

Dredging and excavation or sediment capping activities would result in short-term impacts to existing parking facilities. Open space may be required for the staging of dredging activities and for the temporary stockpiling of material removed from the Harbor bottom. All parking effects from the dredging itself should be limited and temporary only, and equipment and materials are to be removed at the completion of dredging operations.

Low Flow Diversions

The installation of the flow diversions may result in temporary impacts to parking facilities. Parking areas may temporarily be required for the staging of the installation of the flow diversions. All parking effects from the installation of the flow diversions should be limited and temporary only, and equipment and materials are to be removed at the completion of construction operations.

Catch Basin Inserts

The installation of the catch basin inserts may result in temporary impacts to parking facilities. Parking areas may temporarily be required for the staging of the installation of the catch basin inserts. All parking effects from the installation of the catch basin inserts should be limited and temporary only, and equipment and materials are to be removed at the completion of construction operations.

Monitored Natural Attenuation of Contaminants

Monitored natural attenuation of contaminants is not expected to result in effects on existing parking facilities, or demand for new parking.

Non-Structural BMPs

Non-structural BMPs may result in short-term impacts to existing parking facilities, if construction operations require use of existing parking. Non-structural BMPs should be scheduled at times when these activities have lower impact, such as periods of low traffic activity and parking demand. For example, Street sweeping could reduce available parking in an area during certain times of the day, week, and/or month, depending on frequency of events. Street sweeping should be scheduled during times of low parking demand to mitigate this impact.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

13. Transportation/Circulation. c. Will the proposal result in substantial impacts upon existing transportation systems?

Answer: Potentially Significant Impact

Structural BMPs

Depending on the structural BMPs selected and transportation method chosen for dredging material disposal, temporary alterations to existing transportation systems may be required during construction and installation activities. The potential impacts would be limited and short-term.

Potential impacts could be reduced by limiting or restricting hours of construction so as to avoid peak traffic times, and by providing temporary traffic signals and flagging to facilitate traffic movement. Activities could be synced with existing port operations to further mitigate impacts to existing systems.

Non-Structural BMPs

It is not reasonably foreseeable that non-structural BMPs would result in substantial impacts upon existing transportation systems.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

13. Transportation/Circulation. d. Will the proposal result in alterations to present patterns of circulation or movement of people and/or goods?

Answer: Potentially Significant Impact

See response to "Transportation/Circulation." 13. c.

13. Transportation/Circulation. e. Will the proposal result in alterations to waterborne, rail or air traffic?

Answer: Potentially Significant Impact

Infiltration Systems, Vegetated Swales, Stormwater Capture Systems, Media Filters, Replacement of copper-based antifouling paints, Oil/Water Separators, Low Flow Diversion, Catch Basin Inserts, and Monitored Natural Attenuation of Contaminants.

It is not reasonably foreseeable that these implementation BMPs would result in alterations to waterborne, rail or air traffic.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging and disposal or sediment capping activities would result in short-term impacts to waterborne traffic. Dredge and disposal would be carried out using waterborne construction equipment such as clamshell dredges, barges, and tugboats, which would result in short-term impacts the waterborne traffic in the Harbors. Dredge material may also be transported via barge or rail. However, all impacts from the dredging itself should be limited and temporary only, and equipment and materials are to be removed at the completion of dredging operations. Locating barge away from more highly used port transportation lanes may help to mitigate aquatic traffic. If using rails for dredger material disposal, activities can also be timed for non-peak hours.

Non-Structural BMPs

It is not reasonably foreseeable that non-structural BMPs would result in alterations to waterborne, rail or air traffic.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

13. Transportation/Circulation. f. Will the proposal result in increase in traffic hazards to motor vehicles, bicyclists or pedestrians?

Answer: Potentially Significant Impact

Structural BMPs

A temporary increase in traffic hazards may occur during construction and installation activities. The specific project impacts can be mitigated by appropriate mitigation methods during construction. To the extent that site-specific projects entail excavation in roadways, such excavations should be marked, barricaded, and traffic flow controlled with signals or traffic control personnel in compliance with authorized local police or California Highway Patrol requirements. These methods would be selected and implemented by responsible local agencies considering project level concerns. Standard safety measures should be employed including fencing, other physical safety structures, signage, and other physical impediments designed to promote safety and minimize pedestrian/bicyclists accidents.

Non-Structural BMPs

Street Sweeping BMPs

A temporary increase in traffic hazards may occur during street sweeping activities. The specific project impacts can be mitigated by appropriate mitigation methods during operation. These methods would be selected and implemented by responsible local agencies considering project level concerns. Standard safety measures should be employed including physical safety structures, signage, and other physical impediments designed to promote safety and minimize motor vehicles, pedestrian/bicyclists accidents.

Other Non-Structural BMPs

It is not reasonably foreseeable that other non-structural BMPs would result in increases in traffic hazards to motor vehicles, bicyclists or pedestrians.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

14. Public Service. a. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas: Fire protection?

Answer: Potentially Significant Impact

Structural BMPs

During construction and installation of structural BMPs, temporary delays in response time of fire vehicles due to road closure/traffic congestion during construction activities may occur. However, any construction activities would be subject to applicable building and safety and fire prevention regulations and codes. The responsible agencies could notify local emergency service providers of construction activities and road closures and could coordinate with local providers to establish alternative routes and appropriate signage. In addition, an Emergency Preparedness Plan could be developed for the construction of proposed new facilities in consultation with local emergency providers to ensure that the proposed project's contribution to cumulative demand on emergency response services would not result in a need for new or altered fire protection services. Most jurisdictions have in place established procedures to ensure safe passage of emergency vehicles during periods of road maintenance, construction, or other attention to physical infrastructure. The installation of structural devices would not create any more significant impediments than such other ordinary activities.

Non-structural BMPs

It is not reasonably foreseeable that non-structural BMPs would result in a need for new or altered governmental services in fire protection.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)).

These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

14. Public Service. b. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas: Police protection?

Answer: Potentially Significant Impact

Structural BMPs

There is potential for temporary delays in response times of police vehicles due to road closure/traffic congestion during installation of structural BMPs. To mitigate potential delays the responsible agencies could notify local emergency and police service providers of construction activities and road closures, if any, and coordinate with the local police protection to establish alternative routes and traffic control during the installation activities. Most jurisdictions have in place established procedures to ensure safe passage of emergency vehicles during periods of road maintenance, construction, or other attention to physical infrastructure, and there is no evidence to suggest that installation of these structural devices would create any more significant impediments than other such typical activities. Any construction activity would be subject to applicable building and safety codes and permits. Therefore, the potential delays in response times for police vehicles after mitigation are less than significant.

Non-Structural BMPs

It is not reasonably foreseeable that non-structural BMPs would result in a need for new or altered governmental services in police protection.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

14. Public Service. c. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas: Schools?

Answer: No Impact

Non-structural and structural BMPs will not have an effect upon, or result in a need for new or altered schools or school services because none of the BMPs would introduce any physical effects that could impact this public service category.

14. Public Service. d. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas: Parks or other recreational facilities?

Answer: Potentially Significant Impact

Structural BMPs

During construction and installation of infiltration systems, stormwater capture systems or vegetated treatment systems, parks or other recreational facilities could be temporarily affected. Construction activities could potentially be performed near or within a park or recreational

facilities. Potential impacts would be limited and short-term and could be avoided through siting, designing, and scheduling of construction activities. Parks can also be used to treat stormwater runoff by designing playing fields to serve as infiltration basins, which could impact the recreational use of the fields after a storm. This impact could be mitigated by designing infiltration facilities that drain quickly.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or sediment capping activities would result in short-term impacts to recreational use of the Harbor. Open space may be required for the staging of dredging activities and for the temporary stockpiling of sediment removed from the Harbor bottom. All impacts from the dredging itself should be limited and temporary only, and equipment and materials are to be removed at the completion of dredging operations. Proper project siting and planning can help mitigate adverse impacts to parks or other recreational facilities.

Non-Structural BMPs

It is not foreseeable that non-structural BMPs will have a negative impact upon, or result in a need for new or altered governmental services to parks or other recreational facilities.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

14. Public Service. e. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas: maintenance of public facilities, including roads?

Answer: Potentially Significant Impact

Structural BMPs

Structural BMPs and infrastructure improvements could potentially impact public service requiring additional maintenance to ensure proper operation. Culvert cleaning, flow diversion devices, vegetated swales, oil/water separators, and catch basin inserts require some degree of maintenance, though the frequency and intensity of maintenance vary per BMPs. Other structural BMPs and infrastructure improvements do not require frequent maintenance. These devices can be further designed and engineered to lessen the amount of maintenance and servicing required. While these requirements may result in increases in maintenance costs, any increase will be outweighed by the resulting overall improvement in water quality and protection of aquatic life and water supply beneficial uses.

Non-Structural BMPs

It is not foreseeable that non-structural BMPs will have a negative impact upon, or result in a need for new or altered governmental services in any of the following areas: maintenance of public facilities including roads.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce

potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

14. Public Service. f. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas: other government services?

Answer: Potentially Significant Impact

Structural BMPs

As discussed above, structural BMPs may include additional maintenance to ensure proper operation of newly installed structural BMPs. Maintenance events could be scheduled to be performed at the same time as other maintenance activities performed by the municipalities, or at times when these activities have lower impact, such as periods of low traffic activity and parking demand.

Non-Structural BMPs

Implementation of the TMDL will result in the need for some increased monitoring on the storm drains and Marina del Rey Harbor to track compliance with the TMDL. However, no impact on the environment would be expected from these monitoring activities. Increased public outreach and education, street cleaning, and storm drain cleaning may potentially impact government services. Nevertheless, these types of alterations to governmental services are not "environmental" impacts that involve a change in the physical environment. Enlisting enforcement and clean-up volunteers may help mitigate adverse impacts associated with non-structural BMPs.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

15. Energy. a. Will the proposal result in use of substantial amounts of fuel or energy?

Answer: Potentially Significant Impact

Structural BMPs

Compliance should not result in the use of substantial additional amounts of fuel or energy, or a substantial increase in demand upon existing sources of energy, or require the development of new sources of energy.

Construction of infrastructure improvements and structural BMPs require energy and fuel for heavy equipment, machinery, and vehicles. Energy demands during construction are temporary.

Responsible parties can further mitigate fuel and energy consumption during construction through the use of more energy efficient vehicles and equipment.

Reasonably foreseeable infrastructural improvements and structural BMPs require infrequent maintenance and are unlikely to use substantial amount of fuel or energy, substantially increase demand upon existing sources of energy, or require the development of new sources of energy.

Replacement of copper-based antifouling paints

Increased growth of fouling organisms could occur as a result of boat owners converting from copper-based antifouling paints to alternative coatings and strategies which may prove to be less effective. Less effective antifoulant coatings may result in increased fouling community growth on boat hulls. Increased fouling community growth will resulted in increased hull bottom drag and corrosion, and a subsequent decrease in safety, maneuverability, and fuel efficiency. A decrease in fuel efficiency would lead to an increase in gasoline consumption for motorized boats, which in turn could have adverse effects on air quality because of increased gasoline combustion. To avoid this potentially significant impact, effective alternatives to copper-based antifouling paints should be considered. At present, there are a number of available alternatives that have been demonstrated to be both nontoxic in nature and effective at reducing fouling growth. Examples include silicone hull coatings and hard smooth epoxy hull coatings, combined with more frequent underwater hull cleaning. In general, less toxic and non-toxic alternative coatings require more frequent cleaning in order to remove the buildup of fouling growth and prevent increased fuel consumption. If increased frequency of hull cleaning isn't adequate to prevent significant air pollution, additional measures such as putting pollution control devices on engines may be necessary.

Non-Structural BMPs

Increases in administrative action, and outreach and education may also increase consumption and demand for fuel and energy. Responsible parties may also employ volunteers and choose to employ outreach activities and use of more energy efficient vehicles.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

15. Energy. b. Will the proposal result in a substantial increase in demand upon existing sources of energy, or require the development of new sources of energy.

Answer: Potentially Significant Impact

See response to "15. Energy. a." Compliance with the TMDL will not require the development of new sources of energy.

16. Utilities and Service Systems. a. Will the proposal result in a need for new systems, or substantial alterations to the following utilities: power or natural gas?

Answer: Potentially Significant Impact

Structural BMPs

Installation of structural BMPs may require alterations or installation of new power or natural gas lines. Power and natural gas lines might need to be rerouted to accommodate the addition of structural BMPs. The degree of alteration depends upon local system layouts which careful placement and design can minimize. However, that the installation of structural BMPs will result in a substantial increased need for new systems, or substantial alterations to power or natural gas utilities, is not reasonably foreseeable, because none of these BMPs are large enough to substantially tax current power or natural gas sources. No long-term effects on the environment are expected if alterations to power or natural gas utilities are required.

Non-Structural BMPs

Non-structural BMPs will not result in a need for new systems or alterations to power or natural gas utilities because none of the BMPs would introduce any physical effects that could impact this characteristic.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

16. Utilities and Service Systems. b. Will the proposal result in a need for new systems, or substantial alterations to the following utilities: communications systems?

Answer: No Impact

Structural BMPs

New systems or alterations to communications systems are not necessarily required for structural BMPs. It is anticipated that construction and maintenance crews will use various communication systems such as, telephones, cell phones, and radios. These types of communication devices and systems are used daily by the construction and maintenance personnel as part of regular business activities. It is not expected that the implementation of this TMDL would create undue stress on the established communication systems and will not require substantial alterations to the current communication system or a new communication system. However, that municipalities could install a remote monitoring system, which could include a new communications system, is possible. A telephone line or wireless communications system could be installed, which would not be a substantial alteration.

Non-Structural BMPs

Non-structural BMPs will not result in a need for new systems or alterations to communications systems because none of the BMPs would introduce any physical effects that could impact this characteristic. Current forms of communications used in maintenance vehicles could still be used.

16. Utilities and Service Systems. c. Will the proposal result in a need for new systems, or substantial alterations to the following utilities: water?

Answer: No Impact

Non-structural and/or structural BMPs will not result in a need for new systems or alterations to water supply. The need for new municipal or recycled water to implement this TMDL is not foreseeable.

16. Utilities and Service Systems. d. Will the proposal result in a need for new systems, or substantial alterations to the following utilities: Sewer or septic tanks?

Answer: Potentially Significant Impact

Structural BMPs

It is not reasonably foreseeable that structural BMPs except the flow diversions described below would result in a need for new systems, or substantial alterations to the following utilities: Sewer or septic tanks

Low Flow Diversions

Diverting the low-flow and storm first flush flows to the City's and/or County's sanitary sewer lines would increase the wastewater treatment demand and decrease the available capacity of the existing treatment facilities. This implementation measure will result in a need for new systems, or substantial alterations to sewer or septic tanks. This impact may be mitigated by installing high-flow bypasses along with the diversions. High-flow bypasses are designed to bypass the diversion in the event high-flow events, like storm events, to prevent overflow, flooding, and exhaustion of wastewater treatment plant's capacity.

Depending on the number of diversions installed and flow potential, low-flow and first flush storm diversion may significantly impact the treatable capacity of local Publicly Owned Treatment Works (POTWs). Responsible parties should study the layout of each diversion to determine the optimal amount of diversions necessary and the flow potential associated with those diversions. Responsible parties should also consult with local POTW to determine the average flow rate and treatable capacity of each POTW.

Non-Structural BMPs

It is not reasonably foreseeable that non-structural BMPs would result in a need for new systems, or substantial alterations to the following utilities: sewer or septic tanks.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

16. Utilities and Service Systems. e. Will the proposal result in a need for new systems, or substantial alterations to the following utilities: storm water drainage?

Answer: Potentially Significant Impact

Structural BMPs

In order to achieve compliance with the TMDL, the stormwater drainage systems may need to be reconfigured and/or retrofitted with structural BMPs to capture and/or treat a portion or all of the storm water runoff. The alterations and/or additions to storm water drainage systems will depend on the compliance strategy selected by each responsible party at each location where structural BMPs might be installed. Impacts from construction activities to retrofit or reconfigure the storm drain system as part of BMP installation, and mitigation measures have been considered and discussed in the previous sections of the checklist discussion.

Infiltration Systems and Vegetated Swales

The installation of infiltration systems and vegetated swales may result in substantial alterations to stormwater drainage. This impact may be mitigated by installing high-flow bypasses along with the infiltration systems and vegetated swales. Proper project modeling, siting, and planning can help mitigate adverse impacts to substantial alterations to storm water drainage.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or capping activities would not result in a need for new systems, or substantial alterations to storm water drainage. No impact is expected.

Low Flow Diversions

The development of flow diversion systems has the potential to result in a need for new systems, or substantial alterations to storm water drainage. The systems involve construction of diversion structures, drain lines, and wet well. These types of devices may result in a potentially significant impact due to changes in drainage patterns or flooding hazards if devices become blocked by trash and debris. Any device installed in a storm drain, especially an older, under-capacity drain could have a negative effect on the drain's ability to convey runoff. These negative impacts can be mitigated through design of devices with overflow/bypass structures and by performing regular maintenance of these structures. Proper project modeling, siting, and planning can help mitigate adverse impacts and substantial alterations to storm water drainage.

Catch Basin Inserts

Catch basin inserts are manufactured frames that typically incorporate filters or fabric and placed in a curb opening or drop inlet to remove trash, sediment, or debris. They can also be perforated metal screens placed horizontally or vertically within a catch basin. Flooding is a potential hazard if the filters or screens became blocked by trash and debris and prevent the discharge of stormwater. This would be of particular concern in areas susceptible to high leaf-litter rates. This potential impact can be mitigated through the use of inserts that are designed with automatic release mechanisms or retractable screens that allow flow-through during wet-weather and by performing regular maintenance to prevent the build up of trash and debris. Therefore, the exposure of people and property to flooding hazards after mitigation should be less then significant.

Non-structural BMPs

Non-structural BMPs will not result in a need for new systems, or substantial alterations to stormwater drainage systems because none of the BMPs would introduce any physical effects that could impact this characteristic.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

16. Utilities and Service Systems. f. Will the proposal result in a need for new systems, or substantial alterations to the following utilities: solid waste and disposal?

Answer: Potentially Significant Impact

Infiltration Systems and Vegetated Bioswales

The installation of infiltration systems and vegetated swales may generate construction debris. Additionally, installed infiltration systems and vegetated swales may collect sediment and solid wastes that will require disposal. Construction debris can be recycled at aggregate recycling centers or disposed of at landfills. Improved sorting and recycling methods can reduce the total amount of disposable wastes. Sediment and solid wastes that may be collected can be disposed of at appropriate landfill and/or disposal facilities.

Stormwater Capture Systems

Installed stormwater capture systems may collect sediment and solid wastes that will require disposal. However, no new solid waste or disposal systems would be needed to handle the relatively small volume generated by these projects. Sediment and solid wastes that may be collected can be disposed of at appropriate landfill and/or disposal facilities.

Media Filters and Oil/Water Separators

The installation of media filters and oil/water separators may generate construction debris. Additionally, installed, these BMPs may collect sediment and solid wastes that will require disposal. Construction debris may be recycled at aggregate recycling centers or disposed of at landfills. Sediment and solid wastes that may be collected can be disposed of at appropriate landfill and/or disposal facilities.

Sediment Capping

Sediment capping is to cover contaminated sediments in situ by a layer of clean sediment, clay, gravel, or other material. Sediment capping is not anticipated to result in a need for new systems or substantial alterations to the utilities of solid waste disposal.

Remove Contaminated Sediments - Dredging

The purpose of dredging is to remove sediments from the Harbor bottoms. This dredged material requires disposal. One option for disposal of dredged materials is a landfill site; this could potentially impact solid waste utilities. Another option is to re-use the material in nearby slip fill projects with proper containment.

Low Flow Diversions

The installation of flow diversion systems may generate construction debris. Additionally, installed flow diversion systems may collect sediment and solid wastes that will require disposal. Construction debris can be recycled at aggregate recycling centers or disposed of at landfills. Improved sorting and recycling methods can reduce the total amount of disposable stormwater

wastes. Sediment and solid wastes that may be collected can be disposed of at appropriate landfill and/or disposal facilities.

Install Vegetated Bioswales

The installation of the vegetated bioswales may generate construction debris. Additionally, installed vegetated bioswales may collect sediment and solid wastes that will require disposal. Construction debris can be recycled at aggregate recycling centers or disposed of at landfills. Improved sorting and recycling methods can reduce the total amount of disposable wastes. Existing landfills in the area have adequate capacity to accommodate this limited amount of construction debris. Impacts on the disposal of solid waste would be less than significant. It is not foreseeable that this proposal will result in a need for new systems, or substantial alterations to solid waste and disposal utilities.

Catch Basin Inserts

The installed catch basin inserts may collect sediment and solid wastes that will require disposal. Construction debris can be recycled at aggregate recycling centers or disposed of at landfills. Improved sorting and recycling methods can reduce the total amount of disposable stormwater wastes. Sediment and solid wastes that may be collected can be disposed of at appropriate landfill and/or disposal facilities.

Non-structural BMPs

Non-structural BMPs will not result in a need for new systems, or substantial alterations to solid waste and disposal utilities because none of the BMPs would introduce significant amounts of waste that could impact this characteristic.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

17. Human Health. a. Will the proposal result in creation of any health hazard or potential health hazard (excluding mental health)?

Answer: Potentially Significant Impact

Structural BMPs

It is reasonably foreseeable that hazards or hazardous materials could be encountered during the installation of structural BMPs. Contamination could exist depending on the current and historical land uses of the area. Depending on their location, structural BMPs could be proposed in areas of existing oil fields and/or methane zones or in areas with contaminated soils or groundwater. The use of hazardous materials (e.g., paint, oil, gasoline) and potential for accidents is also likely during installation.

Debris and sediment that are removed during construction of structural BMPs could become hazardous to the public or to maintenance workers who collect and transport the debris and sediment if they are not handled in a timely manner and disposed of appropriately.

Installation of structural BMPs could result in the temporary interference of emergency response or evacuation plans if construction equipment, road closures, or traffic interfered with emergency vehicles traveling through the installation area.

To the extent that installation of structural BMPs could involve work with or near hazards or hazardous materials, potential risks of exposure can be mitigated with proper handling and storage procedures. The health and safety plan prepared for any project should address potential effects from cross contamination and worker exposure to contaminated soils and water and should include a plan for temporary storage, transportation, and disposal of contaminated soils and water. Compliance with the requirements of California Occupational Health and Safety Administration (CalOSHA) and local safety regulations during installation, operation, and maintenance of these systems would prevent any worksite accidents or accidents involving the release of hazardous materials into the environment, which could harm the public, nearby residents and sensitive receptors such as schools. Systems can be redesigned and sites can be properly protected with fencing and signs to prevent accidental health hazards.

To the extent that trash trapped by trash separation devices could become hazardous, impacts to maintenance workers and the public could be avoided or mitigated by educating the local community about the effects of improper disposal of such wastes, enforcing litter ordinances, and timely cleaning out trash separation devices.

To the extent that, infiltration systems, vegetated swales, stormwater capture systems, and flow diversion systems become a source of standing water and vector production, design at the project level can help mitigate vector production from standing water. Vector control agencies may be employed as another source of mitigation. Systems that are prone to standing water can be selectively installed away from high-density areas and away from residential housing and/or by requiring oversight and treatment of those systems by vector control agencies. Appropriate planning, design, siting, and implementation can reduce or eliminate potential health hazards due to the installation of structural BMPs.

See response to "Air." 2. a and b.

Non-Structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would have no impact related to hazards, hazardous materials, or human health.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

17. Human Health. b. Will the proposal result in exposure of people to potential health hazards?

Answer: Potentially Significant Impact

See response to 17 Human Health a.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce

potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

18. Aesthetics. a. Will the proposal result in the obstruction of any scenic vista or view open to the public?

Answer: Potentially Significant Impact

Structural BMPs

Construction of low-flow diversions and other structural BMPs could potentially result in a temporary impairment of a scenic vista or view open to the public and create an aesthetically offensive site open to the public view. Project construction would require site grading, construction materials, stockpiling and storage, and the use of construction equipment. This construction impact would be localized and short-term, lasting during the normal working hours at specific locations. Construction BMPs like screening and landscaping can help mitigate aesthetic impacts. Construction materials and equipment shall be removed from the site as soon as they are no longer necessary. After construction, the scenic vista or view would return to the condition it was prior to the construction.

Remove Contaminated Sediments – Dredging and Sediment Capping

Dredging or capping may require that a dredge be floating in the harbors in order to remove sediment materials. In addition, there may be visual impacts associated with open space areas that are used for the staging of dredging activities and for the temporary stockpiling of material removed from the harbors bottom. These temporary changes would not significantly result in the obstruction of any scenic vista or view open to the public.

Non-structural BMPs

Non-structural BMPs will not result in the obstruction of any scenic vista or view open to the public because none of the BMPs would introduce any physical effects that could impact this characteristic.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

18. Aesthetics. b. Will the proposal result in the creation of an aesthetically offensive site open to public view?

Answer: Potentially Significant Impact

See response to 18. Aesthetics. a.

19. Recreation. a. Will the proposal result in impacts on the quality or quantity of existing recreational opportunities?

Answer: Potentially Significant Impact

Structural BMPs

During construction and installation of structural BMPs, beaches, harbors or other recreational areas could be temporarily affected. Construction activities could potentially be performed near or within a harbor or recreational area. Potential impacts would be limited and short-term, and could be avoided through proper planning, and scheduling of construction activities.

In the event that the municipalities might install facilities on a scale that could alter a beach, harbor or recreational area, the structural BMPs could be designed in such a way as to be incorporated into the beach, harbor or recreational area. Additionally, many structural BMPs, if necessary, may be constructed underground to minimize impacts on the quality or quantity of existing recreational opportunities. Mitigation to replace lost areas may include the creation of new open space recreation areas and/or improved access to existing open space recreation areas.

Additionally, improvement of water quality could create new recreation opportunities in urbanized areas of the watersheds by providing the opportunity to recreate in and near a clean water body with a robust and diverse population of plants and animals.

Non-Structural BMPs

It is not reasonably foreseeable that non-structural BMPs would impact the quality or quantity of existing recreational opportunities.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

20. Archeological/Historical. Will the proposal result in the alteration of a significant archeological or historical site structure, object or building?

Answer: Potentially Significant Impact

Structural BMPs

Structural BMPs would be installed in currently urbanized areas where ground disturbance has previously occurred. Because these areas are already fully urbanized it is unlikely that implementation of structural treatment devices would cause a substantial adverse change to historical or archeological resources, destroy paleontological resources, or disturb human remains. However, depending on the final location of facilities, potential impacts to cultural resources could occur. The site-specific presence or absence of these resources is unknown because the specific locations for facilities will be determined by responsible agencies at the

project level. Installation of these systems could result in minor ground disturbances, which could impact cultural resources if they are sited in locations containing these resources and where disturbances have not previously occurred.

Upon determination of specific locations for structural treatment devices, responsible agencies should complete an archaeological survey including consultation with the Native American Heritage Commission, to make an accurate assessment of potential to affect historic, archaeological, or architectural resources or to impact any human remains. If potential impacts are identified, mitigation measures could include project redesign, such as the relocation of facilities outside the boundaries of archeological or historical sites. In the event that prehistoric or historic cultural resources are discovered in project area during construction, all work shall be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological discovery.

Non-structural BMPs

Non-structural BMPs would involve no change to the physical environment either directly or indirectly and would not result in the alteration of a significant archeological or historical site structure, object or building.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the responsible and jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

21. Mandatory Findings of Significance.

21. a Potential to degrade. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Answer: Potentially Significant Impact

Taken all together, the potential impacts of the project will not cause a significant degradation to the environment with appropriate implementation of available mitigation measures. The implementation of this TMDL will result in improved water quality in the waters of the Region and will have significant beneficial impacts to the environment over the long term.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

21. b Short-term. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?

Answer: No Impact

This TMDL is directed to long-term environmental goals, and does not sacrifice long-term for short-term benefit. There are no short-term beneficial effects on the environment from the implementation of non-structural and/or structural BMPs that would be at the expense of long-term beneficial effects on the environment. The implementation and compliance with this TMDL will result in improved water quality in the waters of the Region and will have significant beneficial impacts to the environment over the long term.

21. c. Cumulative. Does the project have impacts which are individually limited, but cumulatively considerable?

Answer: Potentially Significant Impact

Each compliance measure is expected to have nominal environmental impacts if performed properly. Mitigation measures are available for most of these impacts. It is not expected that implementation of the TMDL will cause cumulatively considerable impacts if available mitigation measures are properly implemented.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

21. d. Substantial adverse. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Answer: Potentially Significant Impact

Without implementation of recommended mitigation measures, potentially significant environmental impacts, such as impacts to air, noise, and transportation, can result from implementation projects. In some cases, mitigation measures even if performed may not reduce the impacts to less than significant levels. The significance of these impacts is discussed in detail above, as well as elsewhere in this document. The project will not cause substantial adverse effects on human beings.

This SED impact analysis concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce potentially significant environmental impacts to less than significant levels. However, implementation of these mitigation measures are within the jurisdiction of the responsible agencies listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These agencies have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

7. OTHER ENVIRONMENTAL CONSIDERATIONS

This section evaluates several other environmental considerations of reasonably foreseeable methods of complying with the OC Pesticides, PCBs, PAHs, Sediment Toxicity, and Metals TMDL, specifically:

7.1. Cumulative Impacts of the Program Alternatives (as required by CEQA Guidelines Section 15130);

7.2. Potential Growth-Inducing Effects of the Program Alternatives (as required by CEQA Guidelines Section 15126); and

7.3. Unavoidable Significant Impacts (as required by CEQA Guidelines Section 15126.2).

7.1 CUMULATIVE IMPACTS

Cumulative impacts, defined in Section 15355 of the CEQA Guidelines, refer to two or more individual effects, that when considered together, are considerable or that increase other environmental impacts. Cumulative impact assessment must consider not only the impacts of the proposed TMDL, but also the impacts from other municipal and private projects, which would occur in the watershed during the period of implementation.

The areas of cumulative impacts analyzed in this section include: 1) the program level cumulative impacts and 2) the project level cumulative impacts. On the program level, the impacts from multiple TMDLs, if they exist, are analyzed. On the project level, while the full environmental analysis of individual projects are the purview of the implementing municipalities and agencies, the cumulative impact analysis included here entails consideration of construction activities occurring in the vicinity of one another as a result of other projects being built in the same general time frame and location. The Toxic Pollutants TMDL projects, if occurring with other construction projects, could contribute to temporary cumulative noise and vibration effects that would not occur with only one project.

7.1.1 PROGRAM CUMULATIVE IMPACTS

Currently there is another one TMDL effective in the Marina del Rey watershed – the Marina del Rey Bacteria TMDL. None of the implementation approaches for other TMDLs should disrupt any structural BMPs as applied for toxic pollutants. In fact, potential implementation strategies discussed in this SED for the Toxic Pollutants TMDL may contribute to the implementation of other TMDLs.

7.1.2 PROJECT CUMULATIVE IMPACTS

Specific TMDL projects must be environmentally evaluated and cumulative impacts considered as the implementing municipality or agency designs and sites the project. However, as examples, TMDL projects and other construction activities may result in cumulative effects of the following nature:

Noise and Vibration - Local residents in the near vicinity of installation and maintenance activities may be exposed to noise and possible vibration. The cumulative effects, both in terms of added noise and vibration at multiple Toxic Pollutants TMDL installation sites, and in the context of other related projects, are not considered cumulatively significant due to the temporary nature of noise increases. Noise mitigation methods including scheduling of construction or implementation device installation are available as discussed in the checklist. In addition, the fact that implementation BMP installation activities are being conducted in the same vicinity as other projects will not make mitigation methods less implementable.

Air Quality - Implementation of the Toxic Pollutants TMDL Program may cause additional

emissions of criteria pollutants and slightly elevated levels of carbon monoxide during construction or BMP device installation activities. The TMDL, in conjunction with all other construction activity, may contribute to the region's non-attainment status during the installation period. SCAQMD prepared the Air Quality Management Plan (AQMP) (2003) to bring the region into compliance with the National Ambient Air Quality Standards as set by the EPA under the Clean Air Act Amendments (1990). The AQMP is essentially designed to address the cumulative air pollutants released into the South Coast Air Basin (SCAB). Because these installations -related emissions are temporary, and because the AQMP addresses cumulative air pollution in the SCAB, compliance with the TMDL would not result in long-term significant cumulative air quality impacts. In the short term, cumulative impacts could be significant if the combined emissions from the individual TMDL projects exceed the threshold criteria for the individual pollutants.

Transportation and Circulation - Compliance with the Toxic Pollutants TMDL involves installation activities occurring simultaneously at a number of surface sites in this TMDL area. Installation of BMP devices may be occurring in the same general time and space as other related or unrelated projects. In these instances, surface construction activities from all projects could produce cumulative traffic effects which may be significant, depending upon a range of factors including the specific location involved and the precise nature of the conditions created by the dual construction activity. Special coordination efforts may be necessary to reduce the combined effects to an acceptable level. Overall, significant cumulative impacts are not anticipated because coordination can occur and because transportation mitigation methods are available as discussed in the checklist. In addition, the fact that BMP device installation activities are being conducted in the same vicinity as other projects will not make mitigation methods less implementable.

Public Services - The cumulative effects on public services in the Toxic Pollutants TMDL study area would be limited to traffic inconveniences discussed above. These effects are not considered cumulatively significant as discussed above.

Aesthetics - Construction activities associated with other related projects may be ongoing in the vicinity of one or more Toxic Pollutants TMDL construction sites. To the extent that combined construction activities do occur, there would be temporary adverse visual effects of less than cumulatively significant proportions as discussed in the checklist.

7.2 GROWTH-INDUCING IMPACTS

This section presents the following:

7.2.1) an overview of the CEQA Guidelines relevant to evaluating growth inducement,

7.2.2) a discussion of the types of growth that can occur in the Marina del Rey Harbors,

7.2.3) a discussion of obstacles to growth in the watershed, and

7.2.4) an evaluation of the potential for the TMDL Program Alternatives to induce growth.

7.2.1 CEQA GROWTH-INDUCING GUIDELINES

Growth-inducing impacts are defined by the State CEQA Guidelines as (CEQA Guidelines, Section 15126.2(d)):

> The ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are impacts which would remove obstacles to population

> growth. Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects... [In addition,] the characteristics of some projects… may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It is not assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Growth inducement indirectly could result in adverse environmental effects if the induced growth is not consistent with or accommodated by the land use plans and growth management plans and policies. Local land use plans provide for land use development patterns and growth policies that encourage orderly urban development supported by adequate public services, such as water supply, roadway infrastructure, sewer services, and solid waste disposal services.

Public works projects that are developed to address future unplanned needs (i.e., that would not accommodate planned growth) could result in removing obstacles to population growth. Direct growth inducement would result if, for example, a project involved the construction of new wastewater treatment facilities to accommodate populations in excess of those projected by local or regional planning agencies. Indirect growth inducement would result if a project accommodated unplanned growth and indirectly established substantial new permanent employment opportunities (for example, new commercial, industrial, or governmental enterprises) or if a project involved a construction effort with substantial short-term employment opportunities that indirectly would stimulate the need for additional housing and services. Growth inducement also could occur if the project would affect the timing or location of either population or land use growth, or create a surplus in infrastructure capacity.

7.2.2 TYPES OF GROWTH

The primary types of growth that occur within the Toxic Pollutants TMDL area are:

1) Development of land, and

2) Population growth (Economic growth, such as the creation of additional job opportunities, also could occur; however, such growth generally would lead to population growth and, therefore, is included indirectly in population growth.)

Growth in land development

Growth in land development is the physical development of residential, commercial, and industrial structures in the Toxic Pollutants TMDL area. Land use growth is subject to general plans, community plans, parcel zoning, and applicable entitlements and is dependent on adequate infrastructure to support development.

Population Growth

Population growth is growth in the number of persons that live and work in the Toxic Pollutants TMDL area and other jurisdictions within the boundaries of the area. Population growth occurs from natural causes (births minus deaths) and net emigration to or immigration from other geographical areas. Emigration or immigration can occur in response to economic opportunities, life style choices, or for personal reasons.

Although land use growth and population growth are interrelated, land use and population growth could occur independently from each other. This has occurred in the past where the housing growth is minimal, but population within the area continues to increase. Such a situation results in increasing population densities with a corresponding demand for services, despite minimal land use growth.

Overall development in the County of Los Angeles is governed by the County of Los Angeles General Plan, which is intended to direct land use development in an orderly manner. The General Plan is the framework under which development occurs, and, within this framework, other land use entitlements (such as variances and conditional use permits) can be obtained. Because the General Plan guides land use development and allows for entitlements, it does not represent an obstacle to land use growth. The cities within the Toxic Pollutants TMDL area also have plans which direct land use development.

7.2.3 EXISTING OBSTACLES TO GROWTH

Obstacles to growth could include such things as inadequate infrastructure, such as an inadequate water supply that results in rationing, or inadequate wastewater treatment capacity that results in restrictions in land use development. Policies that discourage either natural population growth or immigration also are considered to be obstacles to growth.

7.2.4 POTENTIAL FOR COMPLIANCE WITH THE PROPOSED TMDL TO INDUCE GROWTH

Direct Growth Inducement

Because the reasonably foreseeable methods of compliance with the proposed Toxic Pollutants TMDL focus on structural BMPs, non-structural BMPs and improvements to the storm drain system which are located throughout the urbanized portion of this TMDL area, this TMDL would not result in the construction of new housing and, therefore, would not directly induce growth.

Indirect Growth Inducement

Two areas of potential indirect growth inducement are relevant to a discussion of the proposed TMDL: (1) the potential for compliance with the TMDL to generate economic opportunities that could lead to additional immigration, and (2) the potential for the proposed TMDL to remove an obstacle to land use or population growth.

Installation and/or construction of structural BMPs to comply with the proposed TMDL would occur over a 20-year time period. Installation and maintenance spending for compliance would generate jobs throughout the region and elsewhere where goods and services are purchased or used to install structural BMPs. Based on the above annual construction cost estimates, the alternatives would result in direct jobs and indirect jobs. The creation of jobs in the region is considered a benefit.

Although the construction activities associated with the Toxic Pollutants TMDL would increase the economic opportunities in the area and region, this construction is not expected to result in or induce substantial or significant population or land use development growth because the majority of the new jobs that would be created by this construction are expected to be filled by persons already residing in the area or region, based on the existing surplus of unemployed persons in the area and region.

The second area of potential indirect growth inducement is through the removal of obstacles to growth. As discussed above, no obstacles exist to land use or to population growth in the watershed.

7.3 UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Section 15126.2(c) of the CEQA Guidelines requires a discussion of potential significant, irreversible environmental changes that could result from a proposed project. Examples of such changes include commitment of future generations to similar uses, irreversible damage that may result from accidents associated with a project, or irretrievable commitments of resources. Although the proposed TMDL would require resources (materials, labor, and energy) they do not represent a substantial irreversible commitment of resources.

Furthermore, implementation of the Toxic Pollutants TMDL is both necessary and beneficial. To the extent that the alternatives, mitigation measures, or both, that are examined in this SED are not deemed feasible by the municipalities and agencies complying with the TMDL, the necessity of implementing the federally required TMDL and removing the significant environmental effects from toxic pollutants impairment in the Marina del Rey Harbor Waters (an action required to achieve the express, national policy of the Clean Water Act) remains. In addition, implementation of the TMDL will have substantial benefits to water quality and will enhance beneficial uses. Enhancement of the recreational beneficial uses (both water contact recreation and non-contact water recreation) will have positive social and economic effects by decreasing potential toxic pollutants hazards in the harbor and other recreation areas.

8. STATEMENT OF OVERRIDING CONSIDERATIONS AND DETERMINATION

The Regional Board staff has balanced the economic, legal, social, technological, and other benefits of this proposed Toxic Pollutants TMDL against the unavoidable environmental risks in determining whether to recommend that the Regional Board approves this project. Upon review of the environmental information generated for this project and in view of the entire record supporting the TMDL, staff has determined that the specific economic, legal, social, technological, and other benefits of this proposed Toxic Pollutants TMDL outweigh the unavoidable adverse environmental effects, and that such adverse environmental effects are acceptable under the circumstances.

The implementation of this Basin Plan amendment will result in improved water quality in the waters of the Region and will have significant positive impacts to the environment (including restoration and enhancement of beneficial uses) and the economy over the long term. Enhancement of the recreational beneficial uses (both water contact recreation and non-contact water recreation) will have positive social and economic effects by decreasing potential hazards and increasing the aesthetic experience at the waterbodies of concern in the Marina del Rey Harbor Waters. Specific projects employed to implement the Basin Plan amendment may have adverse significant impacts to the environment, but these impacts are generally expected to be limited, short-term or may be mitigated through design and scheduling.

The Staff Report, Basin Plan amendment, and this SED provide the necessary information pursuant to Public Resources Code section 21159 to conclude that properly designed and implemented BMPs and properly executed remediation activities generally should not foreseeably have a significant adverse effect on the environment. Any potential impacts can be mitigated at the subsequent project level when specific sites and methods have been identified, and responsible agencies can and should implement the recommended mitigation measures.

For this TMDL, mitigation measures are available to reduce environmental impacts to less than significant levels and in most cases are routine measures that are typically used in construction projects and infrastructure maintenance. Routine construction and maintenance of power lines and storm sewer systems are regular and expected activities carried out by responsible parties. Sewer and power line maintenance, traffic alterations, and environmental impacts from them already occur and are expected. This project will foreseeably require these types of projects and their individual impacts are not expected to be extraordinary in the magnitude or severity of impacts.

Specific projects to comply with this TMDL that may have a significant impact will be implemented by responsible jurisdictions and would therefore be subject to a separate environmental review. The lead agency for the TMDL Implementation projects have the ability to mitigate project impacts, can and should mitigate project impacts, and are required under CEQA to mitigate any environmental impacts they identify, unless they have reason not to do so. Notably, in almost all circumstances, where unavoidable or immitigable impacts would present unacceptable hardship upon nearby receptors or venues, the local agencies have a variety of alternative implementation measures available instead. Cumulatively, the many, small individual projects may have a significant effect upon life and the environment throughout the region.

This TMDL is required by law under section 303(d) of the federal Clean Water Act (CWA), and if this Regional Board does not establish this TMDL, the USEPA will be required to develop a TMDL. The CWA requires states to establish a priority ranking for waters on the 303(d) list of

impaired waters and to develop and implement TMDLs for these waters (40 CFR §130.7). The impacts associated with USEPA's establishment of the TMDL would be significantly more severe, as discussed herein, because USEPA will not provide a compliance schedule, and the final waste load allocations, pursuant to federal regulations, would need to be complied with upon incorporation into the relevant stormwater permits. (40 CFR 122.44(d)(1)(vii)(B).) Since compliance would not be authorized over a period of years, all of the impacts associated with complying would be truncated into a short time frame, thus exacerbating the magnitude of the cumulative effect of performing all projects relatively simultaneously throughout the region.

The implementation of this TMDL will result in improved water quality in the Marina del Rey Harbor Waters, but it may result in short-term localized significant adverse impacts to the environment as a variety of small construction projects may be undertaken in the vicinity of the waterbodies of concern in the Marina del Rey Harbors. Individually, these impacts are generally expected to be limited, short-term or may be mitigated through careful design and scheduling. The Staff Report for the Marina del Rey Harbor Waters Toxic Pollutants TMDL and this checklist provide the necessary information pursuant to Public Resources Code section 21159 to conclude that properly designed and implemented structural or non-structural BMPs of compliance should mitigate and generally avoid significant adverse effects on the environment, and all agencies responsible for implementing the TMDL should ensure that their projects are properly designed and implemented.

All of the potential impacts must, however, be mitigated at the subsequent, project level because they involve specific sites and designs not specified or specifically required by the Basin Plan amendment to implement the TMDL. At this stage, any more particularized conclusions would be speculative. The Regional Board does not have legal authority to specify the manner of compliance with its orders or regulations (California Water Code section § 13360), and thus cannot dictate that an appropriate location be selected for any particular project, that it be designed consistent with standard industry practices, or that routine and ordinary mitigation measures be employed. These measures are all within the jurisdiction and authority of the agencies that will be responsible for implementing this TMDL, and those agencies can and should employ those alternatives and mitigation measures to reduce any impacts as much as feasible. (Title 14, California Code of Regulations, Section 15091(a)(2).)

Implementation of the TMDL is both necessary and beneficial. To the extent that the alternatives, mitigation measures, or both, that are examined in this analysis are not deemed feasible by responsible agencies, the necessity of implementing the federally required TMDL and removing the toxic pollutants impairment from the Marina del Rey Harbor Waters (an action required to achieve the express, national policy of the Clean Water Act) remains.

9. FINDINGS

On the basis of this initial evaluation and staff report for the TMDL, which collectively provide the required information:

☐ I find the proposed Basin Plan amendment could not have a significant effect on the environment.

☐ I find that the proposed Basin Plan amendment could have a significant adverse effect on the environment. However, there are feasible alternatives and/or feasible mitigation measures that would substantially lessen any significant adverse impact. These alternatives are discussed above and in the staff report for the TMDL.

☐ I find the proposed Basin Plan amendment may have a significant effect on the environment. There are no feasible alternatives and/or feasible mitigation measures available which would substantially lessen any significant adverse impacts. See the attached written report for a discussion of this determination.

DATE:

_____ _____

Sam Unger
Executive Officer

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Caring for Your Coast

Gary Jones
Acting Director

Kerry Silverstrom
Chief Deputy

John Kelly
Deputy Director

December 5, 2013

TO: Small Craft Harbor Commission

FROM: Gary Jones, Acting Director

SUBJECT: **ITEM 7b – STRATEGIC PLAN FOR BOATING RESOURCES IN MARINA DEL REY**

Staff from the Department of Beaches and Harbors will discuss the strategic plan for boating resources and solicit input from the Commission and public on the operation, enhancement, and expansion of the recreational boating amenities in Marina del Rey.

GJ:anr

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Caring for Your Coast

Gary Jones
Acting Director

Kerry Silverstrom
Chief Deputy

John Kelly
Deputy Director

December 5, 2013

TO: Small Craft Harbor Commission

FROM: Gary Jones, Acting Director

SUBJECT: **ITEM 7c –U.S. COAST GUARD PROPOSAL TO DISCONTINUE CERTAIN AIDS TO NAVIGATION LIGHTS**

The Commission's attention and discussion of this proposal is requested.

GJ:anr

Attachment (1)

CHANNEL ISLANDS-ATON DISCONTINUANCE

The U.S. Coast Guard is proposing to discontinue the following AtoN:

Santa Barbara Island Light (2675)

Santa Catalina Island West End Light (2670)

Ship Rock Light (2635)

Catalina Harbor Light (2630)

Long Point Light (2625)

Santa Catalina Island East End Light (2605)

San Nicolas Island East End Light (2590)

Direct any questions, comments, or feedback no later than 16 Dec 13 to LT Melissa Smith at 510-437-5984 or Melissa.A.Smith@uscg.mil.

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Caring for Your Coast

Gary Jones
Acting Director

Kerry Silverstrom
Chief Deputy

John Kelly
Deputy Director

December 05, 2013

TO: Small Craft Harbor Commission

FROM: Gary Jones, Acting Director

SUBJECT: **ITEM 7d – PROPOSED 2014 COMMISSION MEETING SCHEDULE**

Small Craft Harbor Commission meetings are usually held on the second Wednesday of each month at 10:00 a.m. (unless otherwise noted) at the Burton Chace Park Community Building, 13650 Mindanao Way, Marina del Rey. For 2014, staff is recommending the same schedule unless there is an item of broad community interest, such as a major leasehold redevelopment proposal. When those items are to be presented to your Commission for recommendation, an evening meeting may be scheduled.

We respectively submit the following proposed 2014 calendar for your consideration and approval:

Date	Day of Week	Time
January 8, 2014	Wednesday	10:00 am
February 12, 2014	Wednesday	10:00 am
March 12, 2014	Wednesday	10:00 am
April 9, 2014	Wednesday	10:00 am
May 14, 2014	Wednesday	10:00 am
June 11, 2014	Wednesday	10:00 am
July 9, 2014	Wednesday	10:00 am
August 13, 2014	Wednesday	10:00 am
September 10, 2014	Wednesday	10:00 am
October 8, 2014	Wednesday	10:00 am
November 12, 2014	Wednesday	10:00 am
December 10, 2014	Wednesday	10:00 am

GJ:anr

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Caring for Your Coast

Gary Jones
Acting Director

Kerry Silverstrom
Chief Deputy

John Kelly
Deputy Director

December 5, 2013

TO: Small Craft Harbor Commission

FROM: Gary Jones, Acting Director

SUBJECT: **ITEM 8 - ONGOING ACTIVITIES REPORT**

BOARD ACTIONS ON ITEMS RELATING TO MARINA DEL REY

On October 8, 2013, the Board of Supervisors approved an amendment to lease No. 5691 for Parcel No. 53, The Boatyard, located at 13555 Fiji Way, in Marina del Rey, pertaining to the readjustment of rents, adjustment of square foot rental provisions, increase in rental security deposit, and update of insurance provisions, for a ten-year term ending February 28, 2022.

On October 15, 2013, the Board of Supervisors approved an amended and restated lease agreement with Holiday-Panay Way Marina, L.P., to facilitate the redevelopment of Parcel 21 in the Marina del Rey Small Craft Harbor, and also with MDR Oceana, LLC, to facilitate the development of Parcel 147 in Marina del Rey.

On November 12, 2013, the Board of Supervisors authorized the execution of the Fourth Extension of and Modification to the Lease Option Agreement with MDR Boat Central, L.P., (Boat Central), for Parcels 52R and GG, granting an extension up to 24 months to provide additional time for Boat Central to procure a Coastal Development Permit from the California Coastal Commission for the proposed boat storage development and to negotiate a new option agreement and lease agreement with the County to facilitate redevelopment of the Parcels.

On December 3, 2013, the Board of Supervisors adopted the Mitigated Negative Declaration (MND) for the proposed Oxford Retention Basin Multiuse Enhancement Project and authorized the Director of Public Works to proceed with the preconstruction phase.

REGIONAL PLANNING COMMISSION'S CALENDAR

On October 30, 2013, the Regional Planning Commission authorized a conditional use permit for a nightclub at The Warehouse Restaurant and valet/shared parking on the adjacent Lease Parcel 134 in the Marina del Rey Specific Plan Zone and Visitor-Serving/Convenience Commercial (Parcel 133) and Office (Parcel 134) land use designation.

CALIFORNIA COASTAL COMMISSION CALENDAR
No items relating to Marina del Rey were heard by the California Coastal Commission during meetings for the months of October and November 2013.

VENICE PUMPING PLANT DUAL FORCE MAIN PROJECT UPDATE
A trial court hearing on the case is scheduled for December 16, 2013. This is pursuant to the March 14, 2013, Court of Appeal decision that reversed the trial court's decision to bar the City from building a new 54-inch sewer main from Venice to Playa del Rey through unincorporated Marina del Rey when another comparable route along Pacific Avenue in City territory exists.

REDEVELOPMENT PROJECT STATUS REPORT
The updated Marina del Rey Redevelopment Projects Descriptions and Status of Regulatory/Proprietary Approvals report is attached.

DESIGN CONTROL BOARD MINUTES
The August and September minutes are attached.

MARINA DEL REY SLIP REPORT
The overall vacancy percentage across all anchorages in Marina del Rey stood at 18.2% in October 2013. Adjusted to remove out-of-service slips and 50% of available double slips, vacancy within Marina del Rey stood at 16.42%. Vacancies in the various size classifications are separated by anchorage and are provided in the document attached.

This month's figures are an increase from 18.0% (overall) and 15.03% (adjusted) last month. The 0.2% increase in overall vacancy during October is the result of the 30' to 50' slips being returned to market at P125l during the month of October.

CALIFORNIA COASTAL COMMISSION SLIP REPORTS
Pursuant to certain conditions of the Coastal Development Permit (5-11-131) issued by the California Coastal Commission, the County is required to maintain certain minimum thresholds of slip sizes as a percentage of the entire Marina. The attached documents outline the percentage of each size category as a percentage of all available slips in the Marina.

DEPARTMENT OF REGIONAL PLANNING VISIONING PROJECT
On October 30, 2013, a joint meeting was held by the Small Craft Harbor Commission and the Design Control Board. At the meeting, the Department of Regional Planning gave a briefing on the status of the Marina del Rey visioning process, solicited public input, and had a discussion with the Commissioners and Board members to identify their issues, areas of concern, and ideas that should be considered as part of the

visioning and Local Coastal Program update process. The meeting was attended by approximately 85 members of the public.

FISHERMAN'S VILLAGE (PARCEL 56)

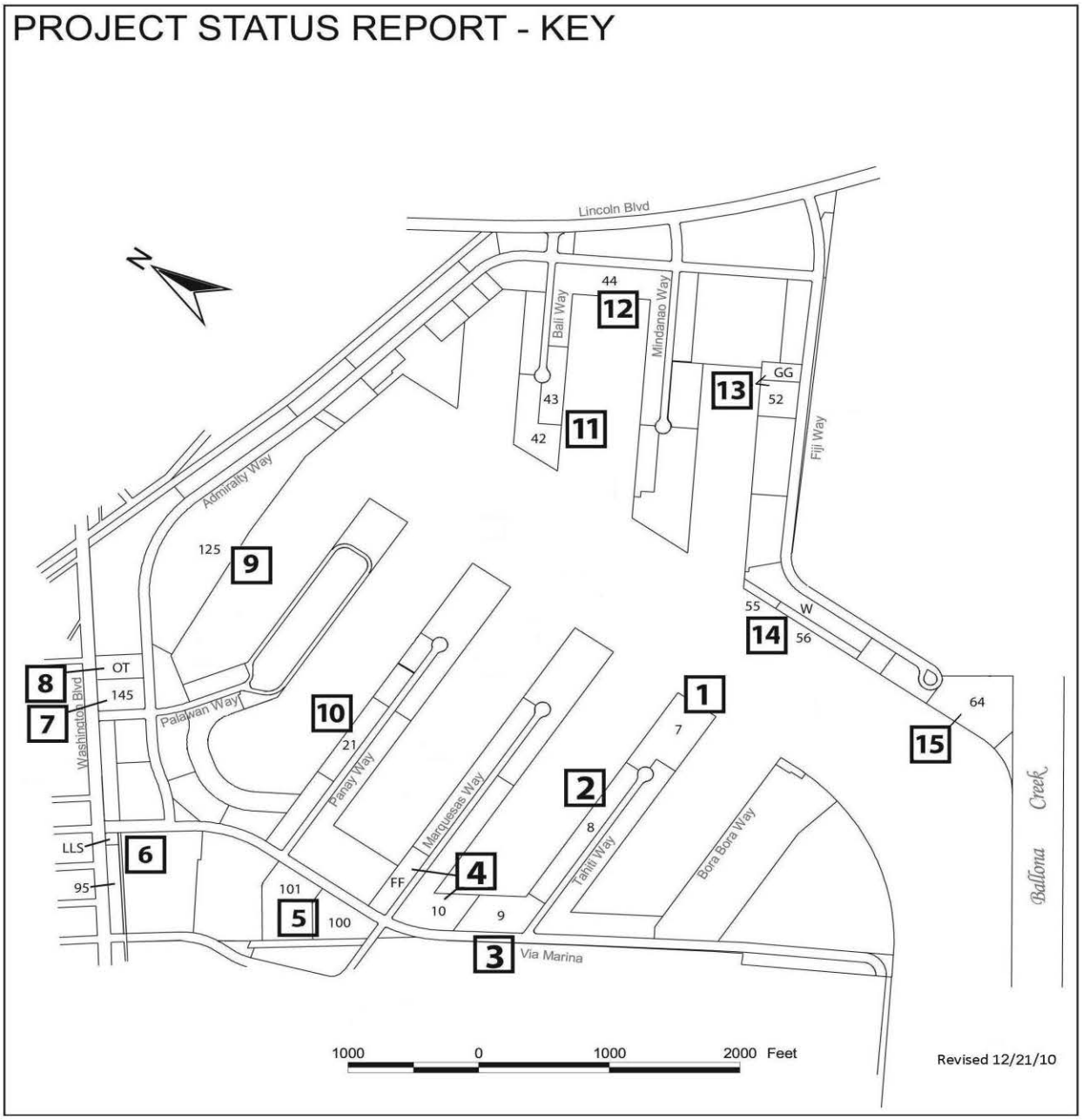
Future redevelopment of the site was discussed by the Small Craft Harbor Commission and Design Control Board at the visioning meeting held on October 30, 2013.

GJ:SP:anr
Attachments (4)

Marina del Rey Redevelopment Projects
Descriptions and Status of Regulatory/Proprietary Approvals
As of December 3, 2013

Map Key	Parcel No. -- Project Name/Lessee	Lessee Name/ Representative	Redevelopment Proposed	Massing and Parking	Status	Regulatory Matters
			Seeking Approvals			
3	**9** -- Proposed Hotel on northern half of Parcel 9U	Sam Hardage	* Revised project to be submitted as requested during 4/26/11 BOS hearing. Previously: 19-story, 288-room hotel (152 hotel rooms and 136 timeshare suites). * Wetland public park project (1.46 acres)	**Massing** -- Revised project will be resubmitted at a later date. **Parking** -- Parking plan will be resubmitted at a later date.	Regulatory -- DCB initial hearing May 2006, conceptual approval on June 2006. RPC filing on November 2006. RPC heard the item on 10/29/08. On 10/14/09, the RPC requested a DCB review for promenade improvements prior to returning on 2/3/10. DCB approval of promenade improvements on 12/17/09. RPC continued item on 2/3/10. RPC approval of Tentative Tract Map, CDP, CUP, Parking Permit, Variance and FEIR for landside on 3/10/10. RPC also approved the CDP for wetland park and Plot Plan for the docks on 3/10/10. The park and hotel projects were both appealed to BOS. On April 26, 2011, the BOS asked that the remodified hotel design return to RPC and DCB for reconsideration. The appeal of the park project was denied by the BOS. The park was appealed to the CCC on 06/07/12. On 12/12/12 the appeal of the park was denied by the CCC and project was approved (permit A-5-MDR-12-161). Hotel redesign will return to DCB in Janurary 2014.	
4	**10/14 (FF)** -- Neptune Marina/ Legacy Partners	Tim O'Brien	* 526 apartments * 161-slip marina + 7 end-ties * 28 foot-wide waterfront promenade * Replacement of public parking both on and off site	**Massing** -- Four 55' tall clustered 4-story residential buildings over parking with view corridor **Parking** -- 1,012 project required parking spaces to be provided (103 public parking spaces to be replaced off site)	Proprietary -- Term sheet action by BOS August 2004; lease documents approved by BOS August 2008. SCHC voted on 8/10/11 to support recommendation for renewal of option to extend the lease agreement. Regulatory -- DCB conceptual approval on June 2006. RPC filing on November 2006; Scoping meeting held on April 23, 2007. DCB approval of promenade improvements on 12/17/09. RPC certified EIR on 3/10/10 and recommended approval of Plan Amendment, CDP, CUP and Variance to BOS. LPC Amendments were included in the LCP map and text amendment which was approved by the BOS on 2/1/11; on April 26, 2011, the BOS indicated its intent to approve the project and recertified the EIR; Proposed marina replacement was included in the County's master wateside CDP application approved by the CCC on 11/3/11. LCP amendment also approved by CCC on 11/3/11 with modifications as suggested by Coastal staff. BOS accepted CCC changes to LCPA & CDP on 11/29/11. Effective certification of the amended LCP was granted by the CCC on 02/08/12; on 3/20/12 the BOS approved Counsel's final resolution on the LUP as certified by the CCC, the ordinance amendments to Title 22 will take effect 4/19/12. Final approval of the project was granted by the BOS on 5/15/12. The project was appealed to the CCC on 06/07/12. On 7/12/12, the CCC found no substantial issue on the appeals.	
6	**95/LLS** -- Marina West Shopping Center/Gold Coast	Michael Pashaie/ David Taban	*22,806 square feet of commercial/retail/restaurant and public park component.	**Massing** -- Single story buildings **Parking** -- All parking required of the project to be located on site	Proprietary -- New Term sheet at Board in closed session on 1/31/12. Regulatory -- Conceptual DCB design submittal was approved on 5/16/12. Public review period for MND was from 8/18/12 through 9/17/12. On 12/11/12 BOS adopted MND and authorized the Chairman to sign the option to Amend the lease. On 5/8/13, the RPC approved the redevelopment project (201200005). Final DCB approval received on 6/19/13.	No Variance proposed
8	**147 (OT)** -- Oceana Retirement Facility/ Goldrich & Kest Industries	Jona Goldrich/ Sherman Gardner	* 5-story, 114-unit senior accomodation units plus ancillary uses * 3,500 square feet of retail space * Replacement of 92 public parking spaces on site * Public accessway from Washington to Admiralty	**Massing** -- One 5-story residential (senior) building over ground-floor retail and parking; 65' tall **Parking** -- On-site parking includes all required project parking, 92 public parking spaces (94 public parking spaces to be replaced off site near Marina Beach)	Proprietary -- Lease documents approved by BOS July 2008. Aproval of Renewal of Lease Option Agreement for a 66-month extension approved by BOS on 10/4/11. Regulatory -- DCB conceptual approval on August 2005; RPC filing May 2006. DCB approval of pedestrian plaza on 2/17/10. RPC continued project on 10/21/09 to 12/16/09. RPC certified EIR 4/28/10 and recommended approval of Plan Amendment, CDP, CUP, and Parking Permit to BOS. Project was included in the LCP map and text amendment approved by the BOS on 2/1/11; On 4/26/11, the BOS approved the project and certified the EIR; LCP map and text amendment approved by CCC on 11/3/11 with modifications as suggested by Coastal staff. BOS accepted CCC changes to LCPA & CDP on 11/29/11. Final amendment report was provided to CCC in February 2012; on 3/20/12 the BOS approved Counsel's final resolution on the LUP as suggested by the CCC, the ordinance amendments to Title 22 were effective 4/19/12. Final DCB approval on 4/18/12. Last day to appeal project to CCC was 8/1/12 at 5pm.	
10	**21** -- Holiday Harbor Courts/ Goldrich & Kest Industries	Jona Goldrich/ Sherman Gardner	Phase 1 * 5-story, 29,300 square-foot mixed-use building (health club, yacht club, retail, marine office) * 92-slip marina * 28 foot-wide waterfront promenade and pedestrian plaza Phase 2 (Parcel C) * Westernmost portion of land to revert to County for public parking	**Massing** -- One 56' tall commercial building with view corridor/community park **Parking** -- A Six-level parking structure (447 spaces) to contain: all project required parking, 94 (replacement for OT) spaces and Parcel 20 boater parking	Phase 1 Proprietary -- Lease option documents approved by BOS July 2008. Aproval of Renewal of Lease Option Agreement for a 66-month extension approved by BOS on 10/4/11. Regulatory -- DCB conceptual approval on August 2005. RPC filing September 2006. DCB approval of promenade on 2/17/10. RPC certified EIR and approved CDP, CUP, and Parking Permit on 4/28/10. Appeal to BOS filed 5/12/10; on April 26, 2011, the BOS approved the project and certified the EIR. Proposed marina replacement was included in the County's master wateside CDP application approved by the CCC on 11/3/11. On 12/8/11, the CCC denied the appeal of the BOS 4/26/11 determination and approval is final. Final DCB approval granted on 4/18/12. Anticipated construction date will be early 2014. Phase 2 (Parcel C) DCB hearing March and April 2006 on transfer of leasehold to County. Item continued.	
12	**44** - Pier 44/Pacific Marina Venture	Michael Pashaie/ David Taban	* Build 5 new visitor serving commercial and dry storage buildings * 91,090 s.f. visitor serving commercial space * 143 slips + 5 end ties and 234 dry storage spaces	**Massing** -- Four new visitor-serving commercial buildings, maximum 36' tall and one dry stack storage building, 65' tall. 771.5 lineal feet view corridor proposed **Parking** -- 381 at grade parking spaces will be provided with shared parking agreement (402 parking spaces are required)	Proprietary -- Term sheet to be negotiated. Regulatory -- Initial DCB review during the October 2008 meeting, but project will be revised. Proposed marina replacement was included in the County's master wateside CDP application approved by the CCC on 11/3/11. Conceptual project approved by DCB on 7/16/13.	Shared Parking Agreement No Variance proposed
13	**52** -- Boat Central/ Pacific Marina Development	Jeff Pence	* 345-vessel dry stack storage facility * 30-vessel mast up storage space * 5,300 s.f. County boatwright facility	**Massing** -- 81.5' high boat storage building partially over water and parking with view corridor **Parking** -- All parking required of the project to be located on site	Proprietary -- Term sheet action by BOS on July 2006; Option to lease approved by SCHC March 2007 and by BOS May 2007. BOS granted extension and modification of Option on 11/10/09. Lease Option Agreement and extentension for 6 months approved on 5/14/13. An extension to the Option was approved at the 11/12/13 BOS meeting. Regulatory -- DCB review continued on March 2007, project disapproved on May 2007. DRP application filed December 2008. Proposed marina replacement was included in the County's master wateside CDP application approved by the CCC on 11/3/11. LCP map and text amendment also approved by CCC on 11/3/11 with modifications as suggested by Coastal staff. BOS accepted CCC changes to LCPA & CDP on 11/29/11. Final amendment report was provided to CCC in February 2012. Public review of DEIR from 1/5/12 to 3/5/12 and public hearing for testimony on DEIR only was scheduled for 2/8/12 in Chace Park, MdR; on 3/20/12 the BOS approved Counsel's final resolution on the LUP as suggested by the CCC, the ordinance amendments to Title 22 took effect 4/19/12. Project was approved by RPC on 4/24/13.	Variance for reduced setbacks and Architectural Guidelines requiring that structures beat least 15 ft. from bulkhead
14	**55/56/W** -- Fisherman's Village/ Gold Coast	Michael Pashaie/ David Taban	* 132-room hotel * 65,700 square foot restaurant/retail space * 30-slip new marina * 28 foot-wide waterfront promenade	**Massing** -- Nine mixed use hotel/visitor-serving commercial/retail structures (8 1- and 2-story and 1 60'-tall hotel over ground floor retail/ restaurant), parking structure with view corridor **Parking** -- On-site parking includes all project required parking, parking for Parcel 61 lessee (Shanghai Reds)	Proprietary -- Lease extension Option approved by BOS December 2005. Option expired Regulatory -- DCB review continued on May 2006, conceptual approval in July 2006. DRP application filed May 2007. Screencheck DEIR in review. Lessee has indicated intent to submit a revised project.	Shared Parking Agreement Variance for reduced setbacks (side and waterfront)
			Construction in Process			
1	**7** -- Tahiti Marina/K. Hakim	Kamran Hakim	* Complete leasehold refurbishment; 149 apartments * Relocate landside boater facilities * 214 slips + 9 end ties will not be reconstructed at this time	**Massing** -- 3 stories, 36'-"7" in height. **Parking** -- Currently 465 spaces. Possible slight reduction of parking due to relocation of landside boating facilities. Impact is currently unknown.	Proprietary -- BOS action on term sheet on 9/29/09. Regulatory -- The 30-day public review period of the MND was 3/15/10 through 4/14/10. BOS certified MND on 7/20/10. Site renovation approved in concept by DCB on 7/21/10. DRP Site Plan application filed on 9/13/10. Final DCB concept was approved as submitted without conditions on 12/15/10. DRP Site Plan application approved on 1/20/11. Construction started March 2012 and still on schedule to complete the project in early 2016.	No Variance proposed
2	**8** -- Marina Club	Latosha Brunson	* Building renovation; 205 apartments * 207 slips + 11 end ties will be reconstructed	**Massing** -- Two 3-story residential buildings over parking; 41' and 48'. **Parking** -- 315 residential parking spaces and 172 slip parking spaces	Proprietary -- Term sheet action by BOS August 2008; lease extension option approved by BOS 12/8/09. On 10/12/11 the SCHC endorsed the renewal of the lease extension option. BOS authorized the renewal of the option to amend lease agreement and extension of option for 18 months to 12/8/12. Regulatory -- DCB continued from July 2008 with conceptual approval on August 2008. Site Plan Review application filed with DRP on 12/4/08, approved 12/23/09. BOS certified MND on 12/8/09. CDP application for new docks approved by CCC on 12/15/10. DCB final design for site renovation was approved on 1/18/12. Dock replacement project commenced 9/10/12. Revonation project is currently under construction.	No Variance proposed
11	**42/43** -- Marina del Rey Hotel/ IWF MDR Hotel	Dale Marquis	* Complete renovation of existing 154-room hotel and new 277-slip marina.	**Massing** -- One 36' tall hotel building **Parking** -- 372 Parking spaces	Proprietary -- Term sheets initialed; Parcel 42 on 9/7/09 and Parcel 43 on 8/31/09. On 5/17/11 BOS approved Option to bifurcate Parcels 42 and 43 into separate leaseholds, expand Parcel 43 water premises, and extend lease for 39 years. On 8/29/13 BOS approved bifucation of Parcels 42 and 43 into separate leaseholds, expands Parcel 43 water premises, and extend lease for 39 years at Parcel 42. Parcel 43 lessee has extended the option agreement for six months to have enough time to procure building permits from DPW. Regulatory -- DRP application for environmental review only was signed by DBH on 4/28/10. MND public review period ended 12/20/10. SCHC reviewed MND and Option on 3/9/11. BOS certified MND on 5/17/11. Proposed marina replacement was included in the County's master wateside CDP application approved by the CCC on 11/3/11. Final DCB design was approved on 5/16/12. Parking permit approved by hearing officer on 7/3/12. Last day to appeal was 7/17/12. Renovation started August 2013.	No Variance proposed. Parking Permit for reduced parking.
15	**64** -- Breakwater	Latosha Brunson	* Complete leasehold renovation; 224 apartment units * 15-18 feet wide waterfront promenade	**Massing** -- Existing 224 units in 3 stories with portions over parking **Parking** -- All parking located on site	Proprietary -- BOS action on term sheet on 2/2/10. BOS approved assignment of Lease Option to Archstone Property Holdings, LLC., and extension of the Option Agreement expiration date to 12/31/11. Regulatory -- Project has changed from redevelopment to refurbishment. Initial Study received by DRP May 2009. MND was recirculated with 30-day public review period 7/5/10 through 8/4/10. SCHC reviewed MND on 9/08/10. BOS certified MND on 9/14/10. Site Plan application in DRP approved 11/9/10. DCB final concept approved 11/17/10. Construction commenced November 2011; 1st phase completed in June 2012. 2nd Phase Completed October 2012. 3rd and final phase completed in October 2013.	No Variance proposed
9	**125** -- Marina City Club	Karen Seemann	* 282 slip marina will be reconstructed * Waterfron promenade of varying witdhs from 12 to 20 feet and fire access improvements with new pavers, railing, landscape and pedestrian amenities.	**Massing** -- No modifications to existing buildings proposed. **Parking** -- Existing 361 shared parking spaces for boaters and guests will remain unchanged.	Proprietary -- Lease amendment adopted by BOS on 7/6/10. Regulatory -- DCB conceptual promenade design review approved on 11/17/10. DRP Site Plan Review application filed 10/26/10. Proposed marina replacement was included in the County's master wateside CDP application to CCC. CCC approved wateside master CDP for dock construciton on 11/3/11. Final approval of promenade improvements granted by DCB on 3/16/11. Reconstruction of Marina Walk and docks is anticipated from January 2013 through April 2014. Final promenade improvements approved by DCB on 8/21/13.	
7	**145** -- Marina International Hotel/ IWF Marina View Hotel	Dale Marquis	* Complete renovation of 134 rooms	**Massing** -- Two 3-story buildings, 42' and five 1-story bungalows, 22' **Parking** -- 208 parking spaces.	Proprietary -- BOS action on term sheet on 2/16/10 and on 2/8/11, approved option to extend the lease term for 39 years. Regulatory -- DCB initial hearing November 2008; conceptual approval granted January 2009. Initial Study received by DRP May 2009; 30-day public review period of the MND was 3/10/10 through 4/09/10. SCHC reviewed MND on 12/14/10. BOS certified the MND on 2/08/11. Site Plan Review application approved by DRP on 4/20/11. DCB approval of final design granted on 7/20/11. Final Certificate of Occupancy will be issued in December 2013.	No Variance proposed

PROJECT STATUS REPORT - KEY



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DESIGN CONTROL BOARD MINUTES
August 21, 2013

Members Present: Peter Phinney, AIA, Chair (Fourth District); Helena Jubany, Vice Chair (First District); Tony Wong, P.E, Member (Fifth District)

Members Absent: Simon Pastucha, Member (Third District)

Department of Beaches and Harbors Staff Present: Gary Jones, Acting Director; Charlotte Miyamoto, Planning Division Chief; Michael Tripp, Planning Specialist; Ismael Lopez, Planner; Mindy Sherwood, Interim Secretary for the Design Control Board

County Staff Present: Anita Gutierrez, Department of Regional Planning; Amy Caves, County Counsel;
Gina Natoli, Department of Reginald Planning

Guests Testifying: Adam Berry, Essex Property Trust; Jeff Winter, Bluewater Design Group; Jill Peterson, Pacific Ocean Management, LLC; Melik Gozalian, Marine Parts Supplier; Kishiko Muradian, MOMO; Greg Schem, The Boatyard; Paul Collins, PAC Design; Aaron Clark, Armbruster, Goldsmith & Delvac, LLP; David Canzoneri, Villa Del Mar Properties, Ltd; Brian Tichenor, Tichenor & Thorp Architects

1. **Call to Order and Pledge of Allegiance**
   Chair Phinney called the meeting to order at 1:33 PM.

   Board Member Wong led the Pledge of Allegiance.

   Chair Phinney requested a change in the order of the agenda so that New Business Items 6A, 6B, and 6C, all signage requests, would be heard first. The Board unanimously agreed to Chair Phinney's request.

2. **Approval of June 19, 2013 and July 16, 2013 Minutes**
   On a motion of Mr. Wong, seconded by Vice-chair Jubany, the Board unanimously approved the minutes for June and July of 2013.
   Ayes: 3 – Chair Phinney, Vice-chair Jubany, and Mr. Wong

3. **<u>Public Comment</u>**
   None

4. Consent Agenda
None

5. Old Business (Items 6A, 6B and 6C were heard prior to Items 5A and 5B)
A. Parcel 44 – Pier 44 – Consideration of final redevelopment and DCB Review related thereto – DCB #08-015

Mr. Lopez presented the project staff report and at the request of Chair Phinney, read the following conditions into the record.

- Revise design, massing and orientation of Building V, to allow a wide central view corridor toward Basin G from Admiralty Way;
- Include pedestrian enhancements and improve pedestrian connections throughout the parcel including at the intersection of Admiralty Way at Mindanao Way. Landscaping in view corridors should be kept low to avoid interfering with the view of the Marina;
- Enhance pedestrian promenade and bicycle path with amenities and additional landscaping;
- Distribute bicycle parking stalls in multiple locations and near entryways throughout parcel, rather than in one centrally located area;
- Reexamine the mass and scale of Building II (Trader Joe's);
- Revise building design and orientation of Buildings VI and VII to allow conditions listed above to be accommodated;
- Exploit design differences for the buildings on the property;
- Further develop Building VII. Consider locating the yacht club there; and
- Return for final project review post-entitlement for final colors, materials, building design, landscaping, promenade/site amenities, signage and site illumination.

Public Comment
None

Board Comment
Chair Phinney suggested a revision to the second condition, to clarify the Board's intention to have a diagonal access point at both of the project's intersections along Admiratly Way. He requested that staff add the intersection of Admiralty Way and Bali Way to the second condition.

On a motion of Mr. Wong, seconded by Vice-chair Jubany, this item was approved unanimously with the following revision to the second condition:

- Include pedestrian enhancements and improve pedestrian connections throughout the parcel including at the intersections of Bali Way and Admiralty Way and Mindanao Way and Admiralty Way. Landscaping in view corridors should be kept low to avoid interfering with the view of the Marina.

Ayes: 3 – Chair Phinney, Vice-chair Jubany, and Mr. Wong

B. Parcel 125 – Marina City Club – Further consideration of promenade improvements and DCB Review related thereto – DCB #10-016-C

Mr. Lopez presented the project staff report.

Mr. Berry introduced himself and stated Essex Property Trust would be presenting three alternatives that incorporate Board comments made at the May meeting.

Mr. Winter presented the project and stated that revisions were made to the hardscape, landscaping and seating areas. He summarized that the lessee was proposing to widen the promenade up to 12 feet in width, make it accessible to the public 24 hours a day, and make it compliant with the Americans with Disabilities Act. Mr. Winter further stated that the pavers that had been approved as part of the 2011 submittal, had been replaced with stamped concrete, the existing palms trees would remain, and the seating areas had been revised to incorporate flags as vertical elements. Mr. Winter opined that the pattern of the concrete would contribute to a sense of open space.

Public Comment
None

Board Comment
Vice-chair Jubany wanted to know why the proposed benches were changed from wood to metal and if there was any cost difference or maintenance issues contributing to the choice between the two materials.

Mr. Winter responded that the wood would not stand up as well to the marine environment and that the metal would complement the new railing along the seawall, and the security fence.

Chair Phinney disclosed he had ex parte communication with the applicant and his architect at his office, and that during that meeting he suggested adding landscaping and softening elements which he thought were missing from the originally revised plan. He further stated that he thought that Alternative One was not as interesting as Alternatives Two or Three, and asked for the Board for their opinion on the alternatives. Mr. Phinney then asked the applicant if there would be no irrigation to the landscaping, because they were proposing drought tolerant plants.

Mr. Winter responded irrigation was not necessary for these plants, because of the amount of moisture naturally occurring in the air.

Mr. Wong asked who would be responsible for maintaining the landscaping.

Mr. Winter responded the lessee would be responsible for maintaining the landscaping.

Mr. Jones noted even though it is the promenade it is still the leaseholder's responsibility to maintain the area.

Mr. Tripp stated that the lessee has agreed to maintain the landscaping and that staff will ensure that it survives.

Chair Phinney requested confirmation that the Board was voting on the final design package as a whole and making a recommendation on one of the alternatives.

Vice-chair Jubany thanked the applicant for working closely with the Board to provide a better looking project.

On a motion of Vice-chair Jubany, seconded by Mr. Wong, this item was approved unanimously with the selection of Alternate Two as the preferred alternative for the seating area and landscaping.

Ayes: 3 – Chair Phinney, Vice-chair Jubany, and Mr. Wong

6. New Business

A. Parcel 145 – Hilton Garden Inn – Consideration of additional business identification signage and DCB Review related thereto – DCB #12-014-B

Mr. Lopez presented the project staff report.

Public Comment

None

Board Comment

Chair Phinney asked about the hours of operation and proposed illumination schedule for the sign.

Mr. Lopez responded that staff's recommendation to allow the sign to be lit for one hour after closing was consistent with what had been previously approved by the Board for bars and restaurants in the Marina.

On a motion of Vice-chair Jubany, seconded by Mr. Wong, this item was approved unanimously.

Ayes: 3 – Chair Phinney, Vice-chair Jubany, and Mr. Wong

B. Parcel 56 – Momo Gift Shop – Consideration of business identification signage and DCB Review related thereto – DCB #13-006

Mr. Lopez presented the project staff report.

Public Comment

None

Board Comment

Vice-chair Jubany asked why the proposed façade-mounted sign appeared to be located off-center over the window.

Ms. Muradian responded that it was their intention to center the sign over the window.

Chair Phinney recommended that the façade-mounted sign should be the same width as the window, and centered above it so that it appears to be part of the building. Regarding the blade sign, he recommended that it be made smaller, so that it would be in compliance with the County Code.

On a motion of Vice-chair Jubany, seconded by Mr. Wong, this item was approved with the above-mentioned recommendations, and approved unanimously.

Ayes: 3 – Chair Phinney, Vice-chair Jubany, and Mr. Wong

C. Parcel 44 – Marine Parts Supply – Consideration of business identification signage and DCB Review related thereto – DCB #13-007

Mr. Lopez presented the staff report.

Vice-chair Jubany asked if staff they had pictures of other signs located on the same building.

Mr. Lopez showed photos of other signs located on the property.

Public Comment
None

Board Comment
Vice-chair Jubany asked for clarification of staff's recommendation to approve one sign and deny the other.

Mr. Lopez responded that staff was recommending the approval of the signage that reads, "Marine Parts Supplier," because it contained the name of the business, and the denial of the sign that reads, "Marine Engine Service," because it is simply describing a service that is offered, and the Marina del Rey sign regulations only permit one façade-mounted sign per non-contiguous street or water frontage.

Chair Phinney asked the applicant if the two store fronts that he was occupying were two different businesses.

Mr. Gozalian responded that it was only one business.

Ms. Peterson stated the second sign describes a service that the business offers.

Vice-chair Jubany asked if signage had previously come before the Board, which included the phone number of the business, and if this type of sign was typical in the Marina.
Mr. Lopez responded that the Board had approved signs with phone numbers on them before, and that it depended on where the sign was located and what already existed on the site.

On a motion of Vice-chair Jubany, this item was approved with the staff recommendation of approval of first sign, which reads, "Marine Parts Supplier," and denial of the second sign. The motion was seconded by Mr. Wong and approved unanimously.

Ayes: 3 – Chair Phinney, Vice-chair Jubany, and Mr. Wong

D. Parcel 53 – The Boatyard – Consideration of site renovation concept and DCB Review related thereto – DCB #13-008

Mr. Lopez presented the staff report.

Mr. Schem introduced himself and gave a summary of the proposed project.

Public Comment
None

Board Comment
Chair Phinney stated that the Board could not comment whether or not the proposed landside promenade was consistent with the promenade proposed for the Boat Central project proposed on the neighboring parcel, because that project was denied by the Board, and they never saw the final design plans.

Mr. Tripp stated that the promenade proposed for this project was similar to the Boat Central project, but much narrower, at about 12 feet in width, versus 28 feet for that project.

Chair Phinney stated this project is different from most projects reviewed by the Board because it is a commercial fishing project with no public aspect to it. He stated that the project had no public promenade along the water, but was providing an expanded walkway along the street. Chair Phinney then asked staff if the existing public promenade essentially stops at Boat Central and doesn't pick up again until Fisherman's Village.

Mr. Tripp responded that currently there is no public promenade that goes around the launch ramp, and that the Local Coastal Program states that some uses, such as boat yards, are not required to provide a waterfront promenade, because of safety issues.

Chair Phinney stated that he hoped that as part of the lease negotiation, the property along the Ballona Wetlands could be looked at for discussion of a possible public promenade along the wetlands, when a waterfront promenade cannot be provided. Specifically Chair Phinney asked if lessees could provide financial and design contribution to such a promenade, even though it is not part of their leasehold. Chair Phinney then asked staff if any discussions had been made about such an idea.

Mr. Jones stated that it had been considered during the negotiations, as had question as to whether a marine commercial use was the best use for this parcel, and the boat yard located next to it on Parcel 54. It was eventually determined that this type of use was critical to the vitality of the Marina, and that while the department had made similar requirements on less crucial uses, it did not feel it was appropriate in this case.

Chair Phinney asked if the applicant was going to be coming back to the DCB, with some refinement for, final approval.
Mr. Lopez affirmed that the project would return for final review.

Chair Phinney stated that he was dissatisfied with the sidewalk and would like to the department to negotiate a walkway across the street as part of this project.

Mr. Tripp responded that the land which he is referring to belongs to California Department of Fish and Wildlife and that it would be difficult to condition a project to build on land that is owned by a state agency.

Ms. Miyamoto stated that the Ballona Wetlands is working on their environmental document, which would be going public in a couple of months. She further stated that the document going public would provide an opportunity for interested parties to make comments about the connections between the Marina del Rey and the Wetlands.

Mr. Tripp suggested the Visioning Process is another opportunity where this issue may be addressed.

On a motion of Chair Phinney, the preliminary site plan was approved with the requirement that improvements be made to the exterior of the carport structure, specifically the wave design on the side of the building near the fire lane, that increased transparency be provided in the perimeter fencing, particularly at the southeast corner, and that the applicant further refine the chain link fence around the site. The motion was seconded by Mr. Wong and approved unanimously.

Ayes: 3 – Chair Phinney, Vice-chair Jubany, and Mr. Wong

E. Parcel 13 – Villa del Mar Aprtments – Consideration of site renovation concept and DCB Review related thereto – DCB #13-009

Mr. Lopez presented the staff report.

Mr. Clark, Mr. Canzoneri and Mr. Tichenor gave their presentation on the project.

Public Comment

Charles Preston expressed his support for the renovation.

Tim Riley submitted a letter of support from the MdR Lessees Association.

Board Comment

Vice-chair Jubany stated that she liked the pattern chosen for the promenade.

Chair Phinney recommended more up lighting opportunities with shuttered LED fixtures with low wattage to up light the flax proposed behind the benches. He also suggested lighting the potted materials located near the restrooms, and using up lights and down lights to enhance the promenade.

Vice-chair Jubany asked if the parking area was facing the promenade, and if so, what efforts were being made to screen it.

Mr. Canzoneri confirmed that the parking area did face the promenade, and stated that vertical elements and green screening would be used to address the issue.

On a motion of Vice-chair Jubany, seconded by Mr. Wong, this item was approved unanimously.

Ayes: 3 – Chair Phinney, Vice-chair Jubany, and Mr. Wong

7. Staff Reports

Ms. Miyamoto introduced Gina Natoli from the Department of Regional Planning.

Ms. Natoli provided a report on the Visioning Process. She Informed the Board that her department had created a virtual town hall for the Visioning Process, which could be accessed by going to www.envisionmdr.com. Ms. Natoli also stated that in September, she will be going before the Regional Planning Commission, to listen to their ideas and suggestions and then will return to the Small Craft Harbor Commission and DCB at a joint meeting in October.

All other reports were received and filed.

Public Comment
None

Board Comment
Chair Phinney stated he visited the town hall website and that the information is out there and easy to find.

8. **Adjournment**
Chair Phinney adjourned the meeting at 4:10 PM.

Respectfully Submitted,

Mindy Sherwood
Interim Secretary for the Design Control Board

(310) 305-9503 ✦ 13837 Fiji Way, Marina del Rey, CA 90292 ✦ beaches.lacounty.gov

Caring for Your Coast

Gary Jones
Acting Director

Kerry Silverstrom
Chief Deputy

John Kelly
Deputy Director

DESIGN CONTROL BOARD MINUTES
September 18, 2013

Members Present: Peter Phinney, AIA, Chair (Fourth District); Helena Jubany, Vice Chair (First District); Tony Wong, P.E, Member (Fifth District)

Members Absent: Simon Pastucha, Member (Third District)

Department of Beaches and Harbors Staff Present: Charlotte Miyamoto, Planning Division Chief; Michael Tripp, Planning Specialist; Ismael Lopez, Planner; Mindy Sherwood, Interim Secretary for the Design Control Board

County Staff Present: Anita Gutierrez, Department of Regional Planning; Amy Caves, County Counsel

Guests Testifying: Patrick Faranal, National Sign and Marketing Corporation; Jill Peterson, Pacific Ocean Management; Julian Pearson, Coldwell Banker

1. **Call to Order and Pledge of Allegiance**
   Chair Phinney called the meeting to order at 1:35 PM.

   Chair Phinney led the Pledge of Allegiance.

2. **Approval of August 21, 2013 Minutes**
   On a motion of Mr. Wong, seconded by Vice-chair Jubany, this item was approved unanimously.
   Ayes: 3 – Chair Phinney, Vice-chair Jubany, and Mr. Wong

3. **Public Comment**
   None

4. **Consent Agenda**
   None

5. **Old Business**
   None

6. **New Business**
   A. Parcel 97 – Marina Optometry – Consideration of new business identification signage and DCB Review related thereto – DCB #13-010

   Mr. Lopez presented the project staff report.

Chair Phinney thanked Mr. Lopez for providing context photos of businesses in the surrounding area.

The applicant had no additional comments.

Public Comment
None

Board Comment
Chair Phinney asked about the hours of operation.

Mr. Lopez responded that the illumination schedule for the sign was from dusk till 11:30 p.m., or closing of the last business, whichever was earlier.

Chair Phinney inquired about the closing time of the last business.

Mr. Lopez stated that he did not have that information available, but that Jill Peterson of Pacific Ocean Management was present. Mr. Lopez asked Ms. Peterson if she would provide the requested information.

Ms. Peterson informed the Board that the liquor store and the pizza place both close at 12:00 a.m.

Ms. Miyamoto stated that this specific sign will be turned off at 11:30 p.m.

On a motion of Vice-chair Jubany, seconded by Mr. Wong, this item was approved unanimously.

Ayes: 3 – Chair Phinney, Vice-chair Jubany, and Mr. Wong

B. Parcel 97 – Coldwell Banker – Consideration of new business identification signage and DCB Review related thereto – DCB #13-011

Mr. Lopez presented the project staff report.

Mr. Pearson agreed with the staff presentation on this particular signage request, but wanted to bring forth a second proposed sign for this location that was not presented with today's request. He asked for advice on how the second sign could be approved by the Department of Regional Planning.

Chair Phinney stated the Board cannot consider signage that has not been proposed as part of the hearing package, but asked staff to advise the applicant if the second sign would be acceptable.

Mr. Lopez responded that even though the additional sign that the applicant was requesting was proposed to be the same size, and made of the same materials as the one before the Board, it did not conform with the Revised Permanent Sign Controls and Regulations (Sign Controls). Mr. Lopez stated that the Sign Controls do not permit two signs on adjoining

elevations, and that the only way that the signs would be permitted would be through a Variance from the Department of Regional Planning.

Chair Phinney asked if it would be possible for the applicant to propose a blade sign that would be visible from Palawan Way.

Ms. Gutierrez responded that only one sign is permitted per each non-contiguous street frontage, and that a blade sign would not be permitted.

Chair Phinney recommend the applicant seek a Variance from the Department of Regional Planning.

Public Comment
None

Board Comment
None

On a motion of Mr. Wong, seconded by Vice-chair Jubany, this item was approved unanimously.

Ayes: 3 – Chair Phinney, Vice-chair Jubany, and Mr. Wong

7. Staff Reports

Ms. Miyamoto announced that there will be a joint meeting of the Small Craft Harbor Commission and Design Control Board on Wednesday, October 30, 2013, at 6 p.m. Ms. Miyamoto further stated that this meeting would replace the October 16th meeting of the Design Control Board, and that only agenda item would be a discussion of the Department of Regional Planning's visioning process.

Ms. Miyamoto stated that the Regional Planning Commission had held a hearing earlier in the day on a Marina del Rey item, and that Ms. Gutierrez would provide an update to the Board.

Ms. Gutierrez noted that at the Regional Planning Commission hearing today, a variance case for Chase Bank signage was heard and denied. Ms. Gutierrez further explained that the project, which requested approval for a 17' tall column sign, was heard by the Board last year. Ms. Gutierrez explained that the project was denied because of its size and bulk, and that the Regional Planning Commission was concerned that its approval would set a precedent for other tenants.

All reports were received and filed

Public Comment
None

Board Comment
Mr. Wong asked Ms. Gutierrez if the Board would have had to review the project, if the Regional Planning Commission had approved the Variance.

Ms. Gutierrez responded that if the project had been approved, it would have been conditioned to require the applicants to return to the Design Control Board for final design approval.

8. <u>Adjournment</u>

Chair Phinney adjourned the meeting at 1:59 PM.

Respectfully submitted,

Mindy Sherwood
Interim Secretary for the Design Control Board

Aug-13	Under Construction	Net Available	TOTAL MdR	% of TOTAL	CDP MIN THRESHOL
25' & Less					
Number of Slips	1	1236	4748	26%	16%
26'-30'					
Number of Slips	21	1127	4748	24%	19%
30'-35'					
Number of Slips	21	1780	4748	37%	18%

Notes

4761 - pre-construction number of slips

Aug-13	18-25			26-30			31-35			36-40			41-45			46-50			51+			TOTAL	TOTAL	%	DOIUBLES	DOUBLES	NON-DBL	
Marina	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VACANT	AVAILABLE	VACANT	VACANT	OUT OF SERVICE	OUT OF SERVICE	TTL OFF LINE
P7	0	8	0.00%	3	80	3.75%	5	44	11.36%	1	42	2.38%	3	12	25.00%	0	7	0.00%	1	21	4.76%	13	214	6.1%				
P8	11	15	73.33%	30	48	62.50%	52	82	63.41%	18	38	47.37%	11	16	68.75%	2	7	#####	0	1	0.00%	124	207	59.9%				
P10	1	12	8.33%	0	126	0.00%	0	22	0.00%	0	20	0.00%	0	0		0	0		0	0		1	180	0.6%				
P12	0	0		0	0		1	30	3.33%	3	53	5.66%	1	58	1.72%	0	44	0.00%	0	31	0.00%	5	216	2.3%				
P13	0	0		0	3	0.00%	0	33	0.00%	0	70	0.00%	0	36	0.00%	1	36	2.78%	2	8	25.00%	3	186	1.6%				
P15	4	106	3.77%	0	32	0.00%	1	40	2.50%	1	20	5.00%	9	20	45.00%	7	18	#####	0	0		22	236	9.3%				
P18	36	198	18.18%	12	68	16.18%	2	41	4.88%	3	39	7.69%	1	26	3.85%	2	18	#####	1	34	2.94%	57	424	13.4%	4	8	1	
P20	13	42	30.95%	5	59	3.39%	1	21	4.76%	1	9	11.11%	0	8	0.00%	0	0		0	0		20	139	14.4%			3	
P21	68	121	49.59%	10	51	19.61%	0	0		1	10	10.00%	0	0		0	0		0	0		79	182	43.4%	32			
P28	0	0		52	182	28.57%	16	100	16.00%	4	82	4.88%	0	0		0	9	0.00%	0	2	0.00%	72	375	19.2%				
P30	0	8	0.00%	5	70	1.43%	2	51	1.96%	0	33	0.00%	0	26	0.00%	1	52	1.92%	2	55	0.00%	10	295	3.4%		2	5	
P41	19	90	21.11%	6	24	25.00%	9	34	26.47%	0	0		0	0		0	0		0	0		34	148	23.0%				
P42-43	53	109	48.62%	39	120	32.50%	13	70	18.57%	0	36	0.00%	0	0		0	10	0.00%	0	4	0.00%	105	349	30.1%				
P44 (P45)	116	269	42.75%	5	51	9.80%	4	71	5.63%	0	0		0	0		0	0		0	0		125	391	32.0%	105	1		
P47	19	53	35.85%	33	81	38.27%	16	29	48.28%	4	6	33.33%	0	1	0.00%	0	1	0.00%	0	0		72	171	42.1%			6	
P53	2	34	5.88%	0	23	0.00%	0	37	0.00%	0	9	0.00%	0	0		0	0		0	0		2	103	1.9%				
P54	0	0		2	3	66.67%	0	0		8	24	25.00%	0	6	0.00%	1	7	#####	1	14	7.14%	12	54	22.2%	7	2		
P111	0	20	0.00%	0	27	0.00%	0	2	0.00%	0	15	0.00%	0	0		0	8	0.00%	1	39	2.56%	1	111	0.9%				
P112	3	100	3.00%	0	0		0	11	0.00%	0	24	0.00%	0	0		0	0		0	40	0.00%	3	175	1.7%				
P125I	18	22	78.26%	24	76	24.74%	10	102	9.80%	0	22	0.00%	0	23	0.00%	1	18	5.56%	0	0	0.00%	53	263	20.2%				67
P132	4	29	10.34%	0	3	0.00%	5	68	5.88%	0	58	0.00%	1	45	2.22%	0	39	0.00%	0	20	0.00%	10	262	3.8%		1	1	
Grand Total	367	1236	29.7%	226	1127	20.1%	137	888	15.4%	44	610	7.2%	26	277	9.4%	15	274	5.5%	8	269	3.0%	823	4681	17.6%	148	14	16	67

Summation

Vacancy in 18'-25'	29.7%
Vacancy in 26'-30'	20.1%
Vacancy in 31'-35'	15.4%
Vacancy in 36'-40'	7.2%
Vacancy in 41'-45'	9.4%
Vacancy in 46' to 50'	5.5%
Vacancy in 51' and over	3.0%

Total Vacancy **17.6%**

Vacancy w/o DOUBLES, OUT OF SERVICE and OFF LINE slips **14.59%**

Sep-13	18-25			26-30			31-35			36-40			41-45			46-50			51+			TOTAL	TOTAL	%	DOIUBLES	DOUBLES	NON-DBL	
Marina	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VACANT	AVAILABLE	VACANT	VACANT	OUT OF SERVICE	OUT OF SERVICE	TTL OFF LINE
P7	0	8	0.00%	2	80	2.50%	3	44	6.82%	0	42	0.00%	2	12	16.67%	0	7	0.00%	4	21	19.05%	11	214	5.1%				
P8	8	15	53.33%	28	48	58.33%	52	82	63.41%	18	38	47.37%	10	16	62.50%	2	7	28.57%	0	1	0.00%	118	207	57.0%				
P10	1	12	8.33%	0	126	0.00%	0	22	0.00%	0	20	0.00%	0	0		0	0		0	0		1	180	0.6%				
P12	0	0		0	0		1	30	3.33%	2	53	3.77%	1	58	1.72%	0	44	0.00%	0	31	0.00%	4	216	1.9%				
P13	0	0		0	3	0.00%	1	33	3.03%	1	70	1.43%	2	36	5.56%	1	36	2.78%	2	8	25.00%	7	186	3.8%				
P15	4	106	3.77%	0	32	0.00%	1	40	2.50%	1	20	5.00%	6	20	30.00%	7	18	38.89%	0	0		19	236	8.1%				
P18	41	198	20.71%	13	68	17.65%	4	41	9.76%	4	39	10.26%	1	26	3.85%	2	18	11.11%	1	34	2.94%	66	424	15.6%	4	8	1	
P20	15	42	35.71%	8	59	8.47%	3	21	14.29%	1	9	11.11%	0	8	0.00%	0	0		0	0		27	139	19.4%			3	
P21	70	121	51.24%	10	51	19.61%	0	0		1	10	10.00%	0	0		0	0		0	0		81	182	44.5%	32			
P28	0	0		51	182	14.01%	18	100	9.00%	4	82	2.44%	0	0		0	9	0.00%	0	2	0.00%	73	375	19.5%				
P30	0	8	0.00%	5	70	1.43%	2	51	1.96%	0	34	0.00%	0	26	0.00%	1	51	1.96%	2	55	0.00%	10	295	3.4%		2	5	
P41	20	90	22.22%	6	24	25.00%	9	34	26.47%	0	0		0	0		0	0		0	0		35	148	23.6%				
P42-43	53	109	48.62%	37	120	30.83%	14	70	20.00%	1	36	2.78%	0	0		1	10	10.00%	0	4	0.00%	106	349	30.4%				
P44 (P45)	119	269	43.87%	4	51	7.84%	4	71	5.63%	0	0		0	0		0	0		0	0		127	391	32.5%	107	1		
P47	20	53	37.74%	33	81	38.27%	16	29	48.28%	4	6	33.33%	0	1	0.00%	0	1	0.00%	0	0		73	171	42.7%			6	
P53	1	34	2.94%	0	23	0.00%	0	37	0.00%	0	9	0.00%	0	0		0	0		0	0		1	103	1.0%				
P54	0	0		2	3	66.67%	0	0		8	24	25.00%	0	6	0.00%	0	7	0.00%	1	14	7.14%	11	54	20.4%	7	2		
P111	0	20	0.00%	1	27	3.70%	0	2	0.00%	0	15	0.00%	0	0		0	8	0.00%	1	39	2.56%	2	111	1.8%				
P112	0	100	0.00%	0	0		1	11	9.09%	0	24	0.00%	0	0		0	0		0	40	0.00%	1	175	0.6%	1			
P125I	17	22	73.91%	25	76	25.77%	17	102	16.67%	1	22	1.61%	0	23	0.00%	0	18	0.00%	0	0	0.00%	60	263	22.8%				67
P132	2	29	3.45%	0	3	0.00%	3	68	2.94%	1	58	1.72%	3	45	6.67%	1	39	2.56%	1	20	5.00%	11	262	4.2%		1	1	
Grand Total	371	1236	30.0%	225	1127	20.0%	149	888	16.8%	47	611	7.69%	25	277	9.0%	15	273	5.5%	12	269	4.5%	844	4681	18.0%	151	14	16	67

Summation

Vacancy in 18'-25'	30.0%
Vacancy in 26'-30'	20.0%
Vacancy in 31'-35'	16.8%
Vacancy in 36'-40'	7.7%
Vacancy in 41'-45'	9.0%
Vacancy in 46' to 50'	5.5%
Vacancy in 51' and over	4.5%

Total Vacancy **18.0%**

Vacancy w/o DOUBLES, OUT OF SERVICE and OFF LINE slips **15.03%**

Sep-13	Under Construction	Net Available	TOTAL MdR	% of TOTAL	CDP MIN THRESHOL
25' & Less					
Number of Slips	1	1236	4748	26%	16%
26'-30'					
Number of Slips	21	1127	4748	24%	19%
30'-35'					
Number of Slips	21	1780	4748	37%	18%

Notes
4761 - pre-construction number of slips

Oct-13	18-25			26-30			31-35			36-40			41-45			46-50			51+			TOTAL	TOTAL	%				
Marina	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VAC	AVAIL	%VAC	VACANT	AVAILABLE	VACANT	*DOUBLE VACANT*	*DOUBLE OUT OF SERVICE*	*NON-DOUBLE OUT OF SERVICE*	*OFF LINE*
P7	0	8	0.00%	5	80	6.25%	5	44	11.36%	2	42	4.76%	3	12	25.00%	0	7	0.00%	4	21	19.05%	19	214	8.9%				
P8	5	15	33.33%	26	48	54.17%	50	82	60.98%	16	38	42.11%	11	16	68.75%	2	7	28.57%	0	1	0.00%	110	207	53.1%				
P10	1	12	8.33%	2	126	1.59%	0	22	0.00%	0	20	0.00%	0	0		0	0		0	0		3	180	1.7%				
P12	0	0		0	0		2	30	6.67%	0	53	0.00%	2	58	3.45%	1	44	2.27%	0	31	0.00%	5	216	2.3%				
P13	0	0		0	3	0.00%	1	33	3.03%	2	70	2.86%	2	36	5.56%	1	36	2.78%	2	8	25.00%	8	186	4.3%				
P15	4	106	3.77%	0	32	0.00%	1	40	2.50%	1	20	5.00%	6	20	30.00%	7	18	38.89%	0	0		19	236	8.1%				
P18	42	198	21.21%	13	68	17.65%	4	41	9.76%	4	39	10.26%	1	26	3.85%	3	18	16.67%	1	34	2.94%	68	424	16.0%	5		1	
P20	15	42	35.71%	8	59	8.47%	3	21	14.29%	1	9	11.11%	0	8	0.00%	0	0		0	0		27	139	19.4%			3	
P21	70	121	51.24%	10	51	19.61%	0	0		1	10	10.00%	0	0		0	0		0	0		81	182	44.5%	32	8		
P28	0	0		50	182	27.47%	17	100	17.00%	6	82	7.32%	0	0		0	9	0.00%	0	2	0.00%	73	375	19.5%				
P30	0	8	0.00%	5	70	1.43%	2	51	1.96%	0	34	0.00%	0	26	0.00%	1	51	1.96%	2	55	0.00%	10	295	3.4%		2	5	
P41	20	90	22.22%	6	24	25.00%	9	34	26.47%	0	0		0	0		0	0		0	0		35	148	23.6%				
P42-43	55	109	50.46%	39	120	32.50%	15	70	21.43%	3	36	8.33%	0	0		1	10	10.00%	0	4	0.00%	113	349	32.4%				
P44(45)	120	269	44.24%	5	51	9.80%	4	71	5.63%	0	0		0	0		0	0		0	0		129	391	33.0%	108	1		
P47	20	53	37.74%	33	81	38.27%	16	29	48.28%	4	6	33.33%	0	1	0.00%	0	1	0.00%	0	0		73	171	42.7%			6	
P53	2	34	5.88%	0	23	0.00%	3	37	8.11%	0	9	0.00%	0	0		0	0		0	0		5	103	4.9%				
P54	0	0		2	3	66.67%	0	0		6	24	16.67%	0	6	0.00%	0	7	0.00%	0	14	0.00%	8	54	14.8%	6	2		
P111	0	20	0.00%	0	27	0.00%	0	2	0.00%	0	15	0.00%	0	0		0	8	0.00%	1	39	2.56%	1	111	0.9%				
P112	0	100	0.00%	0	0		0	11	0.00%	0	24	0.00%	0	0		0	0		1	40	2.50%	1	175	0.6%				
P125I	14	22	63.64%	15	76	19.74%	8	72	7.62%	3	20	10.00%	7	31	22.58%	2	27	7.41%	2	4	50.00%	51	252	20.2%				43
P132	2	29	3.45%	0	3	0.00%	3	68	2.94%	1	58	1.72%	3	45	6.67%	1	39	2.56%	0	20	0.00%	10	262	3.8%		1	1	
Grand Total	370	1236	29.9%	219	1127	19.4%	143	858	16.7%	50	609	8.21%	35	285	12.3%	19	282	6.7%	13	273	4.8%	849	4670	18.2%	151	14	16	43

Summation

Vacancy in 18'-25'	29.9%
Vacancy in 26'-30'	19.4%
Vacancy in 31'-35'	16.7%
Vacancy in 36'-40'	8.2%
Vacancy in 41'-45'	12.3%
Vacancy in 46' to 50'	6.7%
Vacancy in 51' and over	4.8%

Total Vacancy **18.2%**

Total vacancy adjusted for DOUBLES and OUT OF SERVICE slips **16.42%**

Oct-13	OFF LINE (Construction Related)	NET AVAILABLE	TOTAL MdR	PERCENTAGE of TOTAL	CDP MINIMUM THRESHOLD
25' & Less					
Number of Slips	0	1236	4670	26%	16%
26'-30'					
Number of Slips	0	1127	4670	24%	19%
30'-35'					
Number of Slips	33	1750	4670	37%	18%

Notes

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