

APPENDIX E

Harbor Channel and Pierhead Lines



"The following technical report reflects the findings and data available at the time the report was prepared and may not represent the current conclusions and steps forward in the main text of the HAMP, which has been updated after the completion of these reports. These more detailed technical reports provided in the appendices represent the foundation for the overall approach to the HAMP, but are not "living" documents that reflect updated steps forward, costing, quantities, etc. presented in the main text of the HAMP. The main text of the HAMP represents more current information and recommendations based on updated information, new studies, changes in conditions, new funding sources, and/or new regulations."

HARBOR AREA MANAGEMENT PLAN

HARBOR LINES REVIEW Technical Report

Prepared For:

Harbor Resources Division

City of Newport Beach

829 Harbor Island Drive

Newport Beach, CA 92660

Prepared By:

Everest International Consultants, Inc.

444 West Ocean Boulevard, Suite 1104

Long Beach, CA 90802

With HAMP Team: Weston Solutions, Inc.

June 2009

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Background	1
1.2	Purpose and Objectives	1
2.0	EXISTING CONDITIONS.....	2
2.1	Definitions.....	2
2.2	Rules and Regulations.....	2
2.3	Evolution of the Lower Bay and Harbor Lines.....	3
3.0	HARBOR LINES REVIEW	8
4.0	RECOMMENDATIONS	14
4.1	Action Items.....	14
4.2	Roadmap to Implement Harbor Line Changes	14
5.0	REFERENCES	16

LIST OF TABLES

Table 1. Recommended Harbor Line Changes	10
--	----

LIST OF FIGURES

Figure 1A-C. Harbor Lines Review.....	5
---------------------------------------	---

1.0 INTRODUCTION

1.1 Background

After construction of the portion of Newport Bay below the Pacific Coast Highway (Lower Bay), the federal government, through the U.S. Army Corps of Engineers (USACE), established harbor lines (project lines, pierhead lines and bulkhead lines). These lines define the federal navigation channel dredging limits, and the limits on how far piers, wharfs, bulkheads and other solid fills can extend into Lower Bay waters. These lines are important for maintaining safe navigation conditions throughout the Lower Bay.

The harbor lines have not been systematically adjusted since their original development in 1936 even though the Lower Bay has been altered extensively since this time and there have been changes in uses as well. For example, numerous basins and islands have been constructed after the initial construction. The types, sizes, and distributions of vessels within the Lower Bay have also been changing over time following market demands. In addition, changes in policy and regulations at the federal, state, and local levels have resulted in a different regulatory condition from that considered at the time the lines were initially established.

1.2 Purpose and Objectives

As part of the Harbor Area Management Plan (HAMP) for Newport Bay, this task identifies and addresses issues related to the harbor lines throughout the Lower Bay and provides recommendations to update these lines.

Specific objectives developed to satisfy the purpose of this task include:

- Identify existing harbor lines including project lines, pierhead lines, and bulkhead lines.
- Review the development of these lines with respect to relevant policies, regulations, guidelines, and procedures.
- Prepare a map showing the existing harbor lines and summarizing the relevant policies.
- Develop a matrix of goals and constraints to evaluate current harbor line positions based on existing uses.
- Prepare a draft and final report on work performed for the above objectives as well as recommendations, and a road map for implementation of the recommendations.

2.0 EXISTING CONDITIONS

2.1 Definitions

A harbor line is the line set by the federal government, delineating the area in which no obstructions to navigation are allowed (United States of America, Sec. 403). In the Lower Bay, harbor lines include the project line, pierhead line, and bulkhead line (United States of America, Sec. 424).

A harbor project line, federal project line, or project line is the boundary of the federal project and limit of certain federal responsibilities. Pierhead and bulkhead lines are typically between the project line and land.

A pierhead line is a boundary set by the USACE beyond which a pier may not extend (Committee on Standardization and Special Research, 1940). This is typically located between the project line and the bulkhead line.

A bulkhead line is a boundary set by the USACE beyond which solid fill may not be extended (Committee on Standardization and Special Research, 1940).

2.2 Rules and Regulations

There are several rules and regulations pertaining to the harbor lines that must be accommodated in any potential update or realignment of harbor lines.

The City of Newport Beach Municipal Code (Title 17) has the following regulations concerning harbor lines:

All channels, turning basins, anchorage areas, and pierhead and bulkhead lines in Newport Harbor shall be as established by the Federal Government or by the City Council upon recommendation of the Harbor Commission. A map thereof shall be kept on file in the offices of the City Clerk and the Public Works Director for public inspection (Newport Beach, 2002a).

And:

Prior approval of the U.S. Corps of Engineers will be required when:

A. Work extends beyond the U.S. pierhead line; B. Solid filling of a solid structure is constructed beyond the U.S. bulkhead line; C. Harbor lines have not been established in the area by the U.S. Corps of Engineers. (Newport Beach, 2002b).

The Harbor Permit Policy was developed by the City of Newport Beach to regulate bulkheads, cantilevered patio decks, bulkhead lines, piers, floats, pierhead lines, and other water front structures (Harbor Resources Division, 2004). The rules are extensive and hence not repeated here.

The following are federal regulations (Title 33 – Navigation and Navigable Waters) pertaining to harbor lines in Newport Harbor:

The Secretary of the Army is authorized and directed to fix and establish pierhead and bulkhead lines, either or both, at Newport Harbor, California, in accordance with plan dated United States Engineer Office, Los Angeles, California, March 25, 1913, and entitled “Newport Bay, California”, showing harbor lines, beyond which no piers, wharfs, bulkheads, or other works shall be extended or deposit made, except under such regulations as shall be prescribed from time to time by the Secretary of the Army (United States of America, Sec. 424).

And:

The Secretary of the Army is authorized to modify from time to time, the harbor lines at Newport Harbor, California, established in pursuance of section 424 of this title: *Provided*, That in his opinion such modification will not injuriously affect the interests of navigation (United States of America, Sec. 424a).

At the time of publishing this report, the City of Newport Beach is in the process of approving a Local Coastal Program. Until it is approved, the California Coastal Act is enforced directly by the California Coastal Commission. The California Coastal Act does not specifically mention any of the harbor lines.

2.3 Evolution of the Lower Bay and Harbor Lines

Physical features and harbor lines of the Lower Bay have evolved over the years. The evolution of the Lower Bay and associated harbor lines is summarized here to help understand how the harbor lines arrived at where they are.

The first record of Newport Bay occurs in Title 33 of the U.S. code, which refers to a 1913 map of Newport Bay, California. This map however, could not be located for inclusion in this report, so the 1913 extent of Newport Bay is unknown.

Work for Newport Bay started in December 1934 and opening celebrations were held on May 26, 1936 (OCParks.com, 2008). A 1934 map of Newport Bay showed a similar layout as today, but without Linda Isle, Promontory Bay, Balboa Yacht Basin, Balboa Coves, Newport Island or the Grand Canal splitting Balboa Island. On this map, the northern extent of Newport Harbor ended at PCH Bridge and the western extent was at Newport Blvd (U.S. Engineer Office, 1934).

In 1936, “Newport Bay Harbor” had the same features and extents as in 1934. By 1936 the pierhead, bulkhead, and project lines were available, with pierhead lines set at distances varying between zero to 96 feet from bulkhead lines depending on the locations. The project lines were usually 10 to 20 feet channelward from the pierhead lines. This was intentional to allow a buffer so that dredging would not undermine or interfere with the pier piles. The most common spacing had the pierhead line 80 feet from the bulkhead line and the project line 20 feet from the pierhead line (U.S. Engineer Office, 1936).

By 1950 Balboa Coves, Newport Isle, the Grand Canal, Balboa Yacht Basin, and an incomplete Linda Isle had been added (Office of the District Engineer, 1950). Since 1936, a few areas have

shown a 10 foot increase in the distance between bulkhead and pierhead lines with a corresponding decrease in the distance between pierhead and project lines. Bulkhead lines near the Harbor Patrol were moved bayward.

By 2008, a bay had been added to the middle of Linda Isle and Promontory Bay had been added. Figures 1A through 1C shows the harbor lines as of 2008. In these figures, bulkhead lines, Pierhead lines and harbor project lines are shown as yellow, green, and red lines, respectively, while Harbor Permit Policy exceptions and special permits are shown as dashed lines. The circled location markers in these figures are addressed in Section 3 of this report. Changes in the harbor lines that occurred between 1950 and 2008 include: new bulkhead lines in Balboa Yacht Basin, new bulkhead lines in Balboa Coves and Newport Island, new pierhead and bulkhead lines in and around Linda Isle, removed project (channel) lines in Newport Channel, and development of a Harbor Permit Policy regulating variances and exceptions to the original harbor lines at specific locations throughout the Lower Bay.

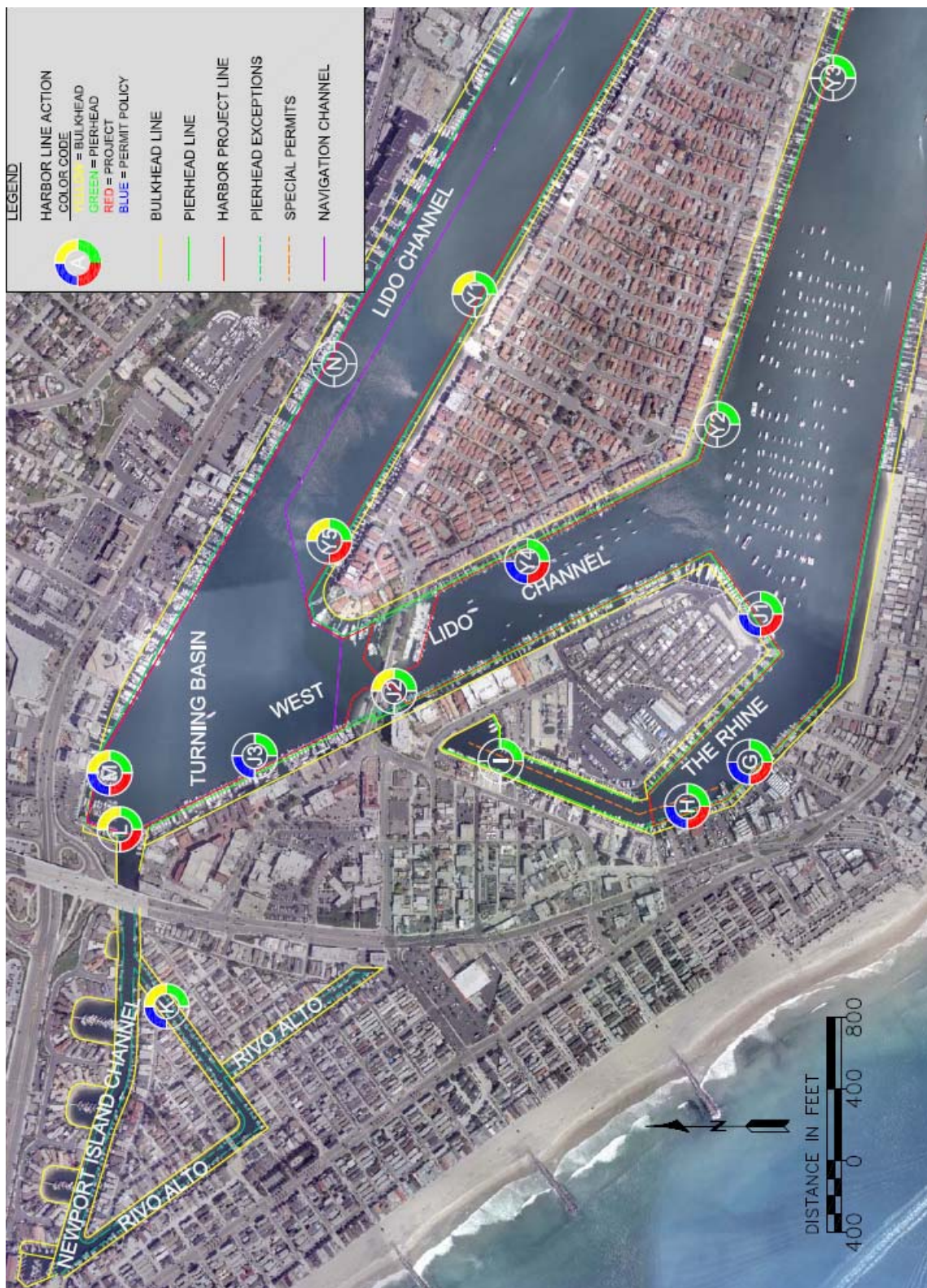


Figure 1A. Harbor Lines Review

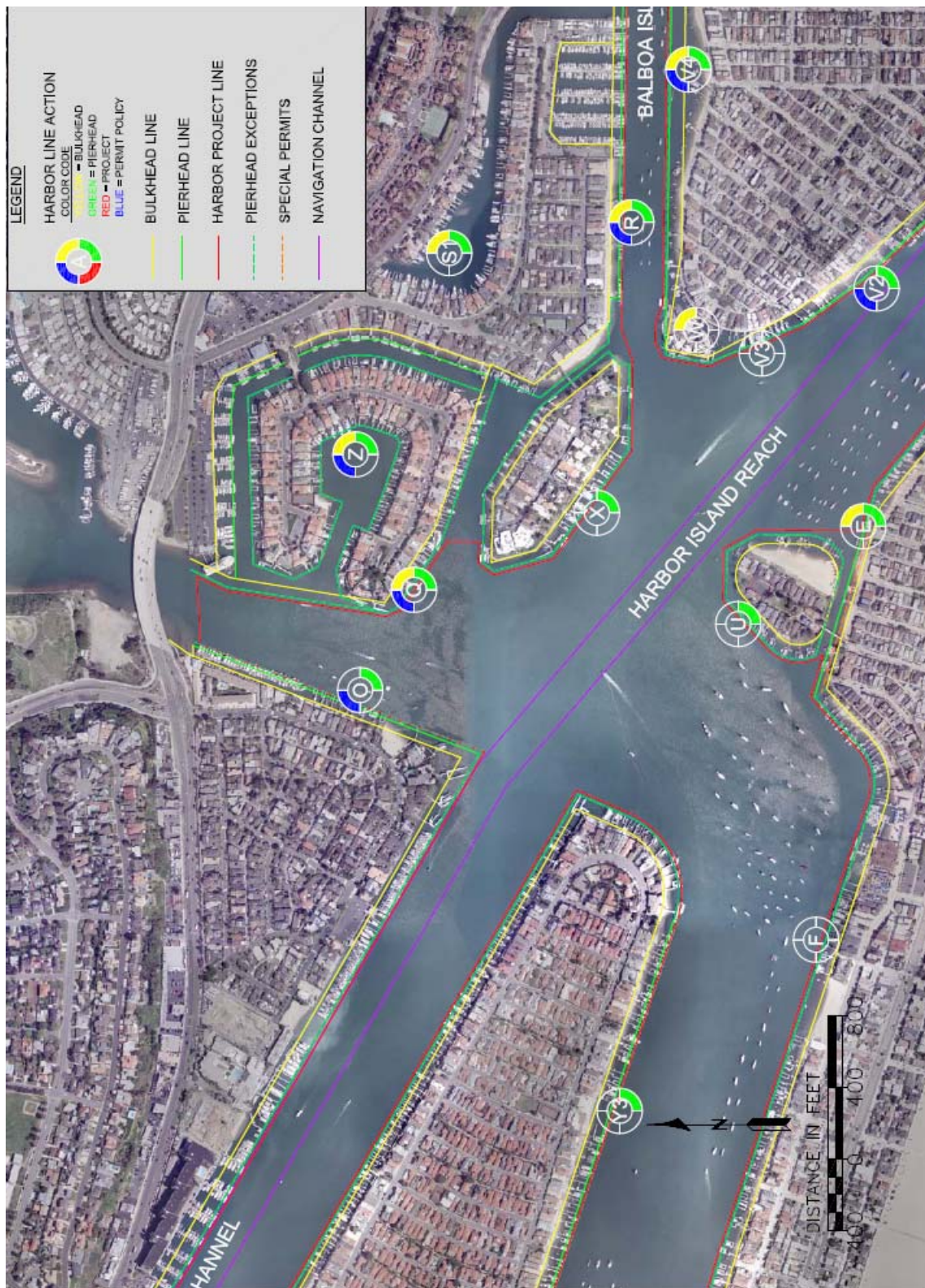


Figure 1B. Harbor Lines Review



3.0 HARBOR LINES REVIEW

Existing harbor lines were overlaid on photos of existing Lower Bay features as shown in Figures 1A through 1C. This map, in combination with location specific rules from the Harbor Permit Policy, was used to identify locations where potential conflict and inconsistencies exist between the harbor lines, Harbor Permit Policy, and existing features. At these locations, outstanding issues can be summarized as follows:

Throughout the Lower Bay, many beaches extend beyond the bulkhead line. In no instance does any beach extend beyond the project line. This practice has evolved over time and is likely in conflict with a strict interpretation of the bulkhead line definition.

Promontory Bay and the Grand Canal (Balboa Island) do not have bulkhead lines.

Some locations have bulkhead lines crossing existing navigable waters and channels. This occurs at Promontory Bay, Balboa Yacht Basin, Linda Isle, from Harbor Patrol through Pirate's Cove, and Balboa Coves.

Pierhead lines are noticeably absent from Promontory Bay and Newport Harbor. There is however guidance in the Harbor Permit Policy for pierhead lines around Newport Island.

No project line exists around Newport Island, The Rhine Channel, Promontory Bay, or Linda Isle. These areas are not federal projects however and may not require project lines.

There are numerous locations where existing structures extend beyond pierhead and project lines. This situation has developed over the decades and is one of the main reasons for performing this study.

These locations were shown to the Harbor Resources Agency and the outstanding issues were discussed. During this meeting, a list of general goals and constraints were developed to address these outstanding issues. The goals included:

- Improving clarity and consistency of the harbor lines and Harbor Permit Policy;
- Allowing pier owners access to deeper, more navigable waters that are further offshore, while reducing impacts to eelgrass; and
- Bringing nearly all Lower Bay structures into compliance through modification of the harbor lines and Harbor Permit Policy.

The constraints on harbor line and Harbor Permit Policy modifications included:

- The changes should minimize pierhead encroachment into navigable waterways;
- Any change in the harbor lines requires USACE approval;
- A navigation study should be performed to verify that changing the harbor lines to match existing conditions would not impact navigation beyond allowable standards. If the impacts are beyond allowable standards, the realignment should be modified.

Any channelward realignment of the project line would transfer maintenance (e.g., dredging) requirements of that new area from the federal government to the City and/or County.

Solutions to the outstanding issues were then developed which attempt to satisfy the goals and constraints. The most common solutions are:

- Realign pierhead lines to bring potential violators into compliance. In other words, move pierhead lines channelward, connecting existing pierheads;
- Where necessary, move the project lines channelward to include the new pierhead lines. This is necessary to maintain project lines channelward of pierhead lines;
- To simplify and clarify bulkhead lines, move bulkhead lines landward to the existing bulkhead or property lines;
- Since no structures should cross navigation channels, remove bulkhead and pierhead lines that cross navigation channels;
- To improve consistency throughout the Lower Bay, add bulkhead and pierhead lines where they do not currently exist; and
- Update harbor lines to reflect the Harbor Permit Policy and then streamline the Harbor Permit Policy by removing area specific exceptions.

Location specific solutions are described in Table 1 and graphically located in Figures 1A through 1C. The different waterfront regions within the Lower Bay have been identified by alpha-numeric labels originally designated in the Harbor Permit Policy. These circled location labels were copied into figures 1A through 1C and supplemented where additional detail was needed. Each column in Table 1 specifies the change recommended to the bulkhead line, pierhead line, project line, or Harbor Permit Policy. In addition, the goals and constraints applicable to each location are also given in the last two columns of Table 1.

An example will clarify the connection between Table 1 and Figures 1A through 1C. Location A in Figure 1C is found on the north-east corner of the Balboa Peninsula. The recommended solution at this location involves moving the pierhead line channel-ward to bring piers into compliance and improve harbor-wide consistency of the rules. While this solution moves the pierhead line into the waterway, no increase in physical encroachment occurs, so encroachment is minimized.

Table 1. Recommended Harbor Line Changes

Location	Bulkhead Line Changes	Pierhead Line Changes	Project Line Changes	Harbor Permit Policy Changes	Goals	Constraints
A	No change	Realign to end of existing pierheads	No change	No change	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
B	No change	Realign channelward to the project line	No change	Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
C	No change	No change	No change	No change		
D	No change	No change	No change	No change		
E	Realign landward to existing bulkheads or property boundaries	Replace with Special Permit Line	No change	No change	Improve harbor-wide consistency. Bring into compliance.	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
F	No change	No change	No change	No change		
G	No change	Realign to end of existing pierheads	Realign channelward to accommodate pierhead line change	Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
H	No change	Realign to end of existing pierheads	Realign channelward to accommodate pierhead line change	Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
I	No change	Realign to end of existing pierheads	No change	No change	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
J1	No change	Realign to end of existing pierheads	Realign channelward to accommodate pierhead line change	Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
J2	Realign along bridge embankments	Realign channelward to the project line	No change	No change	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Requires USACE approval.
J3	No change	Realign channelward to the project line	No change	Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.

Table 1. Recommended Harbor Line Changes

Location	Bulkhead Line Changes	Pierhead Line Changes	Project Line Changes	Harbor Permit Policy Changes	Goals	Constraints
K	Eliminate lines that cross navigable waters	Add pierhead lines to map	No change	Entirely re-write Harbor Permit Policy for this area.	Improve harbor-wide consistency.	Requires USACE approval.
L	Realign landward to existing bulkheads or property boundaries	Realign to end of existing pierheads	Realign channelward to accommodate pierhead line change	No change	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
M	Realign landward to existing bulkheads or property boundaries	Realign to end of existing pierheads	Realign channelward to accommodate pierhead line change	Piers or slips currently permitted to bulkhead line. Eliminate special condition from future policy.	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
N	No change	No change	No change	No change		
O	No change	Realign channelward to the project line	No change	Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
P	No change	No change	No change	No change		
Q	Realign landward to existing bulkheads or property boundaries. Eliminate lines that cross navigable waters	Eliminate lines that cross navigable waters	No change	Ownership issues to be resolved between City, County, and Irvine Company	Improve harbor-wide consistency.	Requires USACE approval. Ownership issues to be resolved between City, County, and Irvine Company.
R	Realign landward to existing bulkheads or property boundaries. Eliminate lines that cross navigable waters	Realign channelward to the project line	No change	Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
S1	Realign landward to existing bulkheads or property boundaries. Eliminate lines that cross navigable waters	Realign to end of existing pierheads	No change	No change	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
S2	Realign landward to existing bulkheads or property boundaries. Eliminate lines that cross navigable waters	Realign channelward to the project line	No change	Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
T1	No change	Realign to end of existing pierheads	Realign channelward to accommodate pierhead line change	No change	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.

Table 1. Recommended Harbor Line Changes

Location	Bulkhead Line Changes	Pierhead Line Changes	Project Line Changes	Harbor Permit Policy Changes	Goals	Constraints
T2	Realign landward to existing bulkheads or property boundaries	Replace with Special Permit Line	No change	No change	Improve harbor-wide consistency. Reduce future construction of longer piers that encroach into waterway.	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
U	No change	Realign to end of existing pierheads	No change	No change	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
V1	No change	Realign channelward to the project line	No change	Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
V2	No change	Realign channelward to the project line	No change	Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
V3	No change	No change	No change	No change		
V4	Realign landward to existing bulkheads or property boundaries	Co-relocate with bulkhead line by maintaining 80' distance between two lines. Where piers extend greater than 80', realign to end of existing pierheads.	No change	Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
V5	No change	Realign to end of existing pierheads	No change	Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
V6	Eliminate lines that cross navigable waters. Add to existing bulkheads or property boundaries	Realign to end of existing pierheads	No change	No change	Improve harbor-wide consistency.	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
W	Realign landward to existing bulkheads or property boundaries	No change	No change	No change	Improve harbor-wide consistency. Bring into compliance.	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
X	No change	Realign to end of existing pierheads	No change	No change		

Table 1. Recommended Harbor Line Changes

Location	Bulkhead Line Changes	Pierhead Line Changes	Project Line Changes	Harbor Permit Policy Changes	Goals	Constraints
Y1	Realign landward to existing bulkheads or property boundaries	Replace with Special Permit Line	No change	No change	Improve harbor-wide consistency.	Requires USACE approval.
Y2	No change	Replace with Special Permit Line	No change	No change	Improve harbor-wide consistency.	Requires USACE approval.
Y3	No change	Realign to end of existing pierheads	No change	No change	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
Y4	No change	Realign to end of existing pierheads	Realign channelward to accommodate pierhead line change	Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
Y5	Realign landward to existing bulkheads or property boundaries	Realign to end of existing pierheads	Realign channelward to accommodate pierhead line change	No change	Improve harbor-wide consistency. Bring into compliance. Improve docking navigation while reducing impact to eelgrass	Minimize encroachment into waterway. Requires USACE approval. Requires navigation study to verify existing conditions adequate.
Z	Realign landward to existing bulkheads or property boundaries. Eliminate lines that cross navigable waters	Eliminate lines that cross navigable waters	No change	Ownership issues to be resolved between City, County, and Irvine Company	Improve harbor-wide consistency.	Requires USACE approval, Ownership issues to be resolved between City, County, and Irvine Company.

<u>Bulkhead changes</u> 1. No change 2. Realign landward to existing bulkheads or property boundaries 3. Eliminate lines that cross navigable waters 4. Realign along bridge embankments <u>Pierhead changes</u> 1. No change 2. Realign to end of existing pier heads 3. Eliminate lines that cross navigable waters 4. Realign seaward to the project line 5. Replace with Special Permit Line 6. Co-relocate with bulkhead line by maintaining 80' distance between two lines. Where piers extend greater than 80', realign to end of existing pierheads. 7. Realign 20' beyond existing 8. Add pierhead lines to map	<u>Project Line Change</u> 1. No change 2. Realign seaward to accommodate pierhead line change <u>Harbor Permit Policies</u> 1. No change 2. Piers or slips currently permitted a specified distance beyond pierhead line. Eliminate extension from future policy 3. Piers or slips currently permitted to <u>bulkhead</u> line. Eliminate special condition from future policy. 4. Ownership issues to be resolved between City, County, and Irvine Company 5. Entirely re-write Harbor Permit Policy for this area. <u>Goals</u> 1. Improve harbor-wide consistency. 2. Bring into compliance. 3. Reduce future construction of longer piers that encroach into waterway. 4. Improve docking navigation while reducing impact to eelgrass	<u>Constraints</u> 1. Minimize encroachment into waterway. 2. Required USACE approval 3. Requires navigation study to verify existing condition adequate. 4. Ownership issues to be resolved between City, County, and Irvine Company. <u>General Recommendations/Considerations</u> A B C D E
--	---	--

4.0 RECOMMENDATIONS

4.1 Action Items

Based on the results of reviewing existing harbor lines, the following action items are recommended:

A new harbor lines map should be developed incorporating project line, pierhead line, and bulkhead line solutions as detailed in Table 1 and Figures 1A through 1C. To increase accuracy, ground truth surveying should be included as part of re-drawing the harbor lines map.

The Harbor Permit Policy should be updated and simplified according to the changes detailed in Table 1 and Figures 1A through 1C.

Pierhead lines should be replaced with special permit lines where applicable. The special permit line is a graphical marker indicating that reference to the Harbor Permit Policy would be necessary at these locations.

Navigation studies should be performed based on the updated harbor lines map to assess the navigation impacts from the recommended changes.

Since there are locations where beaches cross bulkhead lines, guidelines should be codified to regulate beaches with respect to harbor lines. Suggested language for the Harbor Permit Policy is: “dry beach areas may extend beyond bulkhead and pierhead lines, but may not extend beyond project lines at the Mean Lower Low Water elevation.”

Since no review has taken place since initial implementation, and many physical changes have taken place, navigation channel lines should be analyzed in a manner similar to the work performed for the harbor lines.

Mooring area boundaries should be analyzed in a manner similar to the work performed for the harbor lines for the same reasons.

The new harbor lines should be enforced in the future to reduce the likelihood of violations and minimize encroachment into navigable waters.

4.2 Roadmap to Implement Harbor Line Changes

Updating harbor lines is a multi-phase processes requiring coordination between different agencies. The first step to start the process is the preparation of a proposed updated harbor lines map based on the recommendation of this report. It is also recommended that any proposed updates of the mooring boundaries and navigation channels should occur concurrently with any update of the harbor lines. A navigation study may be required to evaluate potential impact of the proposed mooring boundaries, navigation channels, and harbor lines map, and the results of the navigation study may lead to further modifications to the proposed map. The Harbor Permit Policy should also be updated at the same time to reflect on the proposed changes to the mooring boundaries, navigation channels, and harbor lines. Any proposed changes to the map shall be verified with ground truth surveying before preparing the final proposed harbor lines map.

After review and finalization of the proposed recommendations to the harbor lines map, the Harbor Commission would make recommendations to the City Council (Newport Beach, 2002a) who could codify the changes. Both the Harbor Commission and City Council may require further changes to the map. After passing through the City Council, a letter request or recommendation would be made to the Los Angeles District of the USACE who ultimately have jurisdiction to change harbor lines. However, if the federal government de-authorizes the harbor and the City takes responsibility, then the City Council would not be required to request or recommend harbor line changes to the USACE. The California Coastal Act does not regulate harbor lines, but it does regulate any construction taking place in the coastal zone. The harbor lines can be modified without a California Coastal Commission permit, but any subsequent construction dependent on those harbor lines would still be regulated by the California Coastal Commission or a Local Coastal Program. While there is no explicit requirement, the public should also be informed and consulted on the harbor line changes early in the process.

5.0 REFERENCES

Committee on Standardization and Special Research. 1940. *A Port Dictionary of Technical Terms*, published by the American Association of Port Authorities.

Harbor Resources Division. 2004. *Harbor Permit Policy*. Reaffirmed January 24, 1994 and last amended April 13, 2004.

Newport Beach. 2002a. City of Newport Beach Municipal Code, Title 17, 17.08.030 Establishment of Channels, Turning Basins, etc. Ord. 2002-18 (part), 2002.

Newport Beach. 2002b. City of Newport Beach Municipal Code, Title 17, New17.24.080 Required Approval by Corps of Engineers. Ord. 2002-18 (part), 2002.

OCParks.com. 2008. <http://www.ocparks.com/newportharbor/default.asp?Show=History>.

United States of America. United States Code. Title 33. Navigation and Navigable Waters. Chapter 9 - Protection of Navigable Waters and of Harbor and River Improvements Generally, Sec. 424a. Modification of harbor lines in Newport Harbor, California.

U.S. Engineer Office. 1934. Entrance Channel and Bay Dredging, Newport Bay California, Soundings and Borings, Survey of 1934. U.S. Engineer Office, Los Angeles, Calif. September 19, 1934.

U.S. Engineer Office. 1936. Harbor Lines Newport Bay Harbor, California, in two sheets, U.S. Engineer Office, Los Angeles, Calif. 3-20-1936.

Office of the District Engineer. 1950. Harbor Lines, Newport Bay Harbor California. Office of the District Engineer, Los Angeles, Calif. December 26, 1950.