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STAFF REPORT: REGULAR CALANDAR
COMBINED COASTAL DEVELOPMENT PERMIT APPLICATION AND FEDERAL CONSISTENCY CERTIFICATION

CDP Application No: **5-14-0200**

Consistency Certification No.: **CC-0002-15**

Applicant: **City of Newport Beach**

Agents: Schmitz and Associates (Don Schmitz) and Anchor QEA (Adam Gale)

Project Location: Dredging & Beach Replenishment in Newport Bay (Orange County): between the shoreline and project lines, on beaches and within bay waters, at street ends and in front of bulkheads in lower Newport Bay, and within Upper Newport Bay in the bulkheaded areas of Dover Shores, Bayside Village, and existing docks at Shellmaker Island; and

Offshore Disposal: at EPA approved disposal site known as LA-3 located approximately four miles southwest of the entrance to Newport Harbor in Orange County.

Project Description: Consistency Certification CC-0002-15: Maintenance dredging around existing docks and off-shore disposal of up to 75,000 cubic yards per year of suitable dredged material, including proposed Eelgrass Protection and Mitigation Plan for eelgrass impacts; and

Coastal Development Permit 5-14-0200: Beach replenishment of up to 75,000 cubic yards per year of suitable dredged material, including Eelgrass Protection and Mitigation Plan for eelgrass impacts.

Staff Recommendation: CDP: Approval with conditions
CC: Conditional Concurrence

SUMMARY OF STAFF RECOMMENDATION

The City of Newport Beach proposes to continue its small dredging and beach replenishment (or ocean disposal) program within the urbanized harbor areas of Newport Bay. There are approximately 1,200 small docks along the shoreline of Newport Bay where sediment occasionally shoals and renders such docks of limited or no use. The proposed program would authorize dredging under and around these small docks, as necessary, to assure their continued usefulness, and the use of suitable dredge material to replenish beaches in front of bulkheads and at street end beaches throughout the bay. Dredge material unsuitable for beach replenishment would be disposed of at the existing authorized ocean disposal site, LA-3. The proposed dredging and disposal program is a substantially expanded version of the programs previously approved by the Commission under Coastal Development Permit Nos. 5-99-282 and 5-06-117, as amended, and Consistency Certification Nos. CC-078-99, CC-077-01, and CC-0310-06. Key elements include an annual limit of 75,000 cubic yards of dredging and disposal (including sediment characterization requirements for each project), an 8,000 cubic yard cap on the size of each individual dredging and disposal event, and eelgrass (*Zostera spp.*) and invasive algae (*Caulerpa taxifolia*) survey requirements. The proposed dredging program would permit impacts to eelgrass in Newport Bay subject to an Eelgrass Protection and Mitigation Plan developed by the applicant in consultation with the National Marine Fisheries Service, California Department of Fish and Wildlife, and the Commission's Staff Biologist. The program would be authorized for six years.

Since 2003, the City of Newport Beach has funded studies to document the distribution and abundance of eelgrass within the harbor and to understand the factors affecting its recruitment and growth. The City has used the results of those studies as a basis for developing a plan that enables the routine maintenance dredging that is typically undertaken by individual dock owners to be carried out without triggering the standard mitigation measures called for in the California Eelgrass Mitigation Policy. The "plan area" encompasses the portions of the harbor defined as: "The bulkhead to pierhead line plus 20 feet bayward, including those exceptions for structures that extend beyond this boundary as of 2013 in conformance with harbor development regulations or policy." Based on their eelgrass studies, the plan area has been divided into a "stable zone" where eelgrass is relatively abundant and does not fluctuate much from year to year, and a "transitional zone" where eelgrass tends to be sparse, patchy, and temporally variable. Within each zone, three abundance "tiers" have been defined. Larger impacts (up to 5% of eelgrass in the zone) are allowed when eelgrass is abundant (Tier 1). Smaller impacts (up to 3% of eelgrass in the zone) are allowed when eelgrass is less abundant (Tier 2). When eelgrass is in Tier 1, the dock owner has no mitigation responsibilities but the City institutes eelgrass seeding and planting activities proportional to the amount of routine maintenance dredging undertaken by dock owners and pursues an educational program to increase the understanding of the ecological importance of eelgrass and encourage practices that contribute to eelgrass health. Under Tier 2, in addition to the activities of Tier 1, dock owners who have dredged must deploy seed bags or plant eelgrass within the dredged footprint to reduce the temporal loss. The Plan is only operational when eelgrass is relatively abundant. When eelgrass abundance falls below a defined level (Tier 3), mitigation under the California Eelgrass Mitigation Policy is the responsibility of the dock owner.

In order to facilitate Commission review of these items, both the coastal development permit application and the federal consistency certification will be heard at the same time. Commission staff recommends **approval** of the coastal development permit application and **conditional concurrence** with the consistency certification. Special conditions that define the approved program include annual limitations of 75,000 cubic yards of dredging and 8,000 cubic yards per dredging/disposal event, requirements for comprehensive biennial eelgrass surveys, sediment testing and reporting standards, construction BMPs, assumption of risk, and final analysis and mitigation of eelgrass impacts

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I. MOTIONS AND RESOLUTIONS

Motion I:

I move that the Commission approve Coastal Development Permit No. 5-14-0200 pursuant to the staff recommendation.

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution I:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

Motion II:

I move that the Commission conditionally concur with consistency certification CC-0002-15 on the grounds that the project described therein is consistent with the enforceable policies of the California Coastal Management Program (CCMP).

Staff recommends a **YES** vote on the motion. Passage of this motion will result in a conditional concurrence, if modified as suggested, in the certification of the proposed project and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion..

Resolution II:

The Commission hereby conditionally concurs with CC-0002-15 on the grounds that, if modified in accordance with the Special Conditions, the project described therein would be consistent with the enforceable policies of the California Coastal Management Program (CCMP) and would be conducted in a manner consistent with that program.

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the applicants or authorized agent,

acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration**. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation**. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment**. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land**. These terms and conditions shall be perpetual, and it is the intention of the Commission and the applicants to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions applicable to all uses of Coastal Development Permit No. 5-14-0200 and Federal Consistency Certification No. CC-0002-15 (referred to as CDP/CC hereafter):

1. **Final Revised Regional General Permit 54 Program.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit a document, subject to the review and approval of the Executive Director, detailing the final Regional General Permit 54 program. The format of the document shall substantially conform to the preliminary program titled "Permit Application Supplement: Proposed Regional General Permit 54," submitted January 2014, and included as Exhibit 2 in the staff report dated 5/29/15, but shall be amended to reflect the following changes:

    A. Term of Authorization for Dredging and Ocean or Beach Disposal: Authorization to dredge and dispose of suitable material at an approved ocean or beach disposal site under this CDP/CC shall expire six (6) years from the date of issuance of the CDP/CC. Requests for development under this authorization shall be submitted for review and, if authorized by the Executive Director, the development shall be completed within the six-year period.

    Following the review of the biennial eelgrass survey data proposed in the Eelgrass Protection and Mitigation Plan and as required by Special Condition 2, or should there be a net loss in eelgrass in the impacted areas of Newport Bay relative to the reference sites, the City, Commission staff, and other resource agency staff will work together to resolve implementation issues that were unforeseen when the RGP 54 and Eelgrass Protection and Mitigation Plan were developed. If, at any time, the Executive Director determines that the development authorized by this CDP/CC is causing adverse impacts to habitat which are not being mitigated, the Executive Director shall notify the City and suspend commencement of and/or authorization of

any further dredging and/or disposal under this CDP/CC unless and until the applicant obtains approval of an amendment to this CDP and a new consistency certification from the Commission that allows for recommencement of development pursuant to any additional terms and conditions to address the unforeseen impacts to coastal resources.

B. Annual maintenance dredging shall be limited to 75,000 cubic yards (CY) of material.

C. Individual dredging events shall be limited to 8,000 CY of material. Individual disposal (offshore or beach replenishment) events shall be limited to 8,000 CY of material.

D. The demolition, repair and in-kind replacement of docks (including piers, gangways, floats, and piles), bulkheads, and piles with similar structures are excluded from the current Regional General Permit 54 program. These activities shall require a separate coastal development permit from the California Coastal Commission.

E. The City shall submit a pre-construction notification to the Executive Director and must receive a written authorization from the Executive Director prior to any dredging or disposal event undertaken by the City or by anyone with a legal right to dredge or dispose of dredged material. The Executive Director shall notify the City within 60 days indicating whether a proposed dredging or disposal event qualifies under the confines of the Regional General Permit 54 program or whether a separate coastal development permit/federal consistency certification is required from the Commission.

F. The City of Newport Beach Tidelands Administrator shall be the primary Point of Contact (POC) for applicants seeking authorization under Coastal Development Permit No. 5-14-0200 and Federal Consistency Certification No. CC-0002-15 (CDP/CC). Once the POC has determined an application meets the conditions of the subject CDP/CC, the POC will forward the application to the Executive Director of the Commission along with a written certification for the Executive Director's review and approval. The POC may submit one batch of applications to the Executive Director for review and approval once per calendar month; additional submittals per calendar month beyond the single batch submitted by the POC may be authorized by the Executive Director for good cause. This certification shall include the following information:

   i. Certification letter from the City of Newport Beach Tidelands Administrator confirming the proposed application meets the terms and conditions of the CDP/CC, with special emphasis on the presence or absence of eelgrass.

   ii. Maps of the project site including location within the harbor, site address, site assessor's parcel number, site latitude and longitude coordinates (decimal degree format), as well as to-scale drawings of the proposed action (plan view and cross-section view of proposed activity), including the boundaries of any proposed sediment dredging and/or disposal work, the location and physical dimensions of any existing docks, floats, piers, pilings and bulkheads (and general outline of same that is present on adjacent sites), the location of the bulkhead, project and

pierhead lines, and the specific location of any eelgrass beds within or near the work area (based on the most recent comprehensive eelgrass survey required pursuant to Special Condition No. 2).

iii. The proposed area of temporary impacts to coastal waters (in acres), proposed dredge and/or disposal quantities (in cubic yards and acres), including a detailed estimate of how much material has been dredged from or discharged onto the site through previous activities.

iv. The results of an invasive algae (*Caulerpa taxifolia*) survey of the proposed dredge area taken within 30 days of the date the application is submitted.

v. Photos (minimum of five) of the beach area and the low tide line (i.e., prior to any work), with special emphasis on any areas of eelgrass.

vi. Evidence of California State Lands Commission approval for any work upon land that is not within the City of Newport Beach tidelands grant, which shall consist of a copy of a permit issued by the California State Lands Commission, or letter of permission, or evidence that no permit or permission is required for the development to occur at the proposed site. The City shall inform the Executive Director of any changes to the project required by the California State Lands Commission. Such changes shall not be incorporated into the project until the permittee obtains a Commission amendment to this coastal development permit or a new coastal development permit, and, if applicable, a new consistency certification unless the Executive Director determines that no amendment or new permit and consistency certification is legally required. This may be a one-time requirement so long as the approval covers the entire geographic area and time period covered under this CDP/CC.

vii. Evidence of the permittee's legal ability to undertake the development on any land that is not owned in fee title by the City of Newport Beach or County of Orange or upon any land granted to the City or County pursuant to a State Tidelands grant under which said grant does not specifically authorize the grantee to undertake the proposed activity which shall include written documentation demonstrating that the permittee has the legal ability to undertake the proposed development as conditioned herein. The permittee shall inform the Executive Director of any changes to the project required in obtaining such legal ability. Such changes shall not be incorporated into the project until the permittee obtains a Commission amendment to this coastal development permit and, if applicable, a new consistency certification, unless the Executive Director determines that no amendment or consistency certification is legally required.. This may be a one-time requirement so long as the approval covers the entire geographic area and time period covered under this CDP/CC.

viii. Evidence of Regional Water Quality Control Board approval, which shall consist of a copy of a permit issued by the Regional Water Quality Control Board, or letter of permission, or evidence that no permit or permission is required for the development to occur at the proposed site. The City shall inform the Executive Director of any changes to the project required by the Regional Water Quality

Control Board. Such changes shall not be incorporated into the project until the permittee obtains a Commission amendment to this coastal development permit or a new coastal development permit and, if applicable, a new consistency certification, unless the Executive Director determines that no amendment or consistency certification is legally required. This may be a one-time requirement so long as the approval covers the entire geographic area and time period covered under this CDP/CC.

G. Annual Reporting: The City of Newport Beach shall submit annual reports for the life of the subject CDP/CC to the South Coast District Office (Long Beach) of the California Coastal Commission documenting activities authorized under this coastal development permit and consistency certification. Each annual report shall include a cumulative ledger documenting all activities conducted to date under the subject CDP/CC. The annual report shall be submitted no later July 1 of each year, beginning in 2016. Annual reports from the City shall include:

   i. A summary of dredging operations including location (coordinates and address) of each dredging operation and areas and volumes of material dredged (in cubic yards and acres).

   ii. Disposal location(s)(coordinates and address) and volumes for each method used (i.e., beach disposal, LA-3, or inland site).

   i. An estimate of the total acreage of coastal waters impacted for each activity type.

   ii. Summary of any direct and indirect eelgrass impacts for each activity type, and the on-site or off-site eelgrass mitigation completed or in progress.

   iii. An updated, to-scale map showing the locations of all activities conducted using this coastal development permit and consistency certification to date.

   iv. Confirmation of compliance with all special conditions, or a detailed explanation of any special conditions not complied with.

The City and anyone with a legal right to dredge or dispose of dredged material shall undertake development in accordance with the approved final Regional General Permit 54 program. Any proposed changes to the approved final program shall be reported to the Executive Director. No changes to the approved final program shall occur without a Commission amendment to this coastal development permit (and, if applicable, a new consistency certification) unless the Executive Director determines that no amendment is legally required.

2. **Final Revised Eelgrass Protection and Mitigation Plan.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit a document, subject to the review and approval of the Executive Director, detailing the final Eelgrass Protection and Mitigation Plan. The format of the document shall substantially conform to the preliminary plan most recently updated March 2015 and included as Exhibit 3 in the staff report dated 5/29/15, but shall be amended to reflect the following changes:

A. Term of Authorization and Requirement for Eelgrass Monitoring and Biennial Surveys: During the six (6) year period for which the applicant is authorized to dredge and dispose of suitable material at an approved ocean or beach disposal site under this CDP/CC (subject to the requirements of Special Condition 1), the applicant shall conduct a minimum of three (3) comprehensive eelgrass surveys of the Plan Area as specified in the Eelgrass Protection and Mitigation Plan. The first and the third of these surveys shall not be limited to the areas where dredging and beach replenishment are permitted under this permit, but shall cover the entire Newport Harbor. The surveys shall occur once every two years, beginning no later than one year after the issuance of this permit, unless the Executive Director grants additional time for good cause.

B. If invasive algae (*caulerpa taxifolia*) are found within the Plan Area, the City and anyone with a legal right to dredge or dispose of dredged material shall immediately (within 5 days) report it to the Executive Director, the National Marine Fisheries Service, and the Surveillance Subcommittee of the Southern California Caulerpa Action Team. The City and anyone with a legal right to dredge or dispose of dredged material shall not proceed with any dredging or disposal of dredged material in the Plan Area until the City has provided evidence to the Executive Director that all *Caulerpa taxifolia* discovered within the Plan Area has been eliminated in a manner that complies with all applicable governmental approval requirements, including but not limited to those of the California Coastal Act.

C. The demolition, repair and in-kind replacement of docks (including piers, gangways, floats, and piles), bulkheads, and piles with similar structures is excluded from the current approved Regional General Permit 54 program. These activities shall require a separate coastal development permit from the California Coastal Commission.

D. If eelgrass was present within a dredging footprint during the previous biennial survey, its presence at the time of dredging must be assumed and the size of the presumed eelgrass loss documented. That area shall be examined specifically during all following biennial surveys and the distribution and cover of eelgrass documented to determine recovery time.

E. Restoration undertaken by the City and Orange County Coastkeeper (with funding from the City) under Tier 1 and Tier 2, and restoration undertaken by dock owners under Tier 2, shall be documented and reported annually, including time and duration of restoration activities and types of activities undertaken. If Orange County Coastkeeper restoration activities are funded through sources in addition to the City, annual reporting shall document these additional funds and sources and include an estimate of the proportion of total restoration that can be attributed entirely to funding provided by the City. The annual reports shall also evaluate the success of the restoration in terms of eelgrass bed size, cover, and turion density.

F. The City shall submit an annual evaluation of the RGP 54 and Eelgrass Protection and Mitigation Plan which shall include: (a) estimates of the time required for eelgrass recovery with and without on-site restoration activities, (b) estimates of the total temporal loss of eelgrass due to dredging (acres and acre-years), (c) estimates of

the total area of off-site eelgrass restoration accomplished, and (d) the net mitigation accomplished.

G. This CDP/CC does not permit eelgrass impacts as a result of beach replenishment or disposal of dredged material in front of an existing bulkhead. If an unexpected impact to eelgrass occurs during disposal of dredged material, such impact shall be documented and reported to the Executive Director in the same manner that dredging impacts on eelgrass are documented and reported. If an impact was detected (as defined above), the report will include a summary of how the California Eelgrass Mitigation Policy will be complied with. Implementation of mitigation shall require a new coastal development permit unless the Executive Director determines that no amendment or new permit is required. The following implementation measures shall be applied:

   i. If eelgrass was present within 15 feet (in any direction) of a potential dredged material disposal site (in any direction) at the time of the most recent comprehensive eelgrass survey, that site shall be assumed to support eelgrass and cannot be used as a disposal site;

   ii. If eelgrass was present between 15-30 feet from a potential dredged material disposal site (in any direction) at the time of the more recent comprehensive eelgrass survey, then monitoring of the site for potential eelgrass impacts from disposal operations shall be required. Monitoring shall consist of pre- and post-project transects placed perpendicular to the shoreline and spaced five feet apart which map the eelgrass bed. Enough transects shall be used to extend the length of the project footprint. Along each transect, the extent of eelgrass shall be measured. Any decrease in eelgrass extent along any transect (pre-project vs. post-project) will constitute an impact. The pre-project transects shall be conducted no sooner than 60 days prior to the start of dredging and the post-project transects shall be conducted no later than 30 days following the completion of dredging.

   Should the monitoring identify an impact to a mapped eelgrass bed as a result of beach replenishment disposal of dredged material in front of an existing bulkhead, then mitigation consistent with the provisions of the California Eelgrass Mitigation Policy shall apply. An eelgrass monitoring report shall be submitted to the Army Corps of Engineers, National Marine Fisheries Service, and California Coastal Commission no later than 90 days following completion of disposal of dredged material on a beach or in front of an existing bulkhead(s).

The City and anyone with a legal right to dredge or dispose of dredged material shall undertake development in accordance with the approved final Eelgrass Protection and Mitigation Plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit and new consistency certification unless the Executive Director determines that no amendment and consistency certification is legally required.

3. **Construction and Operational Best Management Practices.** In order to minimize adverse environmental impacts and the unpermitted deposition, spill or discharge of any liquid or solid into the sea, the applicant and anyone with a legal right to dredge or dispose of dredged material subject to the program and plan approved by this CDP/CC shall implement the following construction-related and operational best management practices (BMPs), in addition to those construction best management proposed by the applicant's preliminary program titled "Permit Application Supplement: Proposed Regional General Permit 54," submitted January 2014, and included as Exhibit 2 in the staff report dated 5/29/15 and the applicant's Eelgrass Protection and Mitigation Plan most recently updated March 2015 and included as Exhibit 3 in the staff report dated 5/29/15:

   A. No construction materials, debris, waste, oil or liquid chemicals shall be placed or stored where it may be subject to wave erosion and dispersion, stormwater, or where it may contribute to or come into contact with nuisance flow.

   B. Any and all debris resulting from construction activities shall be removed from the site within 10 days of completion of construction.

   C. No machinery or construction materials not essential for project implementation shall be allowed at any time in the intertidal zone or in the harbor.

   D. Sediment for beach replenishment shall be placed, not dumped, using means to minimize disturbance to bay sediments and to minimize turbidity.

   E. If turbid conditions are generated during construction a silt curtain shall be utilized to minimize and control turbidity to the maximum extent practicable.

   F. All stock piles and construction materials shall be covered, enclosed on all sides, shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the soil.

   G. All debris and trash shall be disposed of in the proper trash and recycling receptacles at the end of each construction day

   H. The discharge of any hazardous materials into the harbor or any receiving waters shall be prohibited.

   I. Floating booms will be used to contain debris discharged into coastal waters and any debris discharged will be removed as soon as possible but no later than the end of each day.

   J. Non-buoyant debris discharged into coastal waters will be recovered by divers as soon as possible after loss.

   K. Prior to commencement of any activity authorized under this CDP/CC, the boundaries of any eelgrass meadow within 30 feet of the activity shall be marked with buoys so that equipment and vessel operators avoid damage to eelgrass meadows.

L. Barges and other vessels shall be anchored a minimum of 15 feet from any eelgrass bed. Anchors and anchor chains shall not encroach into any eelgrass bed.

M. Barges and other vessels shall avoid transit over any eelgrass meadow to the maximum extent practicable. Where transit over eelgrass beds is unavoidable such transit shall only occur during high tides when grounding and potential damage to eelgrass can be avoided.

The applicant and anyone with a legal right to dredge or dispose of dredged material subject to the program and plan approved by this CDP/CC shall include the requirements of this condition (including those BMPs proposed in the Regional General Permit 54 and the Eelgrass Protection and Mitigation Plan) on all plans and contracts issued for development subject to program and plan approved by this CDP/CC.

4. **Dredging and Dredged Material Disposal Requirements.** For this CDP/CC, the term dredging operations shall mean navigation of the dredging vessel at the dredging site, excavation of dredged material within the project boundaries, and placement of dredged material into a hopper dredge or disposal barge or scow. The following requirements shall apply, in addition to those proposed by the applicant's preliminary program titled "Permit Application Supplement: Proposed Regional General Permit 54," submitted January 2014, and included as Exhibit 2 in the staff report dated 5/29/15 and the applicant's Eelgrass Protection and Mitigation Plan most recently updated March 2015 and included as Exhibit 3 in the staff report dated 5/29/15:

I. Dredging Activities.

A. Under this CDP/CC, dredging operations are limited to -10 feet MLLW with a 2-foot allowable overdraft (1 foot paid, 1 foot unpaid).

B. Sediment Testing Requirements. The permittee is prohibited from dredging and disposing material in coastal waters that has not been tested and determined by the Commission, in consultation with the Army Corps of Engineers and with the Environmental Protection Agency Region IX (EPA), to be both clean and suitable for ocean disposal or beach replenishment. Prior to each dredging episode at each individual dredging location and prior to beach replenishment at each replenishment location, the permittee shall sample the material to be dredged and any beach-receiver location for the purpose of determining the physical characteristics of the material. Testing shall be performed consistent with procedures defined in: "Procedures for Handling and Chemical Analysis of Sediment and Water Samples," by Russell H. Plumb (1981), Corps Technical Report EPA/CE-81-1, pages 3-28 to 3-47. The grain size test shall be conducted on a composite of at least one core per one-quarter (1/4) acre area to be dredged and/or at least one core per site for each project, as well as at least one core per receiver beach location. The core depth shall be equivalent to the proposed dredging depth plus any over-dredging. Grain size data shall be reported to the nearest 1% for sand, silt, and clay consistent with procedures defined in: "Procedures for Handling and Chemical Analysis of Sediment and Water Samples," by Russell H. Plumb (1981), Corps Technical Report EPA/CE-81-1, pages 3-28 to 3-47.

C. At least 60 calendar days before initiation of any dredging operations authorized by this permit, the permittee shall send a dredging and disposal operations plan to the Corps, EPA, and CCC with the following information:

i. A list of the names, addresses and telephone numbers of the permittee's project manager, the contractor's project manager, the dredging operations inspector, the disposal operations inspector and the captain of each tug boat, hopper dredge or other form of vehicle used to transport dredged material to the designated disposal site.

ii. A list of all vessels, major dredging equipment and electronic positioning systems or navigation equipment that will be used for dredging and disposal operations, including the capacity, load level and acceptable operating sea conditions for each hopper dredge or disposal barge or scow to assure compliance with special conditions on dredging and disposal operations.

iii. A detailed description of the dredging and disposal operations authorized by this permit. Description of the dredging and disposal operations should include, at a minimum:

a. Dredging and disposal procedures for the dredged material determined by the Corps and EPA Region IX to be unsuitable for ocean disposal.
b. Dredging and disposal procedures for the material to be dredged from the proposed site.
c. A schedule showing when the dredging project is planned to begin and end.

iv. A pre-dredging bathymetric condition survey, taken within 30 days of the dredge start date. The survey may be taken via lead line, sounding disc, or sounding pole techniques according to Chapter 8 (Manual Depth Measurement Techniques) from the Corps Engineering and Design - Hydrographic Surveying manual (EM 1110-2-1003, published 01 Jan 2002). Each individual project survey using this method will include a minimum of three sounding points (adjusted for tide) per individual dock.

The pre-dredge survey shall be accurate to 0.5-foot with the exact location of all soundings clearly defined on the survey chart. The pre-dredge survey chart shall be prepared showing the following information:

a. The entire dredging area, the toe and top of all side-slopes and typical cross sections of the dredging areas. To ensure that the entire area is surveyed, the pre-dredge condition survey should cover an area at least 50 feet outside the top of the side-slope or the boundary of the dredging area, unless obstructions are encountered.
b. The dredging design depth, overdredge depth and the side-slope ratio.
c. The total quantity of dredged material to be removed from the dredging areas and the side-slope areas.

d. Areas shallower than the dredging design depth shall be shaded green, areas between the dredging design depth and overdredge depth shall be shaded yellow, and areas below overdredge depth that will not be dredged shall be shaded blue. If these areas are not clearly shown, the Corps may request additional information.
e. The pre-dredging survey chart shall be signed by the permittee to certify that the data are accurate and that the survey was completed within 30 days of the proposed dredging start date.
f. A debris management plan to prevent disposal of large debris at all disposal locations. The debris management plan shall include: sources and expected types of debris, debris separation and retrieval methods, and debris disposal methods.

D. The permittee shall not commence individual dredging operations unless and until the permittee receives a written authorization to proceed from the Executive Director of the Commission to commence work, subject to the terms of Special Condition 1(F).

E. The City shall require applicants to submit a post-dredging completion report, which shall be compiled by the City and submitted to the Executive Director in an annual report. The report shall include all information collected by the permittee, the dredging operations inspector and the disposal operations inspector or the disposal vessel captain as required by the special conditions of this permit. The report shall indicate whether all general and special permit conditions were met. Any violations of the permit shall be explained in detail. The report shall further include the following information:
    v. Permit and project number.
    vi. Start date and completion date of dredging and disposal operations.
    vii. Total cubic yards disposed at the authorized disposal site(s).
    viii. Mode of dredging.
    ix. Mode of transportation.
    x. Form of dredged material.
    xi. Frequency of disposal and plots of all trips to the authorized disposal site(s).
    xii. Tug boat or other disposal vessel logs documenting contact with the USCG before each trip to the authorized ocean disposal site.
    xiii. Percent sand, silt and clay in dredged material: for this CDP/CC only, see sediment testing requirements above.
    xiv. A certified report from the dredging site inspector indicating all general and special permit conditions were met. Any violations of the permit shall be explained in detail.
    xv. Pre-dredging hydrographic survey.
    xvi. A detailed post-dredging hydrographic survey of the dredging area. The survey shall show areas above the dredging design depth shaded green, areas between the dredging design depth and overdredge depth shaded yellow, areas below overdredged depth that were not dredged or areas that were deeper than the overdredge depth before the project began as indicated on the predredging survey shaded blue, and areas dredged below the overdredge depth or outside the project boundaries shaded red. The methods used to prepare the post-dredging survey shall be the same methods used in the predredging condition

survey. The survey shall be signed by the Permittee certifying that the data are accurate.

I. Beach disposal (beach replenishment)

A. Beach disposal (replenishment) shall be the preferred disposal method under the program. All sediment removed from the harbor which is suitable for beach replenishment (subject to the following testing and disposal requirements) shall be disposed of on beaches in front of bulkheads and at street end beaches throughout the bay, subject to the approval of the landowner, Tidelands administrator, and the Executive Director.

B. Grain Size Criteria: Material utilized for beach replenishment shall have a sand content that is either i) greater than 80% sand; or ii) at least 75% sand and within 10% of the sand content of the receiver beach. Any material that meets the requirements outlined above for beach replenishment and consists of less than 80% sand shall only be placed upon submerged beach areas (i.e. below the water line).

C. Prior to commencement of beach replenishment at a site, the results of each sampling episode and beach replenishment compatibility test described in Section I above shall be submitted for the review and approval of the Executive Director. Dredged material deemed suitable for beach replenishment may be deposited at the approved deposition sites only after the Executive Director has concurred with a City determination that the materials to be dredged have been deemed "suitable" using the standards in these special conditions. All dredged material deemed "unsuitable" for beach replenishment shall be disposed of at an approved location according to all federal, state and local regulations. If the disposal site is not within an approved ocean disposal site as identified in section II but is located in the coastal zone, a separate coastal development permit application shall be filed for the disposal of the "unsuitable" material. All contracts involving the subject project shall include the above stated condition of approval.

D. In no case will beach disposal be authorized with material dredged below the sediment testing characterization depth for any particular site.

E. A detailed description of the transport and discharge operations authorized by this permit will be submitted to the Executive Director of the Commission for review and approval at least 60 calendar days prior to work in coastal waters. Description of the transport and discharge operations shall include:

i. Transport and discharge procedures for all sediment, including all material unsuitable for beach replenishment discharge.
ii. A schedule showing when the beach replenishment project is planned to begin and end.
iii. A debris management plan to prevent disposal of large debris at all beach discharge locations. The debris management plan shall include: sources and expected types of debris, debris separation and retrieval methods, and debris disposal methods.

iv. The volume of material to be excavated and discharged.
v. A list of previous discharges by site, date, and volume, as well as the total volume of material which has been excavated and discharged to date using this CDP/CC.

F. The City must submit a pre-construction notification and must receive a written authorization to proceed from the Executive Director of the Commission before the permittee may commence any work.

G. The permittee shall send one copy of a beach disposal post-discharge report to the Executive Director documenting compliance with all general and special conditions defined in this permit. The post-discharge report shall be sent within 30 calendar days after completion of the discharge operations authorized in this permit. The report shall indicate whether all general and special permit conditions were met. Any violations of the permit shall be explained in detail. The report shall include:

i. CDP/CC number.
ii. Identify source of material.
iii. Total cubic yards disposed at each beach disposal site.
iv. Modes of transportation and discharge.
v. Actual start date and completion date of transport and discharge operations.

H. The permittee shall implement all appropriate, standard Best Management Practices to ensure that toxic materials, silt, debris, or excessive eroded materials do not enter coastal waters due to beach replenishment operations. Sediment for beach replenishment shall be placed, not dumped, using means to minimize disturbance to bay sediments and to minimize turbidity. If turbid conditions are generated during construction a silt curtain shall be utilized to minimize and control turbidity to the maximum extent practicable.

I. The permittee will establish a safety flag perimeter of the beach replenishment area during disposal activities, and monitor the premises to protect the general public from construction hazards and equipment.

J. No maintenance, storage, or fueling of heavy tracked equipment or vehicles will occur within 500 feet of the high tide line of waters of the United States.

II. Offshore (ocean) disposal

A. All of the sediments dredged from within the Plan Area that are deemed unsuitable for beach replenishment are suitable for ocean disposal, with the exceptions as identified in the RGP 54 program.

B. Prior to commencement of ocean disposal, the results of each sampling episode described in Section I(B) above shall be submitted for the review and approval of the Executive Director. Dredged material deemed unsuitable for beach disposal/replenishment may be deposited at the approved ocean disposal sites

only after the Executive Director has concurred with a City determination that the materials to be dredged have been deemed unsuitable for beach replenishment and are suitable for ocean disposal using the standards in these special conditions. All dredged material deemed unsuitable for beach replenishment shall be disposed of at an approved location according to all federal, state and local regulations. If the disposal site is not located at an approved ocean disposal site and is located in the coastal zone, a separate coastal development permit application shall be filed for the disposal of the material. All contracts involving the subject project shall include the above stated condition of approval.

C. For this permit, the phrase "ocean disposal operations" shall mean: the transportation of dredged material from the dredging site to the ocean disposal site, proper disposal of dredged material at the central disposal area within the ocean disposal site, and transportation of the hopper dredge or disposal barge or scow back to the dredging site.

D. The approved ocean disposal site is LA-3, effective October 2005: 33 degrees 31.00 minutes North Latitude, 117 degrees 53.30 minutes West Longitude (NAD 1983), circular site with radius of 3,000 feet.

E. In no case will offshore (ocean) or beach disposal be authorized for material dredged below the sediment testing characterization depth for any particular site.

F. No more than 8,000 cubic yards of dredged material excavated for an individual dredging project authorized under this CDP/CC are authorized for disposal at the LA-3 ocean disposal site.

G. The permittee shall ensure dredged material is not leaked or spilled from the disposal vessel(s) during transit to the ocean disposal site. The permittee shall transport dredged material to the ocean disposal site only when weather and sea state conditions will not interfere with safe transportation and will not create risk of spillage, leak or other loss of dredged material during transit. No disposal vessel trips shall be initiated when the National Weather Service has issued a gale warning for local waters during the time period necessary to complete disposal operations.

III. Inland disposal

A. If neither offshore disposal not beach disposal are available for an individual project proposed under this CDP/CC, material may be disposed of at an inland facility, subject to the review and approval of the Executive Director. If the disposal site is located in the coastal zone, a separate coastal development permit application shall be filed for the disposal of the material

5. **Final Report and Eelgrass Mitigation Requirement at End of Six-Year Trial Period.**

The final report for the six-year trial period of the Regional General Permit 54 program and Eelgrass Protection and Mitigation Plan shall assess the net effect of dredging and restoration activities on the presence of eelgrass within the Plan Area in the context of natural trends. The

City, using the biennial survey data and reference sites within the Plan Area that have not been affected by maintenance dredging or replenishment, shall report on the trends in eelgrass abundance over the permit period. Should reference sites indicate a decline in overall eelgrass abundance at the end of six years, the City, the California Coastal Commission, the California Department of Fish and Wildlife, and the National Marine Fisheries Service will evaluate the causes of such decline and use that information in assessing the success of restoration efforts undertaken by the City during the period of the Plan.

If, relative to the reference sites, there is a net loss in eelgrass in the impacted areas of Newport Bay at the end of the six years, the City, the California Coastal Commission, and the National Marine Fisheries Service will evaluate the success of the mitigation efforts by the City and by dock owners throughout the bay. If, through these discussions, the Executive Director determines that there is a shortfall in the necessary mitigation to offset temporal or permanent losses of eelgrass, a revised Eelgrass Mitigation and Monitoring Plan shall be prepared by the City to provide the necessary additional eelgrass mitigation. The revised Eelgrass Mitigation and Monitoring Plan shall require separate review and approval by the Commission through the regular coastal development permit/consistency certification process.

6. **Conformance with the Requirements of the Resource Agencies.** The applicant shall comply with all permit requirements and mitigation measures of the National Marine Fisheries Service, the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, the Environmental Protection Agency, the California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service with respect to preservation and protection of water quality and the marine environment. Any changes to the approved project which are required by the above-stated agencies shall be submitted to the Executive Director in order to determine if the proposed change shall require a permit amendment pursuant to the requirements of the Coastal Act and the California Code of Regulations.

7. **Assumption of Risk, Waiver of Liability, and Indemnity.** By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from slope instability, erosion, landslides and wave uprush, storm conditions, and sea level rise; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

IV. FINDINGS AND DECLARATIONS

A. PROJECT LOCATION AND DESCRIPTION

The development proposed by this application is located in Newport Harbor, a highly urbanized area of Newport Bay where the shoreline is nearly completely developed with residential and commercial structures. There is a high density of piers, docks and wharfs associated with private residences and commercial marinas, both along the edge of the bay and on several constructed islands. The City of

Newport Beach proposes a new Regional General Permit 54[1] to allow the City to assume primary permitting responsibility for small maintenance dredging projects with a designated plan area **(Exhibit 1)**.

The City of Newport Beach is proposing to continue their previously authorized small dredging and ocean or beach disposal (replenishment) program within the urbanized harbor areas of Newport Bay, Orange County. Suitable dredge material is used to replenish beaches in front of bulkheads and at street end beaches throughout the bay. Dredge material unsuitable for beach replenishment is disposed at the existing EPA and Commission authorized ocean disposal site LA-3, located approximately four miles southwest of the entrance to Newport Harbor in Orange County (**Exhibit 2** - Page 22).

As a result of continuous sedimentation, there is a periodic need to dredge both the navigational channels and the shallow areas where the piers are located. Whereas the City in cooperation with the Army Corps of Engineers is responsible for maintaining navigable waters, the owners of private piers and docks are responsible for their own maintenance activities, including the periodic dredging necessary to accommodate the mooring of vessels.

The proposed dredging and disposal program is a substantially expanded version of the programs previously approved by the Commission under Coastal Development Permit Nos. 5-99-282 and 5-06-117, as amended, and Consistency Certification Nos. CC-078-99, CC-077-01, and CC-0310-06. Key elements include a yearly limit of 75,000 cubic yards of dredging and disposal (compared with prior yearly 20,000 cubic yard cap -including physical sediment characterization requirements for each project), an 8,000 cubic yard cap on the size of each individual dredging and ocean/beach disposal event (compared with 1,000 cubic yard cap in prior approval), and eelgrass (*Zostera spp.*) and invasive algae (*Caulerpa taxifolia*) survey requirements including required avoidance. The proposed dredging and disposal program would permit impacts to eelgrass in Newport Bay subject to an Eelgrass Protection and Mitigation Plan developed by the applicant in consultation with the National Marine Fisheries Service and the Commission's Staff Ecologist. The proposed dredging program would be authorized for a period of six years.

The coastal development permit is only for the deposition of suitable dredged material for beach replenishment, the scientific activities subject to the Eelgrass Protection and Mitigation Plan, and any associated eelgrass restoration/mitigation activities undertaken by the City or dock owners. The beach replenishment is a non-exempt form of development given the attendant use of mechanized equipment on a beach. The actual dredging activity, which is required for the maintenance of existing navigational channels, is exempt from coastal development permit requirements. Pursuant to Section 30610(d) of the Coastal Act, maintenance dredging less than 100,000 cubic yards in one year is exempt from coastal development permit requirements. The City's initial submittal also included request for a blanket authorization for repair and in-kind replacement of docks (including piers, gangways, floats, and piles), bulkheads, and piles with similar structures. However, the City has withdrawn that part of the request and such development would not be covered by the Regional General Permit 54 program. These activities will still require a separate coastal development permit from the Commission.

[1] 'Regional General Permit 54' or 'RGP 54' is terminology used by the Army Corps to describe a programmatic approval within a defined geographic area of an activity that needs Corps authorization. Over time 'RGP 54' has become a moniker used by all the agencies involved, including the CCC, to describe the City's dredging program for slips in Newport Harbor. Both the Corps and Commission approvals require periodic reauthorization.

The subject coastal development permit application is a companion to Consistency Certification CC-0002-15 that requests authorization of the dredging and any necessary off-shore disposal of dredge materials. The requested federal consistency certification would also include the proposed Eelgrass Protection and Mitigation Plan for eelgrass impacts, which will be applied to dredging activity and temporal eelgrass impacts in Newport Harbor, subject to the special conditions of this permit and conditional consistency certification.

The proposed dredging would occur from the bulkhead to the pierhead line plus 20 feet bayward, including those exceptions for structures that extend beyond this boundary as of 2013 in conformance with harbor development regulations or policy. Disposal of suitable material (non-toxic, appropriate sediment composition and grain size) would be permitted on beaches in front of bulkheads and adjacent to street ends in lower Newport Bay; and within Upper Newport Bay in the bulkheaded areas of Dover Shores, Bayside Village and existing docks at Shellmaker Island. The RGP 54 program boundaries are called out in detail in **Exhibit 2** - Pages 24-26 and the Eelgrass Protection and Mitigation Plan in **Exhibit 3** - Pages 35-45.

There are parts of Newport Bay that are not a part of this coastal development permit and consistency certification. For instance, areas of the harbor where there are no bulkheads and/or docks, such as the shoreline in Upper Newport Bay adjacent to Castaways, the marina and sandy beach surrounding the cove at Newport Dunes, areas adjacent to Shellmaker Island and the area within the Upper Newport Bay Ecological Reserve, are not proposed for dredging or beach replenishment.

The proposed project includes areas of the harbor which are Tidelands granted either to the City of Newport Beach or the County of Orange by the California State Lands Commission. The City of Newport Beach is the applicant. The County of Orange has authorized the City to act on its behalf. The proposal also includes some submerged lands that are privately owned such as those lands within the coves at Dover Shores and the interior cove and part of the surrounding channel of Linda Isle. These private lands are owned by homeowners associations who have authorized the City to act on their behalf.

The City of Newport Beach has submitted a consistency certification for maintenance dredging and ocean disposal of suitable material. Pursuant to CC-0002-15, maintenance dredging of navigation channels to pre-existing dredge depths of up to 8,000 cubic yards of material per event may be dredged from under private, public, and commercial piers, docks, and floats between the Bulkhead Line and the Pierhead Line within the areas identified in Exhibit 2 and Exhibit 3. The applicant states that the typical individual dredge project is 1,000-8,000 cubic yards and impacts eelgrass around the edges of an existing dock, which the applicant suggests usually recovers in a period of one to two years. Prior to any dredging event, the dock owner or contractor must submit an application package to the City of Newport Beach Tidelands Administrator, subject to the requirements of **Special Condition 1(F)**, which include maps of the proposed dredging area, photos of the area, an invasive algae (*caulerpa taxifolia*) survey of the area, a plan for disposal of the dredged material, and a construction plan (see **Exhibit 5** - application sample).

Under the pre-existing RGP 54 program, suitable dredged material has been pumped from a hydraulic suction dredge via flexible pipelines to deposition sites on the City's beaches along the shoreline of Lower Newport Bay. Subject to the review of the Executive Director, as outlined in **Special Condition 1** dredged material may also be transported and deposited by other means. As proposed, suitable dredged material will be deposited for beach replenishment in the near shore area, or above the mean high tide line. There are 150 street ends and approximately 1,200 residential bulkheads

where beach replenishment could occur. Where necessary, the sand will be spread mechanically to evenly distribute the sand over the deposition area. The maximum quantity of material disposed at any one time at any single site would be 8,000 cubic yards. Subject to **Special Condition 2**, the City cannot conduct any disposal activities within 15 feet of any mapped eelgrass bed and activities with 15-30 feet of a mapped eelgrass bed require monitoring, and mitigation if impacts to eelgrass are determined to have occurred.

The applicant has provided a baseline evaluation of the suitability of the dredge materials for beach replenishment **(Exhibit 2** - pages 23-26**)**. This report generally indicates that dredge materials within Newport Bay in the proposed project area are suitable for beach replenishment from a grain size suitability and chemical standpoint. **Special Condition 4** requires the applicant to conduct specific grain size analyses of both donor and receiver sites prior to any disposal activity of dredged sediment on a beach. Beach disposal is the preferred disposal method under the program; material which is not suitable for beach nourishment will be disposed offshore at LA-3 or at an inland disposal site.

An early version of the proposed RGP 54 was approved by the Newport Beach City Council (November 2010) and a more detailed proposal was approved and determined to be categorically exempt from California Environmental Quality Act requirements by the City of Newport Beach Harbor Resources Manager on May 1, 2013. The applicant based some of the parameters of the RGP 54 on consultation with the Southern California Dredged Material Management Team, including representatives from the Corps, California Department of Fish and Wildlife, Regional Water Quality Control Board, National Marine Fisheries Service, Port of Long Beach, Coastal Commission staff, and project consultants. The Eelgrass Protection and Mitigation Plan was designed with input from the National Marine Fisheries Service, Coastal Commission staff, and project consultants. The applicant has applied for a permit (401 Water Quality Certification) from the Regional Water Quality Control Board. The full RGP 54 permit application is pending with the Army Corps of Engineers. In order to ensure that the applicant obtains the required permits for the dredging program and complies with the requirements of such permits over the six-year authorization of the program, **Special Condition 6** requires the applicant to comply with the requirements of the resource agencies.

B. HABITAT AND BIOLOGICAL RESOURCES

Section 30230 of the Coastal Act states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow,*

encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Newport Bay contains habitat for a diverse variety of wildlife. For instance, there is salt marsh, tidal flats, sandy beach, subtidal mud seafloor, and open water habitat at various locations throughout the bay. Eelgrass and other sensitive vegetation are present in some locations. In addition, several sensitive and endangered bird species nest, breed and forage in these habitat areas. Upper Newport Bay is especially rich with sensitive habitat and wildlife. For instance, California least tern, Belding savannah sparrow, and light-footed clapper rail nest and breed in the Upper Newport Bay and then forage in the upper and lower bay.

The applicant has submitted biological assessments for Newport Bay. These studies indicate that eelgrass (*Zostera spp.*) is present within Newport Bay, particularly around Balboa Island, Linda Isle, Harbor Island, along the channel between Lido Isle and Mariners Mile, along shorelines near the harbor entrance and elsewhere throughout the bay, except for the westerly side of the bay where tidal flushing is very, very low. Eelgrass typically grows at depths ranging from 0 feet to –15 feet Mean Lower Low Water. In some areas of Newport Harbor, such as along Balboa Island, eelgrass occurs at shallower depths. Eelgrass is generally found along the bulkheads and along sandy shorelines within the harbor. However, in locations where the bottom is heavily shaded by docks and moored vessels, eelgrass does not grow due to inadequate light levels.

Eelgrass Impacts and Proposed Mitigation Plan

Newport Harbor currently supports approximately 88 acres eelgrass on its soft bay bottom, much of it in the shallow waters around piers and docks. Submerged aquatic vegetation, such as eelgrass, provides many important ecosystem services, has suffered widespread losses and degradation due to human activities, and is of worldwide conservation concern. The National Marine Fisheries Service (NMFS) identifies eelgrass beds as Essential Fish Habitat and supports a policy of no net loss of this habitat. To that end, NMFS developed a Southern California Eelgrass Mitigation Policy that provided guidelines for monitoring and restoring eelgrass beds. This has recently been replaced by the California Eelgrass Mitigation Policy and Implementing Guidelines (dated October 2014) that covers the whole state. This mitigation policy includes detailed mapping and monitoring of eelgrass at reference sites, at sites of potential impacts from development, and at mitigation sites where eelgrass is restored by seeding or planting. These restoration and monitoring procedures often require trained professionals, are technically difficult, and can be expensive.

Around piers and docks, eelgrass tends to grow along the edges. Due to the negative effects of shading, eelgrass usually does not occupy the area directly under the pier and dock and is often sparse or absent within the actual boat slip if the vessel is generally present. As a result, maintenance dredging around a pier or dock removes a relatively small area of eelgrass and the eelgrass tends to recolonize the area relatively rapidly. However, mitigating those small losses requires costly procedures similar to those required for large impacts and dock owners tend to avoid dredging even when it is needed.

Since 2003 the City of Newport Beach has funded studies to document the distribution and abundance of eelgrass within the harbor and to understand factors affecting its recruitment and growth. The City has used the results of those studies as a basis for developing a plan that enables the routine maintenance dredging typically undertaken by individual dock owners to be carried out without triggering the implementation called for under the California Eelgrass Mitigation Policy.

The City has developed the proposed Eelgrass Protection and Mitigation Plan that would have it assume the responsibility for monitoring and maintaining eelgrass within the harbor and would simplify the mitigation requirements of individual dock owners. The Plan Area encompasses the portions of the harbor defined as "the bulkhead to pierhead line plus 20 feet bayward, including those exceptions for structures that extend beyond this boundary as of 2013 in conformance with harbor development regulations or policy." Based on eelgrass studies undertaken since 2003, the plan area has been divided into a "stable zone" where eelgrass is relatively abundant and does not fluctuate much from year to year, and a "transitional zone" where eelgrass tends to be sparse, patchy, and temporally variable (see **Exhibit 1**).

Within each zone, three abundance "tiers" have been defined in the Plan. Larger impacts (up to 5% of eelgrass in the zone) are allowed when eelgrass is abundant (Tier 1). Smaller impacts (up to 3% of eelgrass in the zone) are allowed when eelgrass is less abundant (Tier 2). When eelgrass is in Tier 1, the dock owner has no mitigation responsibilities but the City institutes offsite eelgrass seeding and planting activities proportional to the amount of routine maintenance dredging undertaken by dock owners and pursues an educational program to increase the understanding of the ecological importance of eelgrass and encourage practices that contribute to eelgrass health. Under Tier 2, in addition to the activities of Tier 1, dock owners who have dredged must deploy seed bags or plant eelgrass within the dredged footprint to reduce the temporal loss. The Plan is only operational when eelgrass is relatively abundant. When eelgrass abundance falls below a defined level (Tier 3), mitigation as required by the California Eelgrass Mitigation Policy is the responsibility of the dock owner. The heart of the plan is mapping and estimating the density of eelgrass every two years in the shallow waters where piers are found and every four years throughout the harbor.

The critical assumption underlying this plan is that dredging impacts to shallow water (≤ 12 feet) eelgrass within the defined Plan area are "temporary and minimal." The amount of permissible impact is related to the size of the eelgrass population, with larger amounts of impact allowed when eelgrass is abundant and less impact allowed when the eelgrass population is smaller. In order to make these determinations, the City will continue to fund biennial surveys of eelgrass within the Plan Area and periodic comprehensive eelgrass surveys throughout Newport Harbor, including deep areas. **Special Condition 2** requires the City to conduct a minimum of three such surveys during the course of the six-year authorized maintenance dredging program.

The assumption that the dredging impacts to shallow water eelgrass are "temporary" is based on the professional judgment of resource agency and City biologists who think that eelgrass will fully recolonize the dredged areas in about 2 years or less. The biennial eelgrass surveys provide a basis for testing this assumption. The other critical assumption is that the impacts are "minimal." For this assumption to be realized, the impacts should be small relative both to the Plan area and to the overall eelgrass population within the harbor. Since 2003, the average size of the eelgrass population in the combined stable and transitional zones of the Plan area has been about 20.53 acres. If 5% were removed each year, there would be an average annual loss of about 1.0 acre of eelgrass. If there is temporary loss for 2 years during recovery and if 50% of the lost eelgrass grows back each year, then the net annual cumulative loss after the first year would be about 1.5 acres and this is the amount that would require mitigation. An average cumulative loss of 1.5 acres is about 1.7% of the 88 acres of eelgrass estimated to be present in all of lower Newport Harbor in 2012 and about 1.9% of the roughly 79 acres present there in 2008 (the deeper water eelgrass varied very little between the two surveys). This estimate of proportional loss is based on the maximum allowable impact, assuming the

population is in Tier 1. The actual impacts would probably be somewhat less over time after the accumulated demand for dredging was met.

In order to assure that the amount of impact is scaled to the abundance of eelgrass, the City proposes two constraints. First, the allowable impact is a percentage of the population that is present. Second, three abundance levels or Tiers have been established. When the eelgrass population is within Tier 1, there may be an annual loss of eelgrass within the plan area of 5%. The allowable loss is reduced to 3% when the population is in Tier 2. If the abundance of eelgrass in the plan area falls below Tier 2, the plan no longer applies and the applicant must go through the standard permitting process and comply with the requirements of the National Marine Fishery Service's 2014 California Eelgrass Mitigation Policy. The Tier boundaries are essentially arbitrary. As originally proposed, the lower boundary of Tier 1 was the average abundance of the four surveys conducted since 2003 and the lower boundary of Tier 2 was the lower 95% confidence bound of that mean. After discussions with Coastal Commission staff and staff of the NMFS and the California Department of Fish and Wildlife, the City has agreed that the Tiers will be based on the estimated frequency with which the eelgrass population is at various abundance levels based on population estimates since 2003 and on the assumption that the samples are from a normal distribution. The tiers are set such that over the long term, the eelgrass population will be high enough to fall within Tier 1 forty percent of the time and within Tier 2 twenty percent of the time. The lowest forty percent of abundance estimates fall within Tier 3. The eelgrass population within the harbor appears to be healthy and near the upper limit determined by the availability of suitable habitat. Therefore, the abundance during recent years is an appropriate touchstone for establishing fixed Tier boundaries. In order to insure that impacts are "minimal," the City has agreed to an additional constraint on dredging: No more than 1% of the estimated total abundance of eelgrass within Newport Harbor may be temporarily impacted by dredging each year.

In order to be consistent with Section 30233 of the California Coastal Act, dredging impacts to marine resources must be mitigated. Since, in this case, the periodic impacts occur repeatedly in the same areas and are temporary (i.e. no new structure is being proposed that would create shading and a permanent impact), permanent mitigation need only be accomplished once to replace in perpetuity the occasional temporal losses. Two types of mitigation are proposed. When dredging impacts to eelgrass occur under Tier 2, the dock owner who is the responsible party must engage in on-site restoration work in the form of deployment of seed bags or planting of eelgrass turions using a surface deployable method. The dock owner is not responsible for monitoring. Assuming these activities increase the rate of eelgrass colonization, they will have the effect of reducing temporal losses, but will not mitigate for those losses.

Under the Plan, the City is the primary eelgrass steward and responsible party. In addition to significant public education and outreach to encourage compliance with the Plan and the commitment to detailed biennial eelgrass surveys necessary to implement the Plan, the City has committed to contributing $30,000 to Orange County Coastkeeper to develop and implement eelgrass restoration methods in Upper Newport Bay. In addition, the City will deploy seed bags and transplant eelgrass using surface-deployed frames at various offsite locations at public piers and docks. This effort will be proportional to the amount of maintenance dredging taking place. The location of these activities should be identified in the plan and appropriate reference sites should be selected.

The actual impacts to eelgrass from dredging, the actual period required for eelgrass recolonization and recovery with and without on-site restoration activities, the actual eelgrass temporal losses, and the actual amount of eelgrass restoration accomplished by the City and Orange County Coastkeeper

(with funding from the City) can only be determined after-the-fact. In evaluating recovery from impacts and the success of restoration efforts, natural trends in eelgrass abundance within shallow areas of the harbor must be considered. The California Eelgrass Mitigation Policy addresses this issue as follows: "Performance milestones may be re-evaluated or modified if declines at a mitigation site are also demonstrated at the reference site, and therefore, may be a result of natural environmental stressors that are unrelated to the intrinsic suitability of the mitigation site."

Special Condition 5 requires the City to submit a final report for the six-year trial period of the Regional General Permit 54 program and Eelgrass Protection and Mitigation Plan, which shall assess the net effect of dredging and restoration activities on the presence of eelgrass within the Plan Area in the context of natural trends. If, relative to the reference sites, there is a decline in eelgrass in the impacted areas of Newport Bay at the end of the six years, the City, the California Coastal Commission, California Department of Fish and Wildlife, and the National Marine Fisheries Service will evaluate the success of the mitigation efforts by the City and by dock owners throughout the bay. If, through these discussions, the Executive Director determines that there is a shortfall in the necessary mitigation to offset temporal or permanent losses of eelgrass, an Eelgrass Mitigation and Monitoring Plan shall be prepared by the City to provide the necessary additional eelgrass mitigation.

In order to make sure enough data is collected to evaluate the effects of the Plan, **Special Condition 1 and Special Condition 2** require the applicant to collect detailed data and prepare annual reports detailing the eelgrass impacts due to dredging and the relative success of revegetation efforts by the City and by private dock owners.

Dredging, disposal, contaminants and water quality

One of the potential adverse effects from dredging, ocean disposal, and beach replenishment activities is the re-suspension and relocation of contaminants. Dredge material can contain elevated levels of heavy metals, pesticides, organics, and other pollutants. These contaminants usually are bound to finer grain material such as clay and silt. Pursuant to the requirements of the Army Corps of Engineers and under the direction of the U.S. Environmental Protection Agency (EPA), the applicant conducted physical, chemical, and biological tests on the sediments within the proposed dredging areas of Newport Bay.

The Commission generally uses the federal testing requirements and guidelines for evaluating the suitability of sediment for aquatic disposal. Contaminants of potential ecological concern (COPECS) included heavy metals, chemical analogues of the pesticide DDT, and polynuclear aromatic hydrocarbons (PAHs) (i.e. chemicals formed during the incomplete burning of coal, oil, gas and other organic substances). In some cases, the sediment chemistry occurs in a range where it may or may not be suitable for ocean disposal or beach replenishment purposes. In those situations, federal dredging testing protocols require the applicant to conduct bioassay and bioaccumulation tests.

Samples were collected from 33 stations comprising six proposed dredging areas in Newport Bay in 2005 and these samples were subjected to a comprehensive suite of physical, chemical and biological (toxicity and bioaccumulation) tests as reported in Dredged Material Evaluation for the Renewal of Regional General Permit-54, Newport Beach California Final Draft (November 2005) and more recently in the Permit Application Supplement: Proposed Regional General Permit 54 **(Exhibit 2)**. The report provides information to determine the suitability of dredged material from these specific areas of Newport Bay for aquatic disposal at the federally-approved ocean disposal site LA-3 or for beach replenishment within Newport Bay. The bay sediments have varying levels of pollutants due to

urban runoff and some past industrial uses of the bay, but testing has indicated for most of the bay, the levels of pollutants are low enough that the dredged material can be safely disposed at the ocean disposal sites or, where sand content is adequate, can be used to replenish beaches within the bay. In addition, toxicity and bioaccumulation tests show that the placing sediments at aquatic disposal or reuse sites will have no measurable impacts on coastal resources. Any location where testing showed elevated or potentially elevated levels of pollutants were excluded from the plan by the applicant.

The applicant is proposing to use dredged sediment for beach replenishment purposes where it has the appropriate sand content. The composition of beach replenishment material can affect the environment. Dredged and deposited sediments can be composed of sand as well as fine-grained material such as silt and clay. One concern relating to the amount of fines in beach replenishment sediment is that the replenishment effort can introduce a grain size that is not already part of the receiver beach environment. Another concern is turbidity associated with fines. Finally, contaminants such as those found in Newport Bay, generally are associated with sediments that are higher in silt or clay content and not associated with sand-sized material. Generally, this occurs because silt and clay particles have larger surface areas to which contaminants may attach.

The Commission has typically used 80% sand content as the lower limit for the use of dredged material for beach replenishment. However, in certain cases the Commission has authorized lower thresholds. For example, in its authorization of the prior dredging program in Newport Bay (CDP 5-99-282, as amended, and Consistency Certification No.s CC-078-99 and CC-077-01) the Commission authorized use of any material dredged under the program for beach replenishment in Newport Bay so long as the sand content of the dredged material and receiver beach were within 10% of one another. Another example is the opportunistic beach sand replenishment program in San Clemente (CDP 5-02-142) where the Commission authorized use of material with 75% sand content or greater (subject to certain time of year limitations to address turbidity).

In this case the applicant is proposing to use any sediment dredged from the approved dredging areas that is comprised of 75% or more sand for beach replenishment. Where the dredged sediment has a sand content between 75% and 80%, the applicant only proposes to use such material for replenishment if the sand content of the dredged sediment and receiver beach are within 10% of one another.

As noted above, some of the sediment to be dredged is known to have contaminant levels elevated above natural conditions, but generally within the range of urbanized estuaries on the California coast. Bioaccumulation and toxicity testing has demonstrated that these contaminants are not biologically available and that the material is suitable for ocean disposal. The U.S. EPA has affirmatively stated that ocean disposal of sediments dredged from within the approved dredging areas is acceptable.

However, the suitability of these sediments for beach replenishment requires further analysis since the estuarine conditions differ from those at the ocean disposal sites. Based on the proposed beach replenishment requirements (more than 80 percent sand or more than 75% sand if the receiving beach is between 65% and 85% sand), dredged sediments used for beach replenishment will be similar in physical, chemical and biological properties to the beach sands and shallow subtidal sediments they will be supplementing. Dredged sediments with more than 75% sand (and subject to this permit) will only be found in areas of relatively high energy from tidal currents or small wind waves. Consequently dredged sediments that may be placed on the beach will only be found directly adjacent to the beaches and will only have an incrementally higher amount of silts and clays than the beaches.

Where core samples in potential dredging areas with moderately high sand content (such as Area 4b with 63% sand) were subjected to toxicity and bioaccumulation testing, they showed no toxicity or significant bioaccumulation. The cores with much lower sand content (10 to 40%) resulted in toxicity levels that were not significantly different than that found at reference sites. Consequently dredged sediments with more than 75% sand content are very unlikely to have adverse affects on estuarine aquatic organisms or to have an impact measurably different than the existing beach sands. In addition, the low levels of contaminants found in the sediment samples were well below human health screening levels published by the USEPA (USEPA Region IX Preliminary Remediation Goals, 2004).

Also, it should be noted that the sediment tests are very sensitive. The effects of exposure are measured by using organisms that live in and ingest the sediment. These tests have shown that mortality of these organisms exposed to sediments from the dredge sites is not statistically significantly different than the mortality of organisms exposed to a reference site. As is noted above, the EPA and the Army Corps of Engineers have found that the sediment to be dredged from the lower Newport Bay is suitable for ocean disposal. Given that the sediments are suitable for ocean disposal and understanding the sensitivity of the tests which determined that ocean disposal is acceptable, the use of the same sediments for beach replenishment will also not have significant adverse effects upon biological resources on the beach. **Special Condition 4** requires sediment testing and approval of the Executive Director prior to disposal of any dredged material on beaches. The Commission finds the proposed project consistent with Section 30231 of the Coastal Act. In addition, the Commission finds that with these measures, the proposed project will not affect water quality resources of the coastal zone, and therefore, the project is consistent with the Water Quality policy of the CCMP.

Storage or placement of construction materials, debris, or waste in a location subject to erosion and dispersion or which may be discharged into coastal water via rain, surf, or wind would result in adverse impacts upon the marine environment that would reduce the biological productivity of coastal waters. For instance, construction debris entering coastal waters may cover and displace soft bottom habitat. In addition, the use of machinery in coastal waters not designed for such use may result in the release of lubricants or oils that are toxic to marine life. Sediment discharged into coastal waters may cause turbidity, which can shade and reduce the productivity of foraging avian and marine species ability to see food in the water column. In order to avoid adverse construction-related impacts upon marine resources, **Special Condition 3** outlines construction-related requirements to provide for appropriate construction methods as well as the safe storage of construction materials and the safe disposal of construction debris.

Dredging, disposal and consistency with Coastal Act Section 30233

The proposed dredging, offshore disposal, and beach replenishment project includes the dredging of sediment from bay waters and either offshore aquatic disposal or placement of dredged material on the beach and below the mean high tide line (MHTL). The extraction of sediment from bay waters is dredging. In addition, the placement of any material below the MHTL is fill as defined by Section 30108.2 of the Coastal Act.

Section 30233 of the Coastal Act allows dredging and filling of coastal waters or wetlands only where feasible mitigation measures have been provided to minimize adverse environmental effects, and for only the eight uses listed in Section 30233 of the Coastal Act, as follows:

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(6) Restoration purposes.

(7) Nature study, aquaculture, or similar resource dependent activities.

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

In this case, the proposed dredging and offshore disposal would occur in order to maintain existing and/or restore previously dredged depths in existing navigational channels, turning basins, and vessel berthing and mooring areas. Meanwhile, fill would result from the restoration of beaches where erosion has narrowed the prior width of the beach. The proposed development includes the dredging and either offshore disposal or beach replenishment of up to 75,000 cubic yards of sediment per year. The volume of dredged material that is proposed for ocean disposal would not exceed 8,000 cubic yards for a completed individual dredging project. In addition, no more than 8,000 cubic yards of material is proposed to be disposed on the beach at one time in any single location. This proposed dredging and fill is allowable pursuant to Sections 30233(a)(2), 30233(a)(5) and 30233(b) of the Coastal Act.

Section 30233 of the Coastal Act also requires that the proposed dredging and fill of coastal waters be the least environmentally-damaging feasible alternative including the use of feasible mitigation measures to reduce adverse environmental effects. The City has proposed measures to ensure that the

proposed project is the least environmentally-damaging feasible alternative and has included mitigation measures to avoid adverse effects on the marine environment.

The proposed dredging would only occur in previously dredged areas to restore previously dredged depths. There are no feasible alternatives to the proposed dredging which would restore the berthing areas at the subject sites and be less environmentally damaging. The proposed dredging would be capped at 8,000 cubic yards per dredging event. The applicant is proposing measures to minimize impacts from the dredging including and avoiding any development in the areas of Upper Newport Bay (i.e. within the Upper Newport Bay Ecological Reserve) that could potentially disturb the breeding activities of sensitive bird species. Therefore, the proposed dredging is the least environmentally damaging feasible alternative.

The City considered at least three options for disposal of beach suitable material. The first option was the no project alternative. Under the no project alternative, no disposal would occur. Without a site to dispose of dredge material, dredging within Newport Bay could not occur. Without dredging, boat slips within the harbor would become silted and unusable. Silting of boat slips within the harbor would decrease the usefulness of the harbor for recreation oriented boating. Accordingly, the no project alternative would have an adverse impact upon boating related uses of coastal waters. In addition, without dredging, public beaches within the harbor could not be replenished with needed beach quality sand and would continue to erode.

The second option was to dispose of all dredge spoils at an upland location. Disposing beach quality dredge materials at an upland location would remove those materials from the shoreline sand supply, increasing erosion. Therefore, this alternative would have an adverse impact on shoreline sand supply.

The third option is the proposed project which results in the use of beach quality dredge material for beach replenishment purposes. This option would avoid any adverse impacts upon shoreline sand supply by re-contributing beach suitable material toward beach replenishment projects. Under this alternative, the applicants are proposing several mitigation measures to mitigate any adverse effects the project may have upon water quality and sensitive marine resources. These measures include avoiding any disposal activities within 15 feet of any eelgrass bed and monitoring for any disposal activity between 15-30 feet of any mapped eelgrass bad **(Special Condition 2)**. Accordingly, disposal impacts to eelgrass will be avoided. The applicant is also proposing to conduct testing of any sediment planned for beach replenishment to ensure compatibility of that sediment for beach replenishment purposes, subject to **Special Condition 4**. These measures will avoid impacts to sand supply and sensitive habitat resources. Additionally, the applicant has limited beach replenishment to 8,000 cubic yards per project, with a maximum total of 75,000 cubic yards of beach replenishment or offshore disposal per year. By limiting the scope of the project, the applicant's proposal will not have significant impacts on marine or estuarine waters.

The applicant asserts that all eelgrass impacts from the dredging program authorized by this CDP/CC will be temporary. The Commission's staff Ecologist John Dixon has reviewed the applicant's RGP 54 Supplement **(Exhibit 2)** and multiple drafts of the Eelgrass Protection and Mitigation Plan **(Exhibit 3)**, and has corresponded with the applicant regarding the proposed ecosystem based approach, whereby temporal impacts are permitted provided the applicant conduct continuous replanting efforts and surveys the results at least every two years. Dr. Dixon has also corresponded with National Marine Fisheries staff who offered suggestions to mitigate the temporal eelgrass impacts of the dredging program. However, as Dr. Dixon writes in his memo **(Exhibit 4)** the actual

impacts to eelgrass from dredging, the actual period required for eelgrass recolonization and recovery with and without on-site restoration activities, the actual eelgrass temporal losses, and the actual amount of eelgrass restoration accomplished by the City and Orange County Coastkeeper can only be determined after-the-fact. In evaluating recovery from impacts and the success of restoration efforts, natural trends in eelgrass abundance within shallow areas of the harbor must be considered. The California Eelgrass Mitigation Policy addresses this issue as follows: "Performance milestones may be re-evaluated or modified if declines at a mitigation site are also demonstrated at the reference site, and therefore, may be a result of natural environmental stressors that are unrelated to the intrinsic suitability of the mitigation site."

Consistent with Coastal Act Section 30233, actual mitigation for dredging impacts is required. The applicant asserts that all eelgrass impacts will be temporary, but if the dredging program causes impacts which are severe or permanent, then additional mitigation will be required. Following the biennial eelgrass surveys, **Special Condition 1(A)** allows the Executive Director to require the applicant to apply for an amendment to this coastal development permit and a new federal consistency certification if the Executive Director determines that the development authorized by this CDP/CC is causing adverse impacts to habitat which are not being mitigated. **Special Condition 5** requires the City to submit a final report for the six-year trial period of the authorized dredging program and Eelgrass Protection and Mitigation Plan, which shall assess the net effect of dredging and restoration activities on the presence of eelgrass within the Plan Area in the context of natural trends. If, relative to the reference sites, there is a decline in eelgrass in the impacted areas of Newport Bay at the end of the six years, the City, the California Coastal Commission, and the National Marine Fisheries Service will evaluate the success of the mitigation efforts by the City and by dock owners throughout the bay. If, through these discussions, the Executive Director determines that there is a shortfall in the necessary mitigation to offset temporal or permanent losses of eelgrass, an Eelgrass Mitigation and Monitoring Plan shall be prepared by the City to provide the necessary additional eelgrass mitigation.

The Commission finds that the proposed dredging and fill associated with the proposal are associated with allowable uses and are the least environmentally-damaging feasible alternatives which includes feasible mitigation measures. Therefore, as conditioned to require biennial eelgrass surveys and reporting and to require additional mitigation if there is a shortfall in the necessary mitigation to offset temporal or permanent losses of eelgrass, the Commission finds the proposed development is consistent with Section 30233(a) of the Coastal Act. In addition, the Commission finds that with these measures, the proposed project will not adversely affect resources of the coastal zone, and therefore, the project is consistent with the policies of the CCMP.

Section 30233(b) of the Coastal Act requires that suitable dredge materials be transported to appropriate beaches for such purposes.

> *...Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.*

The applicant is proposing to use all suitable dredged material for beach replenishment purposes. In order to ensure that the materials proposed for beach replenishment are suitable for such purposes, the applicant has proposed to perform sediment testing to evaluate the physical characteristics of the materials. In order to ensure that such testing adequately characterizes and evaluates the physical characteristics of the proposed beach replenishment materials, the Commission imposes **Special Condition 4** which requires the applicant to perform testing consistent with approved testing

methods. Special Condition 4 requires that grain size tests be conducted on at least one core taken from the dredging area and one core from the receiver beach (if beach disposal/replenishment will occur) for each project. The core depth shall be equivalent to the proposed dredging depth plus any over-dredging. Also, grain size data shall be reported to the nearest 1% for sand, silt, and clay consistent with the above referenced document. Since the grain size of bay sediments can vary over even a small area, the Commission found that at least one core is necessary to adequately characterize the grain size of the sediments being used for beach replenishment. In addition, Special Condition 4 requires the applicant to obtain and test the sediment grain size from at least one core from the receiver beach.

In order to ensure that only beach quality materials are used to replenish the beaches, Special Condition 4 requires that material utilized for beach replenishment shall have a sand content that is either equal to or greater than 80% sand or be between 75% and 80% and within 10% of the sand content of the receiver beach. Normally, the Commission has required that beach replenishment materials contain equal to or greater than 80% sand. However, Special Condition 4 also allows the placement of beach replenishment materials having less than an 80% sand content on a beach if the sand content of the replenishment material and receiver beach are within 10% of one another. A receiver beach core sample and grain size analysis is necessary to confirm that the replenishment material falls within these parameters. While allowing the use of this 10% deviation is not the Commission's standard practice, in this instance, the beach replenishment sites are harbor locations and there is expected to be a higher component of "fines" in the dredge materials and receiver beach sites. Therefore, in this instance, a match of the dredge and receiver sites within a 10% deviation is acceptable.

Furthermore, the Commission is accepting the chemical testing and analysis completed to date for the proposed project. As part of the application process, the City completed a detailed sampling program of the harbor. In this proposal, given the absence of industrial development in the Plan area, the representative sampling is being accepted as sufficient without further investigation required for individual sites. The applicant is proposing a six (6) year duration for the consistency certification and permit. It is expected that any pollutants that may be become deposited in the sediment during the proposed authorization period would be generated by non-point sources and such urban runoff. The concentration of pollutants would not be expected to significantly change over the course of the six-year authorization.

The proposed use of dredged material for beach replenishment will partially mitigate the ongoing erosion of the City's harbor beaches, helping to protect recreational use of the beach and existing structures along the beach. Section 30233(b) of the Coastal Act encourages the use of dredged material for beach replenishment. As proposed and conditioned, the project will not have any adverse impacts on local sand supply. Therefore, the project is consistent with Section 30233(b) of the Coastal Act. In addition, the Commission finds that with these measures, the proposed project will not adversely affect resources of the coastal zone, and therefore, the project is consistent with the policies of the CCMP.

Invasive algae Caulerpa taxifolia

In response to the threat that invasive algae *Caulerpa taxifolia* poses to California's marine environment, the Southern California Caulerpa Action Team, SCCAT, was established to respond quickly and effectively to the discovery of *C. taxifolia* infestations in Southern California. The group consists of representatives from several state, federal, local and private entities. The goal of SCCAT

is to completely eradicate all *C. taxifolia* infestations. If *C. taxifolia* is present, any project that disturbs the bottom could cause its spread by dispersing viable tissue fragments. The proposed project would disturb the harbor bottom by dredging as well as disturb some submerged areas through the placement of sand for beach replenishment. Bay bottom disturbance will also occur during the removal and installation of pilings for piers and docks/floats. These activities could cause the dispersal of *C. taxifolia* through fragmentation. In addition, the *C. taxifolia* could be distributed to other parts of the bay or to the open ocean through transport of the dredge spoils to other locations for beach replenishment and ocean disposal. In order to assure that the proposed project does not cause the dispersal of *C. taxifolia*, the applicant is proposing to survey for the presence of *C. taxifolia* in the project area has agreed to cease dredging and replenishment activities if *C. taxifolia* is found in the project area. The applicant would apply to implement measures to eradicate *C. taxifolia* from the project area and could commence with the project once the eradication is complete. The Commission imposes **Special Condition 1(F) and Special Condition 2(B)** to implement the applicants' proposal.

Conclusion

Therefore, as proposed and conditioned to mitigate and avoid impacts to marine resources, the Commission finds the proposed project is consistent with Sections 30230 and 30233(b) of the Coastal Act. In addition, the Commission finds that with these measures, the proposed project will not adversely affect resources of the coastal zone, and therefore, the project is consistent with the policies of the CCMP.

C. PUBLIC ACCESS AND RECREATION

Section 30210 of the Coastal Act states:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Section 30213 of the Coastal Act states:

> *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.*

Section 30221 of the Coastal Act states:

> *Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.*

One of the basic goals stated in the Coastal Act is to maximize public access and recreation to and along the coast. The proposed project conforms with the Coastal Act policies which protect and encourage public access and recreational use of coastal areas. The proposed project will temporarily mitigate beach erosion and provide for the continuing and increased recreational use of the City street

end beaches by the public. The proposed beach replenishment will increase the size of some beaches and will provide a larger area for recreational use. In addition, the proposed dredging components of the project will allow for continued use of coastal waters for recreational boating.

The typical street end and bulkhead-fronting beach is 30 feet wide and does not provide a lot of space for recreational users to utilize the beach. The project will temporarily impact the use of some street end and bulkhead-fronting beaches during the deposition of the dredged material. However, the disposal activity will typically not exceed a single day. Not all street end and bulkhead beaches will be replenished at the same time and they are typically only 300 to 500 feet apart.

The proposed project will occur upon Tidelands which are held in trust for the people of the State of California. Administration of a portion of Newport Bay was granted to the City of Newport Beach through a Tidelands grant contained within AB1422 approved by the Governor of California on April 6, 1978 and filed with the Secretary of State on April 7, 1978. In general, the area granted consists of submerged and filled lands in the lower bay. Accordingly, the areas adjacent to Lido Isle, the Lido Peninsula, and Balboa Island are within the City's Tidelands grant. Certain uses of tidelands are specified within the tidelands grant. Among those uses are those for "recreational purposes". The proposed dredging and beach replenishment would maintain and improve recreational use of State Tidelands. Dredging and beach replenishment around recreational boating facilities are activities consistent with the City's Tidelands grant.

Meanwhile, some of the project area is located within State tidelands which were granted to the County of Orange (Statutes of 1919, chapter 526, page 1138). These areas are generally located around Harbor Isle, some portions of Linda Isle and within the Upper Newport Bay. The tidelands grant to the County does not authorize the County to dredge or replenish beaches within the grant area without prior approval from the CSLC. Such approval has been granted through a tidelands lease from CSLC.

In addition, there are some submerged lands within the project area which are owned in fee title by a private dock owner. These areas are located in some parts of the channel between Linda Isle and the mainland, the cove within Linda Isle and the coves of the Dover Shores residential community. The private dock owners have given the City of Newport Beach permission to act on their behalf through the subject CDP/CC.

As conditioned, the proposed development will not have any new adverse impact on public access to the coast or to nearby recreational facilities. Thus, as conditioned, the proposed development conforms with Sections 30210 through 30214 and Sections 30220 through 30224 of the Coastal Act. In addition, the Commission finds that with these measures, the proposed project will not adversely affect resources of the coastal zone, and therefore, the project is consistent with the policies of the CCMP.

D. WATER QUALITY

Section 30230 of the Coastal Act states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will*

maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The Coastal Act contains policies that address development in or near coastal waters. The proposed project is located within State Tidelands, in federal waters off the coast of Orange County, and on sandy beaches adjacent to the Pacific Ocean. Sections 30230 and 30231 of the Coastal Act require the protection of biological productivity, public recreation, and marine resources. The permit is conditioned to protect these marine resources.

Due to the project's location near coastal waters, it is necessary to ensure that construction activities will be carried out in a manner that will not adversely affect water quality or marine resources. The potential adverse impacts to water quality and marine resources include discharges of contaminated runoff and debris during construction. The applicants have proposed a list of best management practices for the construction and for long-term protection of water quality.

To minimize impacts to coastal access, **Special Conditions 1 and 2** require the applicant to submit final plans. The applicant has proposed a substantial set of construction and operational best management practices (BMPs). **Special Condition 3** requires the applicant to implement the proposed BMPs in addition to a set of BMPs specific to dredging and beach replenishment that the Commission has imposed through previous approved permits and consistency certifications in Newport Beach and Long Beach. The Commission finds that only as conditioned will the proposed project ensure that marine resources and water quality are protected as required by Sections 30230 and 30231 of the Coastal Act.

E. VISUAL RESOURCES

Section 30251 of the Coastal Act states:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Public beaches and State Tidelands within Newport Harbor are important coastal resources required to be protected from visual impacts under the Coastal Act. Excessive disposal of sediment or disposal of contaminated sediment in these areas could negatively impact coastal resources. Therefore, the Commission finds that only as conditioned to minimize dredging events to 8,000 cubic yards per event and to require the permittee to test the dredged material for compatibility with any proposed disposal site is the proposed project consistent with the visual resource protection policies of the Coastal Act. In addition, the Commission finds that with these measures, the proposed project will not adversely affect resources of the coastal zone, and therefore, the project is consistent with the policies of the CCMP.

F. NATURAL HAZARDS

Section 30253 of the Coastal Act states, in part:

> *New development shall do all of the following:*
>
> *(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
>
> *(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

The proposed development is located in an area subject to tidal action. The tidal environment is dynamic and there are risks associated with development in such areas. For instance, erosion has occurred at the subject beach ends and in front of the bulkheads where beach replenishment is proposed. The fact that the applicant is proposing beach replenishment to restore pre-existing beaches indicates that erosion does occur. However, the applicant is not proposing to increase erosion hazards by increasing the size of beaches beyond pre-existing conditions. Therefore, the proposed project minimizes this hazard. **Special Condition 7** requires the City to assume the risks of the development. The Commission finds that only as conditioned is the proposed project consistent with Section 30253 of the Coastal Act. In addition, the Commission finds that with these measures, the proposed project will not adversely affect resources of the coastal zone, and therefore, the project is consistent with the policies of the CCMP.

G. LOCAL COASTAL PROGRAM

Coastal Act section 30604(a) states that, prior to certification of a local coastal program (LCP), a coastal development permit can only be issued upon a finding that the proposed development is in conformity with Chapter 3 of the Act and that the permitted development will not prejudice the ability of the local government to prepare an LCP that is in conformity with Chapter 3. The Land Use Plan (LUP) for the City of Newport Beach was effectively certified on May 19, 1982. The certified LUP was updated in October 2005 and October 2009. As conditioned, the proposed development is consistent with Chapter 3 of the Coastal Act and the certified LUP for the area. Approval of the project, as conditioned, will not prejudice the ability of the local government to prepare an LCP that is in conformity with the provisions of Chapter 3 of the Coastal Act.

H. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 Title 14 of the California Code of Regulations requires Commission approval of a coastal development permit application to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The City of Newport Beach is the lead agency responsible for CEQA review. As determined by the City, the project is Categorically Exempt, Class 11, Section 15312 was prepared in compliance with Article 6 of CEQA.

The project has been conditioned to require protection of coastal resources including eelgrass and natural beaches. As conditioned, there are no feasible alternatives or additional feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is the least environmentally damaging feasible alternative and complies with the applicable requirements of the Coastal Act to conform to CEQA.

Appendix A – Substantive File Documents

1. City of Newport Beach certified Coastal Land Use Plan
2. Coastal Development Permit Nos. 5-99-282 and 5-06-117 (Newport Beach Dredging and Dock Repair/Replacement Programs)
3. Federal Consistency Certification Nos. CC-078-99, CC-077-01, and CC-0310-06 (City of Newport Beach Dredging and Dock Repair/Replacement Programs)

Exhibits

Exhibit 1 – Vicinity Map and Plan Overview
Exhibit 2 – Permit Application Supplement: Proposed Regional General Permit 54 (January 2014)
Exhibit 3 – Eelgrass Protection and Mitigation Plan (March 2015)
Exhibit 4 – Memo from Coastal Commission Staff Ecologist John Dixon
Exhibit 5 – Dredging Application (Sample City Submittal)

Exhibit 1

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California Coastal Commission

LEGEND:

- Suitable to -10 feet MLLW plus 2 feet of overdepth for unrestricted disposal at the LA-3 ODMDS. Grain size required prior to beach replenishment to demonstrate suitability.
- Suitable to -10 feet MLLW plus 2 feet of overdepth for unrestricted disposal at the LA-3 ODMDS. Material proposed for beach placement must have grain size verification and chemical testing with agency concurrence to verify suitability prior to placement.
- Suitable to -7 feet MLLW plus 1 foot of overdepth for unrestricted disposal at the LA-3 ODMDS. Z-layer testing to confirm post-dredge surface contains mercury less than 1 ppm prior to dredging to demonstrate newly exposed surface is clean. Grain size required prior to beach replenishment to demonstrate suitability.
- Area not included under proposed RGP 54.

0 2000

Scale in Feet

SOURCE: Aerial from Bing maps. Coastline extents from City of Newport Beach.
HORIZONTAL DATUM: California State Plane, Zone 6, NAD83.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

NOTE:
Areas proposed for inclusion in RGP 54 are generally between the bulkhead and pierhead lines with the shoreline/boundary demarcated by the various colors/hatched lines. The colored lines, whether solid or dashed, always follow the shoreline rather than following individual fingers or docks.

L:\AutoCAD Project Files\090243-01 Newport CAD\Lower Newport Bay\RGP 54\0243 RPG-RP-012 SUITABLE.dwg FIG 2
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ANCHOR QEA

Figure 2
RGP 54 Sediment Characterization
Proposed RGP 54

Table 2. City-Sponsored Shallow Water Eelgrass Surveys in Newport Harbor

Survey Dates	Eelgrass in the Plan Area (Acres)	Notes
December 2003 to August 2004	24.51	Largest shallow water eelgrass population recorded in the harbor to date. Water quality conditions ideal with low winter rainfall.
December 2006 to October 2007	18.87	Decline in eelgrass area, primarily around north Balboa Island, Harbor Island, Linda Isle, and Upper Newport Bay.
December 2009 to November 2010	16.20	Decline in transitional zones attributed to strong winter storms, which contributed to high turbidity.
March 2012 to April 2014	22.76	Overall increase in eelgrass observed in Stable and Transitional Zones and additional survey conducted in the deep channel

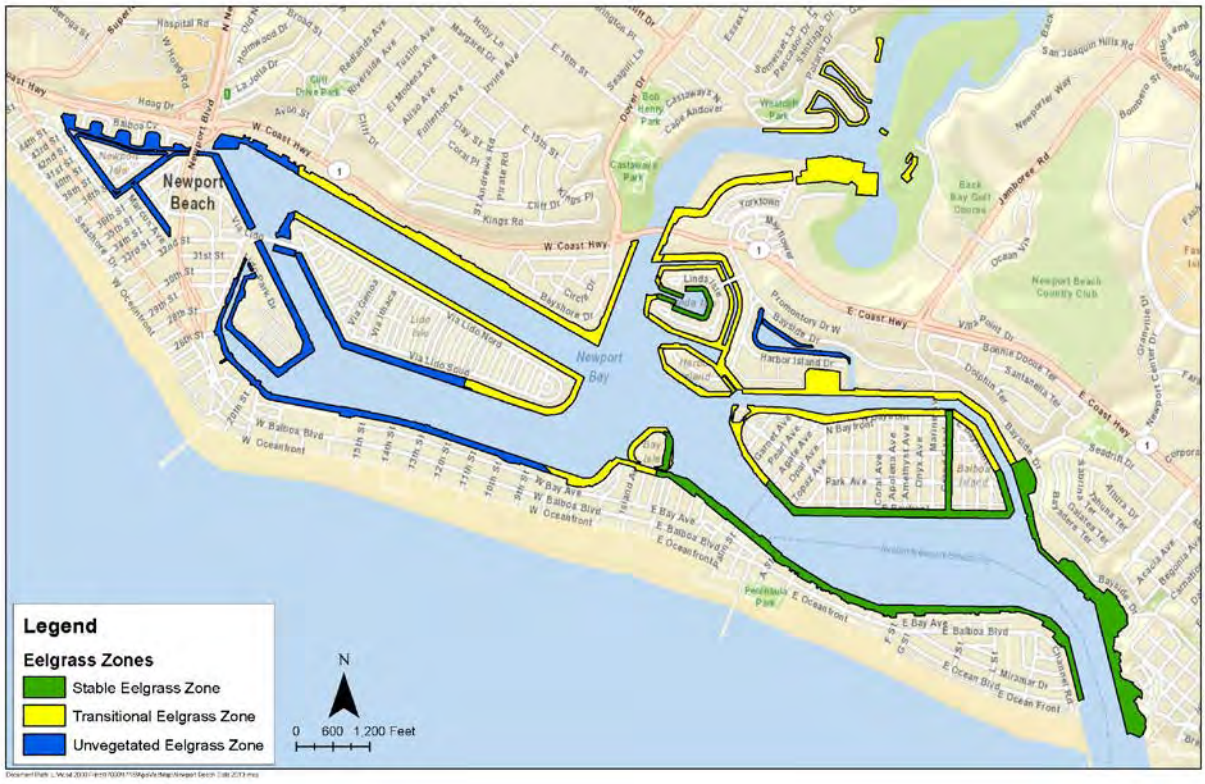

Figure 2. Location of Stable, Transitional, and unvegetated eelgrass zones based on CRM (2010).

PROPOSED REGIONAL GENERAL PERMIT 54

Prepared on behalf of

City of Newport Beach

829 Harbor Island Drive

Newport Beach, California 92660

Prepared by

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January 2014

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1 INTRODUCTION – PURPOSE AND NATURE OF THE ACTIVITY

For approximately 30 years, the City of Newport Beach (City) has maintained Regional General Permit (RGP) 54 that provides a relatively streamlined process for permitting small dredging and dock maintenance projects between the bulkhead and pierhead lines in Upper and Lower Newport Bay. An extension of RGP 54 was authorized in January 2013 and will expire in March 2014, as specified in the following approvals:

- U.S. Army Corps of Engineers (USACE) Permit No. SPL-2011-00249-SME
- California Coastal Commission (CCC) Permit No. 5-06-117
- Santa Ana Regional Water Quality Control Board (RWQCB) Project No. 302012-21

The existing RGP 54 covers minor maintenance dredging (no more than 1,000 cubic yards [cy]) and discharge of material previously deemed suitable for unconfined placement at adjacent beach sites, offshore disposal sites, confined disposal facilities, or upland disposal sites approved for dredged material. The existing RGP 54 includes several limitations that have decreased the utility of the permit over time. These limitations include insufficient individual project volume, insufficient depth allowances, prohibition on dredging in the vicinity of eelgrass (*Zostera marina*), and lack of provisions for maintenance to structures such as docks. Many individuals and businesses are therefore unable to use the RGP, which often results in costly and lengthy separate permitting processes and sediment testing to achieve necessary improvements for navigational safety. In addition, regulatory and resource agencies are forced to process individual permits for many small projects with minimal impacts, which is inefficient and drains agency resources. As a result, the City is seeking a new RGP 54 that will increase the value to the City, the community, and the agencies. Appendix A presents a summary of proposed amendments to the RGP as well as the rationale for each amendment. The proposed RGP 54 coverage area is Newport Bay, within the city of Newport Beach and Orange County (Figure 1), which is within the boundary of the Los Angeles District of the USACE.

Proposed amendments to RGP 54 include increasing the permissible project and annual dredging volumes and depth, expanding the coverage area, and authorizing repair and in-kind replacement of docks (including piers, gangways, floats and piles), bulkheads, and piles. Other RGPs (e.g., the City of Long Beach and the Ports of Los Angeles and Long Beach) have

much higher annual maximum volumes (i.e., 100,000 cy or more), which make those RGPs more useful and flexible for a range of project sizes.

Authorizing simple repair, replacement, and reconstruction of existing structures under RGP 54 would provide a streamlined and cost-effective permitting method for these small projects. The Ports have had pile repair/replacement RGPs in the past, and the existing authorization process for these activities is expensive and lengthy. A streamlined review mechanism is necessary and valuable for in-kind replacements.

In addition to these changes, the City proposes a tiered application review process to streamline review and approval of projects that meet the terms of RGP 54.

2 REGULATORY PERMITS AND APPROVALS

A summary of permit requests is provided in Table 1. Applications for a Standard Individual Permit and Section 401 Water Quality Certification (WQC) are being submitted for review to the USACE and RWQCB, respectively. The City is also applying for a Coastal Development Permit from the CCC. The City's Harbor Resources Division issued an Approval-in-Concept for the project and, as the lead agency, has determined that issuance of RGP 54 is categorically exempt from the California Environmental Quality Act (CEQA; Appendix B). As part of the 2006 RGP 54 permitting process, the County of Orange applied for and was issued a lease from the California State Lands Commission (CSLC; Lease PRC 8432.9); this lease was later amended in 2012 and is valid through June 26, 2016. Additionally, the CSLC does not have leasing authority for surface structures on lands granted to the County of Orange; therefore, any structural improvements would not require approval from the CSLC. The City retains mineral rights to certain tidelands in Newport Bay, and thus, dredging in these areas can occur without a lease from the CSLC. No new lease is required from the CSLC at this time.

Table 1
Summary of Permit Requests

Permit	Requested	Received
USACE: Regional General Permit	Yes	No
RWQCB: Section 401 WQC	Yes	No
City: CEQA Exemption	Yes	Yes
CCC: Coastal Development Permit	Yes	No
CSLC: Dredging Lease	No	No

3 DETAILED DESCRIPTION OF THE ACTIVITY

Major project elements of the proposed RGP 54 include:

- Maintenance dredging under and adjacent to private, public, and commercial docks, floats, and piers. Maintenance dredging would occur to a maximum depth of -10 feet mean lower low water (MLLW), plus 2 feet of overdepth allowance (1 foot paid, 1 foot unpaid), with an annual maximum dredge volume of 100,000 cy within the coverage areas and not to exceed 10,000 cy per individual project.
- Discharge of dredged material at adjacent beach sites (for beach nourishment), at the LA-3 Ocean Dredged Material Disposal Site (ODMDS), confined disposal facilities, or an approved upland disposal site.
- Repair and in-kind replacement of docks (including piers, gangways, floats, and piles), bulkheads, and piles.

Under the proposed RGP 54, structural improvements and dredging activities are designated as Tier I unless the project would result in impacts to eelgrass, as shown in Table 2. The tiers also refer to level of agency review.

Table 2
Dredging and Structural Improvement Tiers

Tier	Dredge Activities Covered	Structural Activities Covered
I	Up to 10,000 cy of dredging	Repair and in-kind replacement of existing structures
II	Up to 10,000 cy of dredging	Same as Tier 1 but would result in impacts to eelgrass

The coverage area within the harbor is defined as bulkhead to pierhead line plus 20 feet bayward, including only those exceptions for structures that extend beyond this boundary in conformance with harbor development regulations defined by Chapter 17.35 of the Newport Beach Municipal Code.

3.1 Dredging and Disposal

Proposed individual and total annual dredging volumes are a conservative estimate based on the needs of anticipated users of RGP 54 and based on the City's experience managing Newport Bay resources and current trends in use of the bay. The maximum dredge depth is being proposed to -10 feet MLLW, plus 2 feet of overdepth allowance (1 foot paid, 1 foot unpaid), which is consistent with the controlling depth of the federal channel and the needs of vessels such as sailboats with deep keels. The proposed annual maximum dredge volume is 100,000 cy within the coverage area and not to exceed 10,000 cy per individual project. The basis for the annual cumulative volume assumes worst case scenario that dredging would be available to 10 applicants with dredging up to 10,000 cy per individual project.

The proposed beneficial use and disposal options are unchanged from the existing RGP 54. Areas throughout much of Lower Newport Bay remain suitable for beach replenishment or placement at LA-3 ODMDS. Sediment unsuitable for these locations is anticipated to be suitable for placement at upland sites or confined disposal facilities. The City has completed the DMMT approval process for placement location, depths, and testing requirements as described below. The approved dredging areas and allowable depths for beach replenishment and placement at LA-3 ODMDS within the RGP 54 coverage area is shown on Figure 2.

3.1.1 Sediment Characterization

A Sampling and Analysis Plan (SAP; Anchor QEA 2013a) was presented to the DMMT on April 24, 2013. The DMMT approved the sampling approach and proposed testing locations presented in the SAP. The SAP was based on the sediment characterization approach used in previous versions of RGP 54 and is consistent with the DMMT's draft SAP guidelines.

Sediment sampling was conducted pursuant to the approved SAP in July 2013, with sampling results summarized in the Sampling and Analysis Report (SAR; Anchor QEA 2013b). Sediment sampling and analysis results and proposed placement activities were presented to the DMMT on November 26, 2013. Subsequent to that meeting, additional information and clarification was provided to the DMMT. Based on results of chemical and biological analyses and in coordination with the DMMT, RGP 54 sediments are recommended as suitable for beach replenishment or placement at the LA-3 ODMDS, except for Balboa Yacht

Basin and Promontory Bay due to elevated metals concentrations. Additional depth limitations and testing requirements for the 2014 permit renewal are presented on Figure 3.

3.2 Structure Maintenance, Repair, and Replacement

The proposed RGP 54 would allow for repair and in-kind replacement of docks (including piers, gangways, floats, and piles), bulkheads, and piles. "In-kind" is defined as replacement where the overwater footprint and configuration of replacement structures is identical to that of existing design conditions. Modern materials may be substituted as appropriate (e.g., concrete piles instead of treated timber, modern lighting or other fixtures, etc.). Improvements to expand the function of existing structures would not be permissible under the proposed RGP 54.

Repair or in-kind replacement would occur in compliance with the City's Waterfront Project Guidelines and Standards (Appendix C).

4 ESSENTIAL FISH HABITAT AND SPECIAL STATUS SPECIES

This section details the environmental setting and potential impacts to Essential Fish Habitat (EFH) and special status species.

4.1 Essential Fish Habitat

This EFH assessment for reauthorization and amendment of RGP 54 is provided in conformance with the 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act (MSA; Federal Regulations 62, 244, December 19, 1997). The MSA, as amended, requires the National Marine Fisheries Service (NMFS) to identify, conserve, and enhance EFH for species designated under a federal Fisheries Management Plan (FMP). The 1996 amendments to the MSA set forth a number of new mandates for NMFS, the eight regional fishery management councils, and other federal agencies to identify and protect important marine and anadromous fish habitat. The councils, with assistance from NMFS, are required to delineate EFH for all managed species. EFH is defined as the waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. Specifically, the MSA requires the following:

- Federal agencies to consult with NMFS on all actions or proposed actions authorized, funded, or undertaken by the agencies that could adversely affect EFH
- NMFS to provide conservation recommendations for any federal or state action that could adversely affect EFH
- Federal agencies to provide a detailed response in writing to NMFS within 30 days of receiving EFH conservation recommendations

The coverage area for the proposed RGP 54 is located within a general area designated as EFH by the Coastal Pelagic Species FMP and the Pacific Coast Groundfish FMP. The area is also considered estuarine habitat, which is considered to be a habitat area of particular concern for EFH.

Project-related impacts to EFH are mostly minimal and temporary, localized minor increases in turbidity associated with construction. Dredging may temporarily remove benthic infauna from the dredging footprint. Fauna are typically sparse in areas between bulkheads

and adjacent to docks and floats, as characterized through recent marine surveys conducted throughout Newport Bay (CRM 2009a, 2009b, 2012). Infaunal communities are expected to rapidly recolonize following dredging.

Because of the minor, temporary, and localized nature of the activities proposed, the adherence to established special conditions, and the requirement to separately mitigate for any direct or indirect impacts to eelgrass (as described below), project activities will have adverse but temporary and minimal impacts to EFH and species managed under the Pacific Coast Groundfish and Coastal Pelagic Species FMPs.

4.1.1 Eelgrass

The City has been conducting periodic eelgrass surveys since 2003, and most recently in spring/summer 2013. Eelgrass beds were identified as occurring at several areas within Lower Newport Bay, predominantly near the bay entrance, around Balboa Island, and near Linda Isle. The City will continue to sponsor bay-wide eelgrass surveys every 2 years.

Projects proposed for authorization under RGP 54 will rely on the most recent City-sponsored eelgrass survey data within the project and disposal area, if applicable, based on the proposed project location. Any decrease in eelgrass will constitute an impact and will be mitigated for pursuant to the Southern California Eelgrass Mitigation Policy (NMFS 2005) or any future applicable policy. Under the proposed RGP 54, the presence of eelgrass does not eliminate a project from consideration under RGP 54.

4.2 Special Status Species

Data from the U.S. Fish and Wildlife Service species list for Orange County and the California Natural Diversity Database for the Newport Beach and Tustin U.S. Geological Survey (USGS) 7.5-minute quadrangles were used to determine the potential for the special status species to occur within the coverage area (CDFG 2012). Table 3 presents the special status species with the potential to occur in or adjacent to the coverage area.

Table 3

Special Status Species with the Potential to Occur In or Adjacent to the Coverage Area

Scientific Name	Common Name	Special Status
Sterna antillarum browni	California least tern	FE, SE
Zalophus californianus	California sea lion	MMPA
Phoca vitulina	Harbor seal	MMPA
Eucyclogobius newberryi	Tidewater goby	FE, SC
Charadrius alexandrinus nivosus	Western snowy plover	FT, SC

Notes:
FE = federally endangered
FT = federally threatened
MMPA = Marine Mammal Protection Act
SE = state endangered
SC = California state species of special concern

California sea lions (*Zalophus californianus*) and harbor seals (*Phoca vitulina*) are known to occur within Newport Bay. Repair or in-kind replacement of existing structures may generate noise from construction activities. Activities such as pile driving may generate noise and vibrations that may disturb marine mammals, if present. These impacts would be short term and highly localized. Any effects on marine mammals present would be minimal, as these species are highly mobile and able to move throughout Newport Bay.

The California least tern (*Sterna antillarum browni*) may use portions of Newport Bay seasonally for foraging but would not use the coverage area for regular loafing or nesting. Known breeding areas for the California least tern include Least Tern Island in the northeast portion of Upper Newport Bay, approximately 2 miles from the coverage area. The coverage area consists of private residences or beaches with high levels of human activity and recreation that are not suitable nesting habitat. Nesting birds have not been observed within the coverage area, and nesting activities are not anticipated to be disrupted as a result of project impacts. Effects to foraging as a result of water quality impacts would be short-lived and minimal if at all. Although project activities such as dredging and pile driving could create elevated surface turbidity levels, these levels are not anticipated to be significant, as turbidity would be predominantly a short-term event. Turbidity is not anticipated to affect prey populations supporting the tern. If turbidity in the immediate vicinity of dredging is slightly higher than ambient, fish may avoid turbid areas and remain available for catch

elsewhere in the system. Therefore, the proposed project does not include any time of year restrictions for consideration of the least tern nesting season.

The federally listed western snowy plover (*Charadrius alexandrinus nivosus*) is a resident to Southern California. The plover typically nests in flat, open areas with sandy or saline substrates. Snowy plovers forage on invertebrates in the wet sand and amongst the surf-cast kelp within the inter-tidal zone, in the dry, sandy areas above the high tide, on saltpans, and along the edges of salt marshes and salt ponds. Snowy plovers typically forage in areas with little or no human activity; and plovers generally avoid areas of high activity, especially where human use is relatively high. Until recently, no nesting by this species has been observed on beaches in the proposed coverage area, which are likely too heavily used to be attractive to birds. In 2009, one nest on the beach near the eastern end of the Balboa Peninsula produced three young (CRM 2009). Western snowy plover have consistently roosted on that same beach during the winter, but as the proposed coverage area would be private residences or beaches with high levels of recreation, the area is not expected to support foraging habitat for the Western snowy plover.

The tidewater goby (*Eucyclogobius newberryi*)—a fish that occurs in tidal streams associated with coastal wetlands in California—is not typically associated with the bulkhead, dock, or pier areas proposed for dredging or structural repair/improvements within Newport Bay. It is not expected that the tidewater goby would be impacted by any short-term increases in turbidity within Newport Bay resulting from the proposed project's activities.

5 APPLICATION REVIEW AND PROCESSING

Under the proposed reauthorization and amendment of RGP 54, project review and approval would occur according to a tiered approach for dredging and/or structural improvements (Tier I or II) based on the potential for impacts (Table 4).

Table 4
Tiered Application Review Process for Dredging and Structural Improvements

Tier	Dredge Activities Covered	Structural Activities Covered	Review Terms
I	Up to 10,000 cy of dredging	In-kind repair or replacement of existing structures	Authority delegated to City without agency review. The City would provide annual reports to the agencies describing all projects authorized under RGP 54.
II	Up to 10,000 cy of dredging	Same as Tier 1 but would result in impacts to eelgrass	The City confirms that a project qualifies as Tier II and forwards within 30 days to the regulatory agencies. Regulatory agencies would have a total of 60 days from receipt of the applications to review and authorize the project under RGP 54 or determine that an Individual Permit is required.

Giving greater responsibility for application review to the City reduces duplicating effort between the City and the agencies as well as increases the efficiency of the review process. The City is able to manage the numerous smaller projects that have negligible impacts much more quickly than the agencies. Larger projects are less frequent and would warrant a coordinated City/agency review proportionate with the scope of the projects.

Harbor Resources will be the primary point of contact for applicants seeking authorization under RGP 54. Applications will be reviewed by Harbor Resources within 30 days of receipt of the application to determine the appropriate project tier and confirm that the project is consistent with the terms and conditions of RGP 54. If the project qualifies as a Tier I, then the City is not required to notify the regulatory agencies. Harbor Resources will provide authorization to the applicant to proceed. Harbor Resources will prepare written certification for internal recording and will include the project information as part of the annual report, as described below.

If Harbor Resources determines that the project qualifies as Tier II, then applications, along with written certifications, will be forwarded to the agencies in batches at the end of each month. The certification will include the following information:

- Confirmation that the proposed application meets the terms and conditions of RGP 54, with special emphasis on the presence or absence of eelgrass
- Maps of the project area, including location within the harbor, site address, site latitude and longitude coordinates (e.g., decimal degree format), and drawings of the proposed action to scale (i.e., plan and cross-section view of proposed activity), including boundaries of any proposed dredging and disposal work
- The proposed area of permanent and temporary impact to waters of the United States (in acres or square feet) and proposed dredge and disposal quantities (in cubic yards)

If eelgrass impacts would result from implementing the project and qualify as a Tier II project, then the applicant would be notified and required to submit a draft eelgrass mitigation plan to Harbor Resources consistent with the provisions of the Southern California Eelgrass Mitigation Policy (NMFS 2005) or other applicable plan. For submission of the application, the applicant can rely on the eelgrass surveys conducted every 2 years to determine the presence of eelgrass in the project area. Harbor Resources would not be involved in review of the project-specific eelgrass mitigation plan but would include a copy of the draft project-specific mitigation plan with the monthly application submittals to the regulatory agencies for review and approval. The application would be subject to Tier II agency review. The agencies would retain ultimate discretion on approval of project-specific eelgrass mitigation plans.

Under Tier II projects, the regulatory agencies would have 60 days from receipt of the application to review and issue a notice to proceed for the project under RGP 54 or determine that an Individual Permit is required. If no response is received within 60 days, the application will be considered approved.

Harbor Resources will submit annual reports for the life of RGP 54 to the regulatory agencies as required, documenting activities authorized under the RGP during the previous year. Each annual report will be a cumulative ledger documenting all activities conducted to date using

the reauthorized RGP. The annual report will be submitted by January 31 of each year. Annual reports from Harbor Resources will include the following:

- A summary of dredge operations including:
  - Location (address) of each dredging operation
  - Areas and volumes of material dredged (in acres and cubic yards)
  - Disposal location(s) and volumes for each method used (i.e., LA-3 ODMDS, upland site, or other approved area)
- An estimate of the square feet of waters of the United States impacted for each activity type
- Summary of any direct and indirect eelgrass impacts for each activity type and the eelgrass mitigation completed or in progress.
- An updated, map showing the locations of all activities conducted to date using the reauthorized RGP 54
- Confirmation of compliance with all special conditions

6 AVOIDANCE AND MINIMIZATION OF IMPACTS

Projects authorized under RGP 54 would adhere to any special conditions, avoidance and minimization measures, or BMPs required by the regulatory agencies. The following avoidance and minimization BMPs have been incorporated into the project:

- Disposal of construction and trash debris into the intertidal zone or the nearshore waters shall be prohibited.
- All construction-related equipment shall be maintained in good working order to minimize the potential for hazardous waste spills. Current hazardous material spill prevention and cleanup plans shall be maintained on site.
- All waste material removed from the project site shall be relocated to an approved disposal point.
- Operators of construction equipment and all other project workers shall not harass any marine mammals, waterfowl, or fish in the project area.
- All dredged material shall be handled and transported such that it does not re-enter surface waters of the state outside the protected immediate work area.
- Water quality monitoring shall not be required if the total dredging duration will be less than 2 days. If dredging will extend beyond 2 consecutive days, then monitoring will be required every other day, beginning with the third day (monitoring will be required on days 3, 5, 7, etc.). If required, water quality monitoring will be conducted consistent with the Water Quality Monitoring Plan approved by the RWQCB for the Lower Newport Bay Dredging Program (RWQCB 2012). Water quality monitoring is not being proposed for structure repair and replacement.
- As piles are pulled from the subsurface, they shall be quickly placed onto a receiving barge to minimize potential releases of creosote, petroleum sheens, and turbidity to the waterway. Piles shall not be rinsed or washed in any way. Piles shall be recycled or properly disposed of at an approved upland disposal facility.
- "Soft-start" techniques shall be used at the beginning of each day's in-water pile-driving activities or if pile driving has ceased for more than 1 hour to allow any marine mammal that may be in the immediate area to leave before pile driving reaches full energy. For vibratory pile driving, the soft start requires the contractor to initiate noise from vibratory hammers for 15 seconds at reduced energy, followed by a 1-minute waiting period. The procedure shall be repeated twice. If an impact

hammer is used on a pile greater than 10 inches in diameter, the contractor shall provide an initial set of three strikes from the impact hammer at 40 percent energy, followed by a 1-minute waiting period, then two subsequent three-strike sets.

- Any repair or in-kind replacement of existing structures would occur in compliance with the City's Waterfront Project Guidelines and Standards (Appendix C).

7 CULTURAL RESOURCES

The proposed project involves maintenance dredging to design depths and/or repair or in-kind replacement of existing structures. Project activities would not occur in previously undisturbed areas; therefore, the project would have no impacts to cultural resources.

8 REFERENCES

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FIGURES

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Jan 21, 2014 8:09am mpratschner

SOURCE: Image from Bing maps.
HORIZONTAL DATUM: California State Plane, Zone 6, NAD83.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

Approximate Project Location:
33° 36.540', 117° 54.230'

0 1.5
Scale in Miles

ANCHOR QEA

Figure 1
Vicinity Map
Proposed RGP 54

LEGEND:

- Suitable to -10 feet MLLW plus 2 feet of overdepth for unrestricted disposal at the LA-3 ODMDS. Grain size required prior to beach replenishment to demonstrate suitability.
- Suitable to -10 feet MLLW plus 2 feet of overdepth for unrestricted disposal at the LA-3 ODMDS. Material proposed for beach placement must have grain size verification and chemical testing with agency concurrence to verify suitability prior to placement.
- Suitable to -7 feet MLLW plus 1 foot of overdepth for unrestricted disposal at the LA-3 ODMDS. Z-layer testing to confirm post-dredge surface contains mercury less than 1 ppm prior to dredging to demonstrate newly exposed surface is clean. Grain size required prior to beach replenishment to demonstrate suitability.
- Area not included under proposed RGP 54.

0 2000
Scale in Feet

SOURCE: Aerial from Bing maps. Coastline extents from City of Newport Beach.
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VERTICAL DATUM: Mean Lower Low Water (MLLW).

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L:\AutoCAD Project Files\090243-01 Newport CAD\Lower Newport Bay\RGP 54\0243 RPG-RP-012 SUITABLE.dwg FIG 2
Jan 21, 2014 8:22am mpratschner

ANCHOR QEA

Figure 2
RGP 54 Sediment Characterization
Proposed RGP 54

LEGEND:

- Suitable to -10 feet MLLW plus 2 feet of overdepth for unrestricted disposal at the LA-3 ODMDS. Grain size required prior to beach replenishment to demonstrate suitability.
- Suitable to -10 feet MLLW plus 2 feet of overdepth for unrestricted disposal at the LA-3 ODMDS. Material proposed for beach placement must have grain size verification and chemical testing with agency concurrence to verify suitability prior to placement.
- Suitable to -7 feet MLLW plus 1 foot of overdepth for unrestricted disposal at the LA-3 ODMDS. Z-layer testing to confirm post-dredge surface contains mercury less than 1 ppm prior to dredging to demonstrate newly exposed surface is clean. Grain size required prior to beach replenishment to demonstrate suitability.
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0 1000
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L:\AutoCAD Project Files\090243-01 Newport CAD\Lower Newport Bay\RGP 54\0243 RPG-RP-012 SUITABLE.dwg FIG 3a
Jan 21, 2014 8:29am mpratschner

ANCHOR QEA

Figure 3a
Proposed RGP 54 Coverage Areas
Proposed RGP 54

LEGEND:

- Suitable to -10 feet MLLW plus 2 feet of overdepth for unrestricted disposal at the LA-3 ODMDS. Grain size required prior to beach replenishment to demonstrate suitability.
- Suitable to -10 feet MLLW plus 2 feet of overdepth for unrestricted disposal at the LA-3 ODMDS. Material proposed for beach placement must have grain size verification and chemical testing with agency concurrence to verify suitability prior to placement.
- Suitable to -7 feet MLLW plus 1 foot of overdepth for unrestricted disposal at the LA-3 ODMDS. Z-layer testing to confirm post-dredge surface contains mercury less than 1.0 ppm prior to dredging to demonstrate newly exposed surface is clean. Grain size required prior to beach replenishment to demonstrate suitability.
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NOTE:
Areas proposed for inclusion in RGP 54 are generally between the bulkhead and pierhead lines with the shoreline/boundary demarcated by the various colors/hatched lines. The colored lines, whether solid or dashed, always follow the shoreline rather than following individual fingers or docks.

L:\AutoCAD Project Files\090243-01 Newport CAD\Lower Newport Bay\RGP 54\0243 RPG-RP-012 SUITABLE.dwg FIG 3b
Jan 21, 2014 8:32am mpratschner

ANCHOR QEA

Figure 3b
Proposed RGP 54 Coverage Areas
Proposed RGP 54

LEGEND:

- Suitable to -10 feet MLLW plus 2 feet of overdepth for unrestricted disposal at the LA-3 ODMDS. Grain size required prior to beach replenishment to demonstrate suitability.
- Suitable to -10 feet MLLW plus 2 feet of overdepth for unrestricted disposal at the LA-3 ODMDS. Material proposed for beach placement must have grain size verification and chemical testing with agency concurrence to verify suitability prior to placement.
- Suitable to -7 feet MLLW plus 1 foot of overdepth for unrestricted disposal at the LA-3 ODMDS. Z-layer testing to confirm post-dredge surface contains mercury less than 1.0 ppm prior to dredging to demonstrate newly exposed surface is clean. Grain size required prior to beach replenishment to demonstrate suitability.
- Area not included under proposed RGP 54.

0 1000
Scale in Feet

SOURCE: Aerial from Bing maps. Coastline extents from City of Newport Beach.
HORIZONTAL DATUM: California State Plane, Zone 6, NAD83.
VERTICAL DATUM: Mean Lower Low Water (MLLW).

NOTE:
Areas proposed for inclusion in RGP 54 are generally between the bulkhead and pierhead lines with the shoreline/boundary demarcated by the various colors/hatched lines. The colored lines, whether solid or dashed, always follow the shoreline rather than following individual fingers or docks.

L:\AutoCAD Project Files\090243-01 Newport CAD\Lower Newport Bay\RGP 54\0243 RPG-RP-012 SUITABLE.dwg FIG 3c
Jan 21, 2014 8:36am mpratschner

ANCHOR QEA

Figure 3c
Proposed RGP 54 Coverage Areas
Proposed RGP 54

EELGRASS PROTECTION AND MITIGATION PLAN FOR SHALLOW WATERS IN LOWER NEWPORT BAY:

AN ECOSYSTEM BASED MANAGEMENT PROGRAM

City Of Newport Beach
Public Works Department
Harbor Resources Division
PO Box 1768
Newport Beach, CA 92658-8915

MARCH 2015

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SUMMARY OF THE EELGRASS PROTECTION AND MITIGATION PLAN

The purpose of this document is to describe an approach (the Plan) to eelgrass (*Zostera marina*) protection and mitigation within Newport Harbor for routine maintenance dredging activities typically undertaken by individual property owners. The Plan focuses on the shallow water eelgrass protection and mitigation measures associated with the following action:

(1) Minor maintenance dredging under and adjacent to currently authorized private, public, and commercial docks, floats, and piers. Dredging depth is not to exceed -10 feet mean lower low water (MLLW; plus 2 feet of allowable over depth).

These types of impacts to eelgrass are temporary in nature. Temporary refers to the fact that the maintenance dredging is short lasting and that immediately following the dredging, the area is subject to sedimentation. The area to be dredged generally consists of the area beneath the boat and dock where eelgrass is generally not found and therefore in these areas there is little or no impact to eelgrass. Eelgrass, however, may be found on the side slopes of the dredged area and therefore comprise only a small or minor area compared to the overall dredging footprint. The area outside the dredging footprint is usually not disturbed by the dredging activity; although there may be some temporary impacts due to turbidity. Maintenance dredging impacts would be minor, as they would occur in small areas within the RGP 54 and Plan boundaries, which cover a relatively small portion of Newport Harbor and the Stable and Transitional Zones.

Eelgrass has been observed to re-establish itself in these areas following dredging events as natural rates of siltation occur. Based on Newport Harbor-specific data reported by Coastal Resources Management Inc. (2010), the shallow water population of eelgrass is found at depths up to -6 to -15 feet relative to MLLW, with greater depth penetration in the portions of the harbor closest to the ocean inlet and lower penetration within Upper Newport Bay. Eelgrass is spread by seed, and it can colonize areas within a few years along the edges of the dredged area. Because eelgrass impacted by dredging is usually at the edge of a dredged area (i.e., it does not grow under the existing docks or boats), the depth of dredging is usually shallower at the sides than within the boat slip, and this slope is within the zone that can be occupied by eelgrass. Other studies have shown that eelgrass can occur within 1 to 2 growing seasons following dredging; however natural variation between years can be substantial and must be considered when evaluating recovery times (Sabol et al, 2005).

The area within Newport Harbor where maintenance dredging would occur is referred to as the Plan Area and comprises portions of the harbor generally defined as:

> The bulkhead to pierhead line plus 20 feet bayward, including those exceptions for structures that extend beyond this boundary as of 2013 in conformance with harbor development regulations or policy.

The eelgrass management threshold (EMT) is defined as the long-term average acreage of eelgrass based on the detailed biannual survey data collected by the City between 2003-2014 within the Plan Area. EMTs have been determined for the Stable and Transitional Zones within the harbor. The EMT is used to determine the lower limit of the Tier 1. Other Tiers have been determined with advice and review by federal and state agencies and are based on fixed numbers for acreages within each Zone.

Under all tier levels, the maximum amount of allowable impacts to eelgrass in the Stable and Transitional Zones of the Plan Area will be limited to a fixed percentage of each Zone per year—up to 5% of the population/year in Tier 1 and up to 3% of the population/year in Tier 2. The impact acreage for the Plan has been also calculated from the average acreage in each zone from the 2003-14 surveys. The allowable total maintenance dredging area will not exceed 8 acres per year in the Stable and Transitional Zones. The tier levels and the actions that the City will undertake are defined in Table 1, and a flow chart demonstrating the process is shown on Figure 1.

Mitigation for temporary and/or minor permanent loss of eelgrass, for activities covered under this Plan, would be implemented under an approach that includes four elements:

> (1) City Assumes Lead Responsibility – The City will enforce compliance with the Plan, subject to agency oversight.[1] Consistent with its management role, the City, rather than individual property owners, will generally be responsible for surveying and data gathering. This will ensure decisions are made based on the City's reliable, professionally gathered data, while relieving individual property owners of a burden they generally lack the expertise to effectively implement.

[1] The Plan will be implemented in coordination with Regional General Permit 54, which is currently being negotiated with the U.S. Army Corps of Engineers, and subject to agency oversight. Other projects that have temporary impacts to eelgrass that require Individual Permits under Section 404 of the Clean Water Act could qualify, if they occur within the Plan Area in Newport Bay and are within the thresholds established under this Plan.

(2) **Eelgrass Management Threshold –** The Plan promotes an ecosystem-based approach; the key metric of eelgrass protection is the maintenance of a sustainable shallow water eelgrass population.[2]

The focus of the City's management will be to protect and promote shallow water eelgrass populations. Dredging is conditioned on compliance with best management practices (BMPs) for avoiding eelgrass disturbance where possible. Should the shallow water eelgrass population drop below the EMT, annual allowable impacts to eelgrass will decrease and increased mitigation will be implemented in a phased manner. If additional impacts to eelgrass within the Plan Area are proposed after the annual limit is reached or eelgrass acreage within the Stable or Transitional Zone at or below Tier 3, the individual applicant will need to apply mitigation consistent with the California Eelgrass Mitigation Policy (CEMP) with approval from federal and state agencies.

(3) **Best Management Practices –** The City will approve the application of the Plan for projects subject to property owner compliance with BMP standards. BMPs include avoidance and, when appropriate under the tier levels, active eelgrass establishment techniques, such as seeding using buoy deployed seed bags (BDSB) and/or use of TERFS™.[3] BMPs will minimize negative impacts to existing eelgrass and encourage additional population growth.

(4) **Program to Promote Regrowth and Establishment –** The City will encourage and support pilot testing of BDSB and TERF™ strategies, begin an education program to encourage the public to view eelgrass as a valuable component of the ecosystem rather than a nuisance weed that restricts boat and dock use, and where appropriate, consider other methods to create areas suitable for eelgrass.

The Plan provides an incentive to the City and property owners to promote a healthy eelgrass population in Newport Bay, as the increased eelgrass occurrence will be accommodated by the flexibility of the Plan to allow for greater temporary impacts. The policy will encourage innovative and effective methods to be used to promote eelgrass establishment throughout the bay, where conditions are suitable, as opposed to limited project-by-project mitigation.

[2] The EMT is based on the shallow water eelgrass population within the defined Plan Area where maintenance dredging generally occurs. Additional areas of shallow water eelgrass are also found outside this Plan Area and will continue to be monitored, but these areas are not used for calculating the EMT.

[3] TERF™ refers to "Transplanting Eelgrass Remotely with Frame Systems." Adult plants are transplanted using a frame system to which the plants are attached.

Best Management Practices (BMPs) and mitigation measures of the Plan would be implemented via a three-tiered approach (Table 1). Fixed brackets or Tiers have been set for each Zone in consultation with the permitting agencies. The most recent eelgrass survey data will then be used to determine which Tier and its associated impact limitations and BMPs are applicable to the next two year period following the survey. BMPs and mitigation measures will be based on the tier level for each Zone. The tier levels may be adjusted based on subsequent survey results, but only with approval by the federal and state agencies with permit authority over the maintenance dredging activities.

Additionally, to further understand eelgrass distribution in the harbor the City engaged a consultant in 2013 to undertake full harbor surveys for eelgrass (shallow and deep water populations) and to conduct additional oceanographic studies on temperature, light, and salinity conditions in areas occupied by eelgrass. Results of these studies are invaluable to not only understanding eelgrass ecology in Newport Harbor, but will also support resource and regulatory agencies in advising policy to protect and promote the resource.

Table 1. Eelgrass Tiers for Activities Occurring in the Shallow Water Eelgrass Zone (Plan Area) in Newport Harbor

Shallow Water Eelgrass in Plan Area		Allowable Annual Temporary Impacts to Eelgrass in the Plan Area[1]	City of Newport Beach Action
Stable Zone	Transitional Zone		
Tier 1			
Eelgrass extent in Plan Area ≥ 16.8 acres	Eelgrass extent in Plan Area ≥ 3.8 acres	Up to a total 0.84 acres in the Stable Zone Up to a total of 0.19 acres in the Transitional Zone	• Develop, test, and/or improve methods to collect and use eelgrass seeds for deployable seed bagging when needed and to construct or use eelgrass TERFS™ devices • The City conducts surveys every 2 years to determine extent of eelgrass coverage in shallow water eelgrass zone • Conduct education program to help the public see eelgrass as a valuable ecosystem component rather than a nuisance weed that restricts boat and dock use • Encourage owners to minimize the size of docks and floating structures or use docks and floating structures that maximize light penetration • Continue to update BMP procedures to minimize impacts to eelgrass and to promote eelgrass coverage
Tier 2			
Eelgrass extent in Plan Area < 16.8 to ≥ 15.8 acres	Eelgrass extent in Plan Area < 3.8 to ≥ 2.5 acres	Up to a total of 0.5 acres in the Stable Zone Up to a total of 0.11 acres in the Transitional Zone	• The City will require property owners who have undertaken the Project Activity to implement deployable seed bagging and/or TERFS BMP at impact area • The City conducts surveys every 2 years to determine extent of eelgrass coverage in shallow water eelgrass zone • Conduct education program to help the public see eelgrass as a valuable ecosystem component rather than a nuisance weed that restricts boat and dock use • Encourage owners to minimize the size of docks and floating structures or use docks and floating structures that maximize light penetration

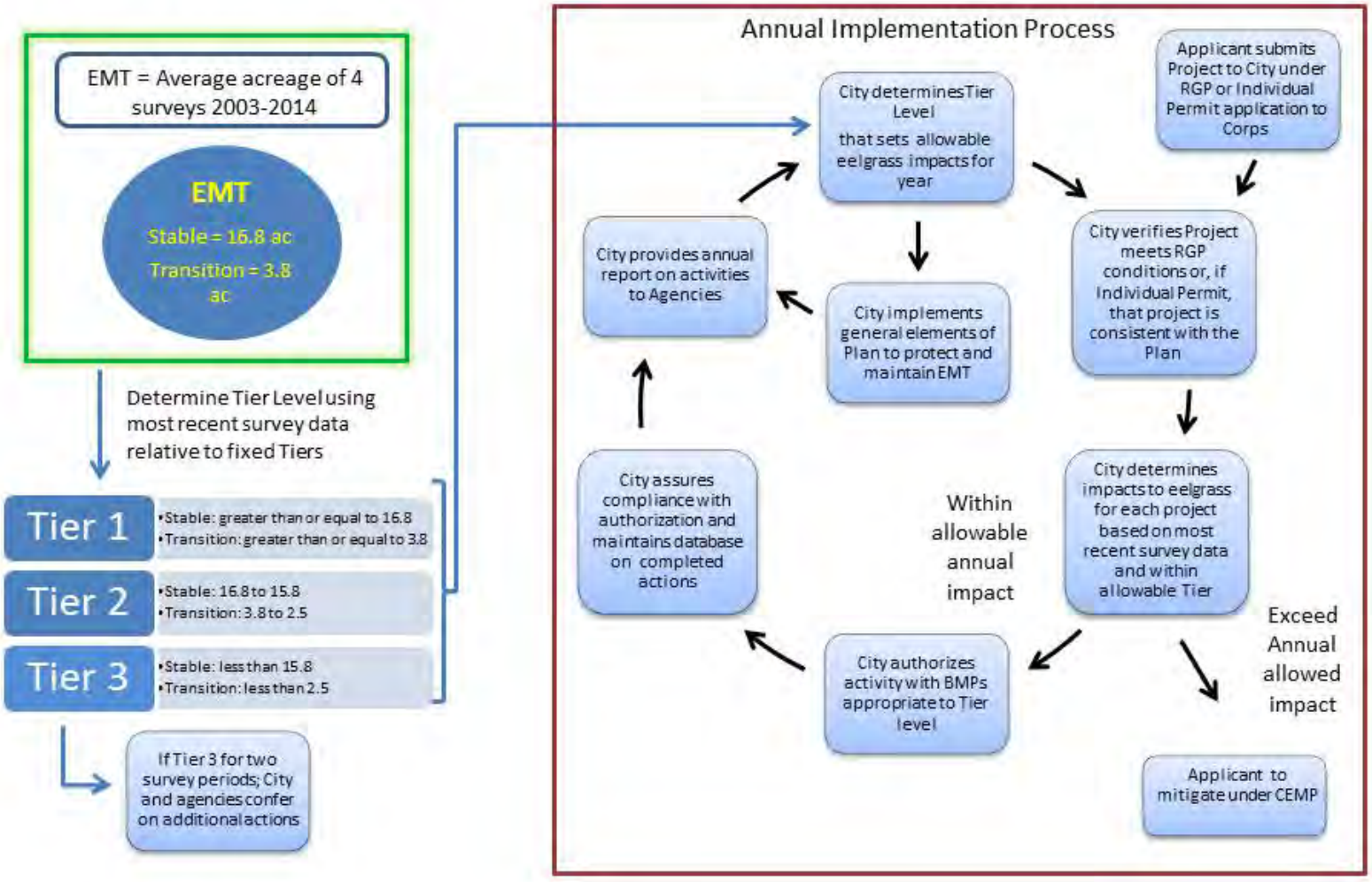
Shallow Water Eelgrass in Plan Area		Allowable Annual Temporary Impacts to Eelgrass in the Plan Area[1]	City of Newport Beach Action
Stable Zone	Transitional Zone		
			• Continue to update BMP procedures to minimize impacts to eelgrass and to promote eelgrass coverage
Tier 3			
Eelgrass extent in Plan Area is < 15.8 acres	Eelgrass Extent in Plan Area is < 2.5 acres	Eelgrass impacts only allowed with standard CEMP mitigation	• The City conducts surveys every 2 years to determine extent of eelgrass coverage in shallow water eelgrass zone • Conduct education program to help the public see eelgrass as a valuable ecosystem component rather than a nuisance weed that restricts boat and dock use • Encourage owners to minimize the size of docks and floating structures or utilize docks & floating structures that maximize light penetration • Continue to update BMP procedures to minimize impacts to eelgrass and to promote eelgrass coverage • Any impacts to eelgrass will be mitigated using the methods (e.g. transplanting), mitigation ratios, and performance standards in the National Marine Fisheries Service California Eelgrass Mitigation Policy. • If shallow water population remains below lowest Tier 3 level for two consecutive survey periods, the City will work with the agencies to determine the cause of the decline and, if necessary, initiate additional actions to improve or create habitat suitable for re-establishment of eelgrass populations to the EMT level

Notes:

1 If additional impacts to eelgrass are proposed within the Plan Area after the Tier limit is reached during any annual reporting period, mitigation would be provided by the project proponent independent of this Plan and consistent with the CEMP or other applicable mitigation policy.

2 The Tier limits are based on long-term averages of four biennial surveys conducted between 2003 and 2014 and fixed based on consultation with federal and state agencies.

Newport Bay Eelgrass Protection and Mitigation Plan



INTRODUCTION

The purpose of this document is to describe an Eelgrass Protection and Management Plan (the Plan) for temporary and minor impacts to eelgrass(*Zostera marina*), associated with maintenance dredging at boat docks typically undertaken by individual property owners and small commercial operators, and include:

> Minor maintenance dredging to be performed under and adjacent to currently authorized private, public, and commercial docks, floats, and piers. Dredging depth is not to exceed -10 feet mean lower low water (MLLW), plus 2 feet of allowable over depth.

The Plan is an outcome of the City of Newport Beach Harbor Area Management Plan (HAMP), as issued in April 2010 and approved by City Council in November 2010. The HAMP established goals and best management practices (BMPs) to ensure a healthy eelgrass population within Newport Harbor, including the development of the Plan.

Consistent with its role as Newport Bay's primary steward and the California Eelgrass Mitigation Policy's (CEMP), the City developed this Plan tailored specifically to Newport Bay's shallow waters adjoining residences. The Plan will govern practices related to a portion of Lower Newport Bay's existing eelgrass population—the shallow water eelgrass zone generally found at depths less than 10 feet below MLLW. Much of the shallow water eelgrass population is located in areas occupied by private piers, docks, and small commercial facilities. The Plan focuses on those impacts that are minimal and temporarily associated with maintenance dredging in these shallow waters.

Eelgrass is very resilient in these areas and recolonizes areas between dredging events as the areas silt in over time. There appears to be an abundant source of seeds to allow for eelgrass establishment in areas affected by the dredging activity. Based on Newport Harbor-specific data reported by Coastal Resources Management Inc. (2010), the shallow water population of eelgrass is found at depths up to -6 to -15 feet relative to MLLW, with greater depth penetration in the portions of the harbor closest to the ocean inlet and lower penetration within Upper Newport Bay. Because eelgrass impacted by dredging is usually at the edge of a dredged area (i.e., it does not grow under existing docks or boats), the depth of dredging is usually shallower at the sides than within the boat slip, and this slope is within the zone that can be occupied by eelgrass. Additionally, because maintenance dredging is not occurring in all areas at the same time, various stages of eelgrass recovery occur throughout the harbor.

The Plan will serve the principal goals of protecting and promoting a long-term sustainable eelgrass population while serving Lower Newport Bay's navigational and recreational beneficial uses. The touchstone of the Plan is an ecosystem-based approach that works by

protecting a sustainable eelgrass population in the Lower Newport Bay and enforcing BMPs that will promote eelgrass growth.

The approach to managing the Harbor's resources embodied in this Plan is consistent with the California Ocean Protection Council's (COPC) Five Year Strategic Plan to implement ecosystem-based management (EBM; COPC 2006). According to COPC, the goal of EBM is, "to maintain an ecosystem in a healthy, productive, and resilient condition so that it can provide the services humans want and need. Ecosystem-based management differs from current approaches that focus on a single species, sector, activity, or concern."

EBM recognizes there are multiple objectives and benefits provided by marine systems, rather than single ecosystem or species services. Such benefits include vibrant commercial and recreational fisheries, biodiversity conservation, renewable energy, and coastal protection. In addition, EMB is adaptable to changing conditions and taking into consideration that healthy systems exhibit resilience to disturbances; therefore, management measures should consider and adapt to large and small scale factors that affect ecosystem change. The EMB approach is also consistent with the *Final Recommendations of the Interagency Ocean Policy Task Force* (CEQ 2010), which emphasizes the concept of Coastal and Marine Spatial Planning for management of coastal resources. The National Marine Fisheries Service (NMFS) has taken a lead role in promoting and implementing EMB within its fisheries, coral reef, and marine sanctuaries management programs. The extension of this approach to eelgrass management in Newport Harbor is proposed in this Plan.

BACKGROUND

The City, as the primary steward of Newport Bay, has invested significant resources to ensure a healthy eelgrass population thrives in the Bay. For instance, the City has retained experts to develop this Plan, conducted eelgrass mitigation banking projects, engaged contractors to conduct bay-wide monitoring and surveying of eelgrass distribution using consistent and repeatable methods, and, most importantly, worked to make the bay more hospitable to eelgrass through the implementation of water quality protection measures. Most recently, the City approved a HAMP that sets an overall goal to, "support a sustainable estuary ecosystem able to be integrated with upstream sustainable watersheds and adjacent coastal area systems."

As a result of these extensive efforts, City staff, as well as the scientists and consultants who have been retained to assist the City, have developed considerable data, knowledge, and expertise about eelgrass ecology in Newport Bay.

The City, as part of its commitment to the 2010 HAMP, developed this Plan for the shallow water eelgrass population in the Lower Bay that promotes a healthy eelgrass habitat and maintains the Bay's navigational, commercial, and recreational uses. The Plan specifically addresses the temporary and minimal impacts to eelgrass resulting from maintenance dredging projects associated with those facilities with the Plan Area. The Plan Area is defined as follows:

> The bulkhead to pierhead line plus 20 feet bayward and including those exceptions for structures that extend beyond this boundary as of 2013 in conformance with harbor development regulations or policy.

The specific boundary of the Plan Area has been established based on harbor surveys of existing docks and is attached as Appendix A of this document.

The Stable and Transitional Zones are those areas within the Harbor where eelgrass has been known to occur based on long-term surveys and is scientifically based on known oceanographic factors (e.g., circulation, turbidity, salinity, and temperature) that affect eelgrass establishment and growth. Further discussion of these zones and a map showing their occurrence are found on Figure 2.

The Plan consists of four main parts:

> (1) The first part establishes the City as the primary steward of eelgrass habitat in the Bay by placing the responsibility for approving use of the Plan for small maintenance dredging projects, as well as monitoring, surveying, and data gathering

on the City rather than on individual property owners. The City would take lead responsibility for initial screening of maintenance dredging projects within the Plan Area and assuring that such projects are consistent with this Plan. In addition, the City would assure compliance with permit conditions and all reporting requirements under the Regional General Permit and any other authorization for maintenance dredging in the Plan Area.

(2) The second part establishes an Eelgrass Management Threshold (EMT) based on survey data collected by the City on a biannual basis. An EMT is the average acreage of eelgrass found in the Plan Area during four surveys conducted from 2003 to 2014. Separate EMTs have been determined for the Stable and Transitional Zones. Any change in the EMT based on subsequent surveys would need to be approved by the federal and state permitting agencies.

Tier 1 impacts and actions are implemented when the extent of eelgrass from the most recent biennial survey is at or above the EMT. In Tier 1, the temporary impacts to eelgrass resulting from projects permitted under this Plan will be limited to 5 percent of the average eelgrass present in each zone over the past four surveys or 0.84 acres in the Stable Zone and 0.19 acres in the Transitional Zone. This percentage is half of the standard deviation from the EMT and therefore well within the range of natural variation. A greater temporary impact is allowed within the Stable Zone as eelgrass is more abundant in this zone and there are numerous sources of seed and spreading rhizomes to promote rapid recovery (in addition to the BMP measures required in each Tier).

In Tier 2, temporary impacts to eelgrass resulting from projects permitted under this Plan will be limited to 3 percent of the average eelgrass present in each zone over the past four surveys or 0.5 acres in the Stable Zone and 0.11 acres in the Transitional Zone. If additional impacts to eelgrass are proposed, after the limit associated with the appropriate tier is reached, mitigation will be provided by the project proponent independent of this Plan and consistent with the CEMP.

(3) The third part establishes BMPs in order to minimize negative impacts and encourage eelgrass population growth, especially following periods when natural events may reduce eelgrass population levels.

(4) The fourth part establishes a program by which the City will implement methods to promote eelgrass growth and promote public education on eelgrass and includes measures to implement adaptive management as new information is developed.

The City has met with NMFS in the development of this Plan and has incorporated the Service's comments and recommendations into the Plan. The City has also met with the Los Angeles District of the Corps of Engineers, the Santa Ana Regional Water Quality Control Board, the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, and the California Coastal Commission during the development of this Plan. Comments received from these agencies have been incorporated into the Plan. The City has been conducting biennial surveys of eelgrass in the Plan Area since 2003 and initiated some elements of the Plan in 2012 and 2013 with the funding of oceanographic studies and provision of funding of $10,000 to the Coastkeeper for the testing of various eelgrass restoration techniques and in 2013 with funding of a survey of shallow water eelgrass in the Plan Area and the deep channels in the entrance to the harbor.

With approval from the federal and state permitting agencies, this Plan will be considered a special management plan area under the California Eelgrass Mitigation Policy (CEMP) and will be used for maintenance dredging within the Plan Area. Applicants whose maintenance dredging projects qualify will reference the Plan when proposing work in areas containing eelgrass, and the resource agencies will use the Plan as a basis for compliance with eelgrass mitigation. The City will prepare annual reports on its progress in implementing the Plan and will maintain records of projects approved under the Plan.

ELEMENTS OF PLAN

CITY ASSUMES LEAD RESPONSIBILITY

The City will have responsibility for implementing the Plan and will comply with all reporting requirements to the permitting agencies. Applicants will be required to submit an application to the City to use the Plan as mitigation for impacts to eelgrass. The City will consider the nature of the project and area of eelgrass impact that would result from the project. If the City approves the applicant's project to use the Plan, the applicant will reference the Plan in their regulatory permit application, including verification by the City certifying the project. For those projects covered under the Regional General Permit (RGP) issued to the City, the reporting and permitting will be undertaken as specified in the RGP.

The City's eelgrass survey and maps will replace the requirement for individual applicants to conduct eelgrass surveys and can be used in support of the agency regulatory approval process. Eelgrass impacts would be calculated by the City using GIS software-by overlaying dredge footprint data with the most recent eelgrass data collected during comprehensive biannual surveys. If the applicant prefers to commission their own pre- and post-construction surveys, the results of those surveys would not be included or incorporated in the bi-annual surveys completed by the City.

The City will be responsible for tracking eelgrass in the Plan Area based on the most recent survey completed prior to the proposed work and for reporting those impacts to the agencies in compliance with the RGP. The City will not authorize any maintenance dredging within the Plan area in excess of 8 acres per year in the Stable and Transitional Zones and in accordance with the Tier levels. The City will report to the agencies when the dredging limit has been reached for the year.

The designation of the various survey areas is shown on Figure 1. The survey procedure is done using a SCUBA diver and GPS and is very accurate in terms of determining the distribution of eelgrass throughout the Harbor. Both eelgrass extent and turion density are recorded. These data are reported in the biannual survey results.

Eelgrass vegetation was mapped using a Global Position System (GPS) and a team of biologists consisting of a diver and a surface support biologist in a kayak. To assist in the mapping process, an Ocean Technology Systems (OTS) surface-to-diver communications system was employed. Eelgrass depth ranges were recorded during this phase of the field operations. A Thales Mobile Mapper Wide- Area Augmentation System (WAAS) GPS/GIS Unit was employed to map eelgrass beds and small eelgrass patches. The estimated GPS error of the Thales Mobile Mapper unit, with post-processing differential correction is less than 1 meter with clear open skies; however, in some instances, the error was higher because the team was working near bulkheads, underneath piers, and between docks where a clear view

of the sky was not always possible. In these instances, the error was estimated to be 1 to 3 meters.

The biologist-diver first located the beginning of an eelgrass bed and marked it with a yellow buoy. The surface support biologist working from a kayak then initiated tracking of the biologist diver with the GPS as the diver swam the perimeter of the individual eelgrass bed. Once the diver returned to the beginning point, the GPS polygon area mapping was terminated. Eelgrass patches that were too small to survey or located in difficult areas to obtain a GPS signal (i.e., behind docks/under piers) were referenced as a GPS "point" and a size of the eelgrass patch was estimated by the diver.

In order to assess eelgrass turion density, thirty (30) eelgrass turion counts were made at each of 15 stations throughout the study area by SCUBA-diving biologists that counted the number of live, green shoots at the sediment/shoot interface within replicated 0.07 square meter (sq m) quadrats. These counts were conducted along an underwater transect between the shallow-and-deep edges of eelgrass at each sampling site. Prior to conducting the survey, the team standardized their counting methods to ensure the accuracy of counts between different team members.

The survey data will be important in assessing the long-term trends in eelgrass within the Harbor as well as providing regional information to compare with other embayments in the southern California bight. Without the biannual survey, the agencies would not have information on the quantity of eelgrass in the Bay. Under site-by-site permitting, permitting agencies would not know if eelgrass trends were positive, stable, or trending towards significant loss. Natural variation in eelgrass abundance is large as has been seen in Morro Bay, but without knowing the trends occurring over time, it is hard to pinpoint the factors controlling its distribution or when specific problems may be arising to cause large scale declines. The survey data will provide the needed information to reduce maintenance dredging should declines in eelgrass abundance be observed. In addition, regional monitoring programs on subtidal habitats are desired, but hard to fund (SCCWRP 2010). The proposed biannual surveys funded by the City of Newport Beach will fill one critical gap for southern California estuaries.

Basis for City Responsibility for Surveys

Since 2003, the City has been conducting routine surveys throughout the harbor on eelgrass distribution and density (Table 2). The data have been entered into a Geographic Information System (GIS) Database maintained by the City's Harbor Resources Division. This information is among the most detailed long-term data set on eelgrass distribution available in Southern California. For portions of the northwestern harbor (e.g., Newport Channel west of Bay Island and portions of Lido Isle), no eelgrass has been found during any of the surveys, whereas in other areas, it thrives from year to year. The distribution of

eelgrass in the Lower Newport Bay is related primarily to light availability and tidal flushing times. Those areas with the most rapid tidal flushing times and best light availability are most likely to be colonized by eelgrass.

Based on the detailed studies completed by the City's consultant, Coastal Resources Management (CRM), there are three eelgrass zones within the Lower Bay (Figure 2).

- **Stable Eelgrass Zone –** A zone where eelgrass distribution appears relatively stable from year to year. This zone is located primarily within the Lower Bay and includes the channel entrance, the southern and eastern portions of Balboa Island and Grand Canal, Corona del Mar, and lower Balboa Peninsula. This zone is also characterized by a tidal flushing time of less than 6 days, which contributes to the higher water clarity.
- **A Transitional Eelgrass Zone –** A zone where eelgrass is susceptible to year-to-year variation in extent and density. This zone is largely found in the central part of the Lower Bay in areas such as Harbor Island, Linda Isle, the northern and western portions of Balboa Island, and the northern side of the Lido Channel. This zone is characterized by a tidal flushing time of 7 to 14 days and is located in a zone that is influenced by turbidity from San Diego Creek discharge during winter months.
- **An Unvegetated Zone–** A zone where eelgrass has not been found or is rarely found. This zone is primarily within the western portion of the Lower Bay and also areas of the Upper Bay north of Castaways Park. These areas are characterized by a tidal flushing time of greater than 14 days.

The survey data provides a depiction of the eelgrass dynamics in the Lower Bay and, because of their detail, can be used as a substitute for the current site-specific survey requirements contained in the CEMP. The City will conduct these surveys once every 2 years.

Figure 1. Location of sampling areas within the shallow water eelgrass zone of Lower Newport Bay.

Table 2. City-Sponsored Shallow Water Eelgrass Surveys in Newport Harbor

Survey Dates	Eelgrass in the Plan Area (Acres)	Notes
December 2003 to August 2004	24.51	Largest shallow water eelgrass population recorded in the harbor to date. Water quality conditions ideal with low winter rainfall.
December 2006 to October 2007	18.87	Decline in eelgrass area, primarily around north Balboa Island, Harbor Island, Linda Isle, and Upper Newport Bay.
December 2009 to November 2010	16.20	Decline in transitional zones attributed to strong winter storms, which contributed to high turbidity.
March 2012 to April 2014	22.76	Overall increase in eelgrass observed in Stable and Transitional Zones and additional survey conducted in the deep channel

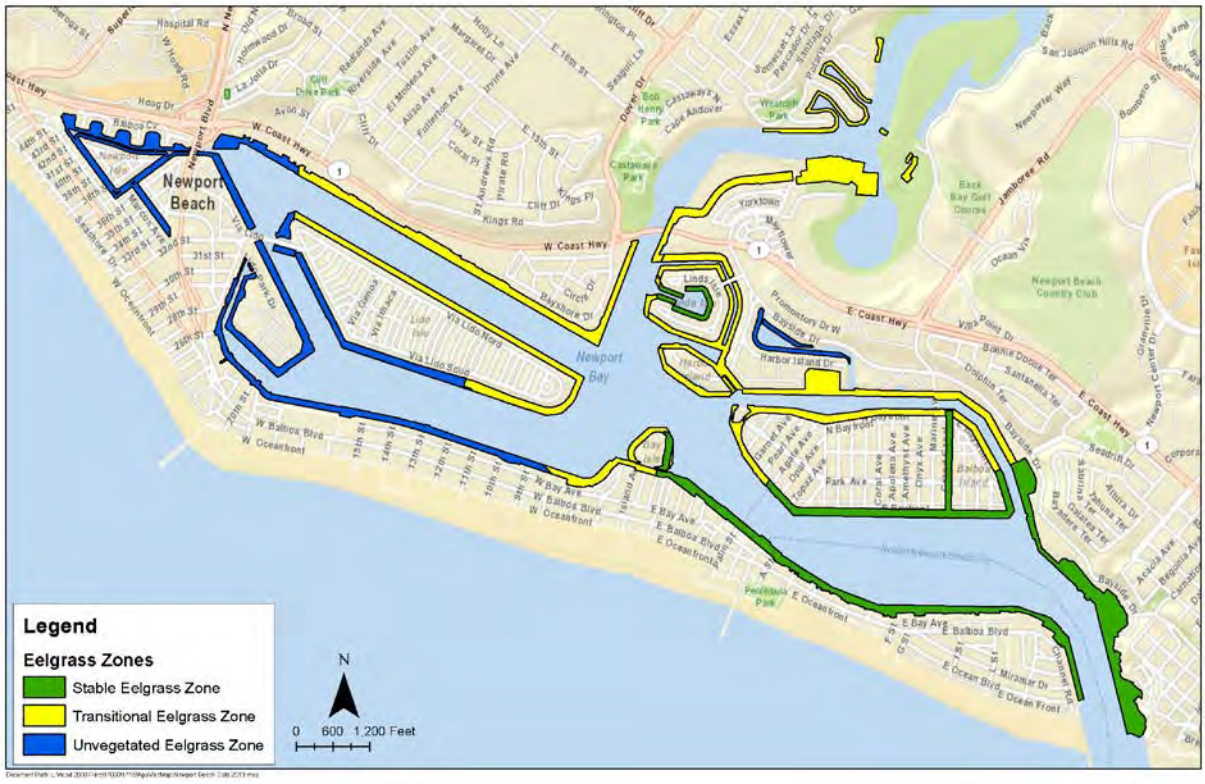


Figure 2. Location of Stable, Transitional, and unvegetated eelgrass zones based on CRM (2010).

EELGRASS MANAGEMENT THRESHOLD

The EMT concept is an ecosystem-based approach designed to take advantage of years of data, research, and knowledge on eelgrass in Newport Bay. The EMT, when coupled with the other parts of this Plan, will benefit the harbor ecosystem and will maintain and promote the growth of eelgrass in the Harbor. The Covered Activities undertaken by individual owners within the confines of this Plan will not have a significant effect on eelgrass resources. Combined with the eelgrass populations in other areas of the harbor, the limitations on eelgrass impacts under the Plan would allow for eelgrass to persist throughout Newport Bay, while accommodating maintenance needs arising from the Bay's other recognized beneficial uses such as navigation and recreation. BMPs that will promote eelgrass growth and establishment will minimize potentially deleterious consequences of maintenance projects via avoidance measures, and in the event the eelgrass declines below specific population levels, will promote the continued proliferation of eelgrass through seeding and other measures.

Maintenance dredging within the Stable and Transitional Zones of the Plan Area will be limited to a maximum of 8 acres per year[4]. On an ecosystem-basis, the total of 8 acres of dredging within the areas occupied by eelgrass on an annual basis represents a small percentage of the total harbor area. The Plan Area itself covers approximately 240 acres and the Stable and Transitional Zones where eelgrass occurs cover approximately 170 acres. Within the Stable or Transitional Zones, the total acreage of eelgrass is 20.5 acres or approximately 12% within those zones. Therefore, in most instances, the dredging activity will have limited direct impacts on eelgrass, and some projects will have no direct impact on eelgrass. The maximum of 8 acres of dredging in the Stable and Transitional Zones represents only 5% of the Plan Area and provides for sufficient areas available for maintenance of the EMT.

The Plan establishes tier levels in relation to the EMT that determine the BMPs that will be implemented. The EMT establishes the Tier 1 threshold and is set at the average of the past four biannual surveys (2003 to 2014) and is based on the surveyed extent of eelgrass within the Plan Area. It is 16.8 acres for the Stable Zone and 3.8 acres for the Transitional Zone for a total of 20.6 acres. As long as the extent of eelgrass is at or exceeds the EMT, the allowable temporary impacts to eelgrass will be set at 5 % of the average eelgrass present in each zone over the past four surveys.

[4] There is no limit established for dredging within the unvegetated zone except for those established under the Regional General Permit and/or any applicable Individual Permit authorization for activities not covered under the RGP.

Tier 2 applies if the shallow water eelgrass population, based on the most recent survey in the Project Area, drops below the EMT, but remains at or above 15.8 acres in the Stable Zone and 2.5 acres in the Transitional Zone (Tier 2),. In Tier 2, allowable temporary impacts to eelgrass will be set at 3 % of the average eelgrass present in each zone over the past four surveys. Tier levels are set independently for each of the eelgrass zones.

Tier 3 applies if the shallow water eelgrass population drops below the Tier-2 levels. During Tier 3, maintenance dredging resulting in any temporary impacts to eelgrass will require the project proponent to mitigate pursuant to the CEMP, including retaining responsibility to meet the performance criteria after 5 years of monitoring. Five years of monitoring and reporting would be completed by the applicant independent of the City's biannual monitoring, and reporting by the applicant to the agencies on an annual basis for the five year duration of the required monitoring period. Consistent with the CEMP, if the mitigation success is not met after five years, the applicant would be responsible for providing additional mitigation to meet the success criteria.

In the future, the EMT may be updated with subsequent survey information, but any change is subject to review by the City and the permitting agencies based on data and information collected in Newport Bay. If additional impacts to eelgrass are proposed within the Plan Area, after the annual limit imposed at the specific tier level is reached, mitigation would be provided by the project proponent independent of this Plan and consistent with the CEMP.

Basis for EMT

The determination of the EMT is based on the average of four sample periods using similar sampling methodology. The results from the four survey periods of 2003 to 2004, 2006 to 2007, 2009 to 2010, 2012 to 2014 were grouped by their occurrence within Stable and Transitional Zones of the Harbor for the Project Area and outside the Project Area (see Appendix B for data tables and maps for each sampling period). The EMT from these surveys is 20.5 acres with a 95% confidence interval of 3.7 acres.

The areas with stable eelgrass populations are influenced by ocean water as they are subject to the higher flushing rates in the portion of the Harbor nearest the inlet channel (Figure 3). As a result, they are less affected by turbidity reduction from inflow of the San Diego Creek into the Upper Bay. There has been little to no dredging for private docks within eelgrass areas during the period covered by the surveys; so, it is expected these numbers represent the baseline conditions.[5] In the Stable Zone, the amount of eelgrass averaged approximately 16.8 acres for the Project Area in the four survey periods with a 95% confidence limit of 1.9 acres.

[5] According to the dredging permit activity log maintained by the City, minimal to no dredging of eelgrass has occurred during this analysis period due to the difficulty and cost of completing mitigation associated with

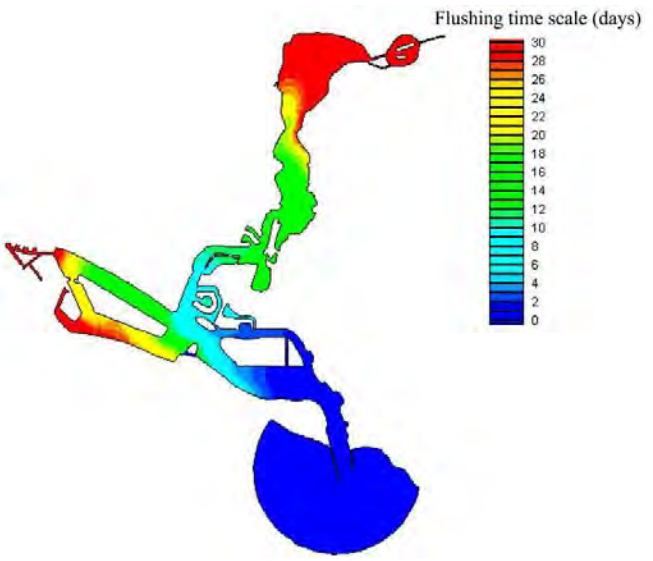


Figure 3. Tidal flushing in days for the Lower and Upper Newport Bay area. Everest Consulting (from CRM 2005).

The Transitional Zone is strongly influenced by reductions in light penetration and perhaps lowered salinities during normal to above normal rainfall years.[6] The significant decline observed from 2003 to 2010 is likely the result of higher rainfall years during the sampling events. Eelgrass in some areas within the Transitional Zone has disappeared during years of high runoff and low light penetration. This is particularly true when strong winter storms in 2009 to 2010 contributed to high turbidity throughout the Harbor. The cooler water temperatures observed in the summer of 2010 may have also stalled recovery by slowing growth (R. Ware, pers. comm.). During the most recent survey, rainfall was lower and therefore turbidity was reduced. For the Transitional Zones, the average within the Project Area was 3.8 acres with 95% confidence limits of the mean at ± 2.6 acres. The variation observed over the four sampling periods is larger than that seen in the Stable Zones.

The inter-annual variation in the transitional areas contributes to most of the variation of shallow water eelgrass as this area is most influenced by variation on turbidity associated with outflows from San Diego Creek and Upper Newport Bay (CRM 2010). Primary emphasis on sustaining eelgrass populations in the Harbor should be placed on maintenance of acreage within the Stable Zone (from which seeds are likely produced to re-establish eelgrass in transitional zones).

eelgrass impacts. So, it is assumed the eelgrass population as measured represents a natural variation from periods of high growth (2003 to 2004 data) and lower growth due to higher turbidity (most recent data).

[6] CRM has found that very small differences in mean light intensity can affect whether eelgrass will establish and grow at specific locations (CRM 2010). Based on light measurements taken in 2008 to 2009, CRM observed the mean light intensity in eelgrass occupied areas was 354 µmol m^{-2} s^{-1} compared to 294 µmol m^{-2} s^{-1}, and that generally light energy in eelgrass beds was greater by approximately 100-200 µmol m^{-2} s^{-1}.

In addition to restrictions on the amount of dredging that could occur within the Stable and Transitional Zones each year, the location of those impacts would be restricted. Because dredging requires substantial pre-project planning and the cost of dredging for small projects is high, adjoining landowners may wish to combine their efforts and conduct dredging over several properties. This may have an impact on the local population of eelgrass; therefore, it is proposed that no contiguous properties will impact more than 25% of the allowable annual eelgrass impacts under the Tier currently in effect for that Zone. Because there are some areas of the bay, such as Carnation Cove and portions of Balboa Island and Channel, where this restriction may present an economic hardship, especially as the eelgrass population increases, should any eelgrass impacts exceed these restrictions, written approval from NMFS would be obtained to exceed these levels.

Maintaining the EMT

With a healthy EMT, there will be ample seeds available in this well-mixed tidal system that most viable areas will be supplied with seeds naturally, such that seeding would be unnecessary. However, the City will support the testing of methods to collect eelgrass seeds for seed bagging and conduct pilot testing of seed bagging. By testing the methodology, the City will be well prepared to instruct those owners who undertake dredging on successful methods in the event the population of shallow water eelgrass falls below the EMT (Tier 1).

The City will also support the testing of eelgrass Transplant Eelgrass Remotely with Frame Systems (TERFS™), which will allow the transplanting of adult eelgrass plants in the event it becomes desirable to supplement seeding efforts.

The City will begin an education program to assist property owners in coming to view eelgrass as a valuable ecological resource rather than a nuisance weed that impedes navigation and recreation.

Below the EMT

In addition to the BMPs described for Tier 1, if the shallow water eelgrass population in the Project Area is within the Tier-2 level, the allowable impacts to eelgrass would decrease to 3% of the population within each Zone. In addition, the City will require those property owners who undertake maintenance dredging in the Stable or the Transition Zones to take active regrowth efforts by deploying seed bags or by using TERFS off their docks in the areas of suitable depth within their lot(s). All other BMPs implemented at the Tier 1 level would also be in effect.

If the population is within the Tier-3 level, any temporary impacts to eelgrass would need to be mitigated pursuant to the CEMP.

If population within the Project Area remains in Tier 3 for two consecutive survey periods, the City will evaluate, in conjunction with the permitting agencies, the field data to determine if the cause is related to natural events such as consecutive heavy rainfall years. If no natural causes for this decline can be determined, the City will consider options to increase eelgrass habitat within the Harbor in consultation with the agencies.

BEST MANAGEMENT PRACTICES

The City will require the use of BMPs as part of the review process when owners propose maintenance dredging within the Project Area appropriate to the tier level. Approvals determined by the City will be conditioned on individual property owner's compliance with the BMPs.

The type of dredging equipment would be determined by the contractor(s) on a per project basis; this flexibility is necessary given the variety to potential project locations, placement sites, and volumes. Dredging would be conducted on a performance-based requirement (e.g. dredge footprint and depths) that the contractor is required to follow, which would be confirmed through pre-and post-dredge surveys. Regardless of the method of dredging employed by the project, the contractor will be required to comply with the terms and conditions of the RGP 54.

Basis for the BMPs

The purpose of the BMPs is to avoid and minimize the temporary impacts to eelgrass to the extent practicable and, where possible, to implement measures to promote eelgrass establishment. The overall plan provides incentives to property owners and the City to promote eelgrass establishment, as it will reduce costs and time associated with the current permitting and mitigation requirements. The BMPs allow the City and the property owners to address maintenance needs while promoting eelgrass stewardship.

Depending on site-specific conditions, the BMPs would include the following:

- **When Shallow Water Eelgrass in the Project Area is in Tier 1:**
  - **Avoidance Where Practicable –** The City will review proposed maintenance dredging projects to ensure avoidance of existing eelgrass beds is maximized to the extent practicable. Avoidance measures may include reducing the proposed dredging area or shifting the dredging area.
  - **Educate Property Owners –** The City will develop a public education program on the importance of eelgrass beds and the reasons they should be protected, so boat owners and property owners view the establishment of eelgrass as a positive outcome. The program will likely consist of information on the City's web site and a fact sheet attached to permit application packages.

- When Shallow Water Eelgrass in the Project Area is in Tier 2 or Tier 3:
    - **Promote Population Growth –** After maintenance dredging is concluded for projects that impact eelgrass, the City will require the property owners to use either of the following means:
        - **Buoyed Deployed Seed Bags (BDSB) –** These will be used to improve seeding adjacent to the disturbed area (Pickerell et al. 2006; Boyer et al. 2008). This method will allow for natural re-seeding of the temporarily disturbed areas and will likely be more successful than transplanting adult plants, because viable seed will be spread throughout the area and will germinate and survive in those areas best suited for eelgrass. It does not require significant expertise, intensive and expensive site-selection studies, or the use of divers, all of which are needed for transplanting. Seeds may be collected from the area prior to disturbance or from donor beds in the Stable Eelgrass Zone.

        - **TERFS™** – These are designed to allow for the stable transplanting of adult plants and will be deployed by the property owners if sufficient suitable area is available in the area surrounding the dredging activity. This would allow for re-establishment within its most suitable habitat area. TERFS will be deployed by the property owner who undertook the project activity.

Over time and through biennial monitoring, the City will be able to determine those methods that are most effective. As part of the annual reporting commitment, the City will include an appendix that includes detailed images of areas that were previously dredged under the proposed RGP 54, which would allow the City and agencies to track the success and re-growth of eelgrass and the effectiveness of the best management practices (BMPs; such as buoyed deployed seed bags) applied during Tier 2. It is expected that BMPs will evolve or additional ones will be adopted over time, as the City continues its efforts to acquire more information about the ecology, light requirements, and seedling survival rates of eelgrass.

If the shallow water eelgrass population in the Project Area is within the Tier-3 category for two survey periods, the City will undertake a rigorous adaptive management program. The City will examine the field data collected in conjunction with its survey program to determine if the decline is the result of natural causes, e.g. consecutive years of high runoff, or is caused by anthropogenic causes. The City will also work with the regulatory and resource agencies to consider more transplanting or seeding methods or creation of suitable areas for eelgrass colonization. The permitting agencies will meet to discuss possible causes for the decline, determine actions that should be taken, and if necessary, reduce or cease

maintenance dredging authorization under their permitting authorities until eelgrass recovery occurs.

PROGRAM TO PROMOTE EELGRASS GROWTH AND ESTABLISHMENT

The City will test eelgrass propagation methods in order to ensure the EMT is maintained through the use and development of restoration techniques, such as BDSBs (Pickerell *et al.* 2006) and TERFS™ (Short and Coles 2001).

The City is committed to minimizing temporary impacts to eelgrass by individual property owners through BMPs in the Plan Area. The City has undertaken an extensive monitoring program within the Harbor to assess light levels, salinity, and temperature throughout the year. It is expected these data can be useful not only in explaining inter-annual differences in eelgrass populations but to also determine areas most feasible for methods that can best promote eelgrass growth.

The City will investigate expanding eelgrass habitat within the Bay, buttressing the City's ability to respond should the population fall below the EMT:

- Use BDSBs to disperse seeds into Transitional Eelgrass Zone areas when population levels decline to promote more rapid recovery of eelgrass (Pickerell et al. 2006). BDSBs are mesh bags that contain inflorescences (with ripened seeds) that are deployed over the area where eelgrass has a potential to grow but has been eliminated by some natural cause such as seasonally low light levels caused by storm events. This method could also be used to improve eelgrass regeneration in areas temporally impacted by dredging that have suitable conditions for eelgrass growth. In San Francisco Bay, BDSBs have been found to also increase genetic diversity over transplant techniques (Boyer et al. 2008).

- Use TERFS to establish eelgrass in areas of high wave action but with suitable light and substrate conditions. The purpose would be to test the ability of TERFS to provide stable structures for the initial establishment of eelgrass in more wave-prone areas.

It is expected that these programs will be undertaken in Stable and Transitional Zones to determine their effectiveness.

INITIAL PROGRAM ACTIONS

The City will undertake several program actions once the Plan is approved by the permitting agencies. While eelgrass does re-establish itself rapidly in areas subject to temporary disturbance, some initial temporal losses may occur during the initial period of plan implementation. These measures will have the effect of promoting eelgrass growth in the Newport Harbor immediately upon approval of the management plan by the agencies and are in addition to the measures to be implemented as part of the overall plan.

The measures proposed include:

- An annual $10,000 contribution to the CoastKeeper or other appropriate non-profit organization over 3 years that will be directed toward a program to benefit eelgrass in Newport Bay[7]. In 2008, the Coastkeeper initiated a partnership with the Bay Back Science Center and the California Department of Fish and Game. It includes an educational program for life science and biology classes and provides teachers with training and classroom materials on eelgrass protection. The program includes an eelgrass cultivation and research program that is directed toward answering critical questions on the future conservation, management, and restoration of eelgrass in Newport Bay. Experimental tanks have been installed to test hypotheses on how best to establish eelgrass in the Upper Bay. The donation will be used to support these programs and to encourage the experimental transplantation of eelgrass in Newport Bay.
- The City will promote the use of dock designs that may improve light intensity below and adjacent to docks. While the City is not in a position to require that dock owners retrofit dock and piers, they can provide information to dock owners who are seeking changes or modifications on methods that could be employed that would improve dock design, such as translucent or grated deck materials, light concentrators, or other materials that may be suitable for use in areas where eelgrass is present. The City will work with NMFS and the California Department of Fish and Wildlife to identify those materials or modifications that have been proven effective and do not compromise safety and structural strength.

[7] The City has already made its first contribution to the Coastkeeper to test various planting methods in the Upper Newport Bay.

REPORTING AND ADAPTIVE MANAGEMENT

The City will prepare annual reports, due by January 31 of each year, on the activities undertaken to implement and manage the Plan. The report will document individual projects that have been approved to use the Plan and the amount of eelgrass that has been impacted during that year. The City will also provide documentation on the activities that have been undertaken, the status of the Initial Program Measures and Best Management Practices, and technical reports that have been completed during the reporting period. The report will be submitted to the National Marine Fisheries Service, the Corps of Engineers, the Santa Ana Regional Water Quality Control Board, the California Department of Fish and Wildlife, and the California Coastal Commission.

As new information is made available on eelgrass distribution and ecology in the project area, the City will, in concert with agency review and input, may propose revisions to the Plan and the EMT thresholds. In addition, new technology related to eelgrass ecology will also be incorporated into possible revisions. The resource and permitting agencies will review any new proposals and will provide consent to implement changes.

Given the investment made by the City and the commitments to prospective individuals wishing to dredge, the Plan will remain in effect for 5 years and may be revised by the City in consultation with the agencies. The agencies may seek modifications to the Plan following review of the biennial eelgrass survey data or should there be a precipitous drop in the eelgrass populations in the Bay. The City and the agencies will work together to resolve implementation issues that were unforeseen when the Plan was developed.

Should eelgrass populations fall precipitously or remain at Tier 3 for two sampling periods, the City and the agencies will meet to review actions needed to preserve and protect eelgrass in the lower Bay.

ACKNOWLEDGEMENTS

This Plan was prepared by WRA, Inc., for the City's Harbor Resources Division. Dr. Michael Josselyn was the primary preparer of the Plan. Larry Paul and Associates, Don Schmitz, Anchor QEA, LLC, Harbor Commissioner Doug West and Harbor Resources Manager Chris Miller participated in the revisions of the Plan. The participation of the National Marine Fisheries Service during the review and revision of the Plan, especially that of Bryant Chesney, is greatly appreciated.

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APPENDIX A

MAPBOOK SHOWING PROJECT AREA COVERED BY PLAN

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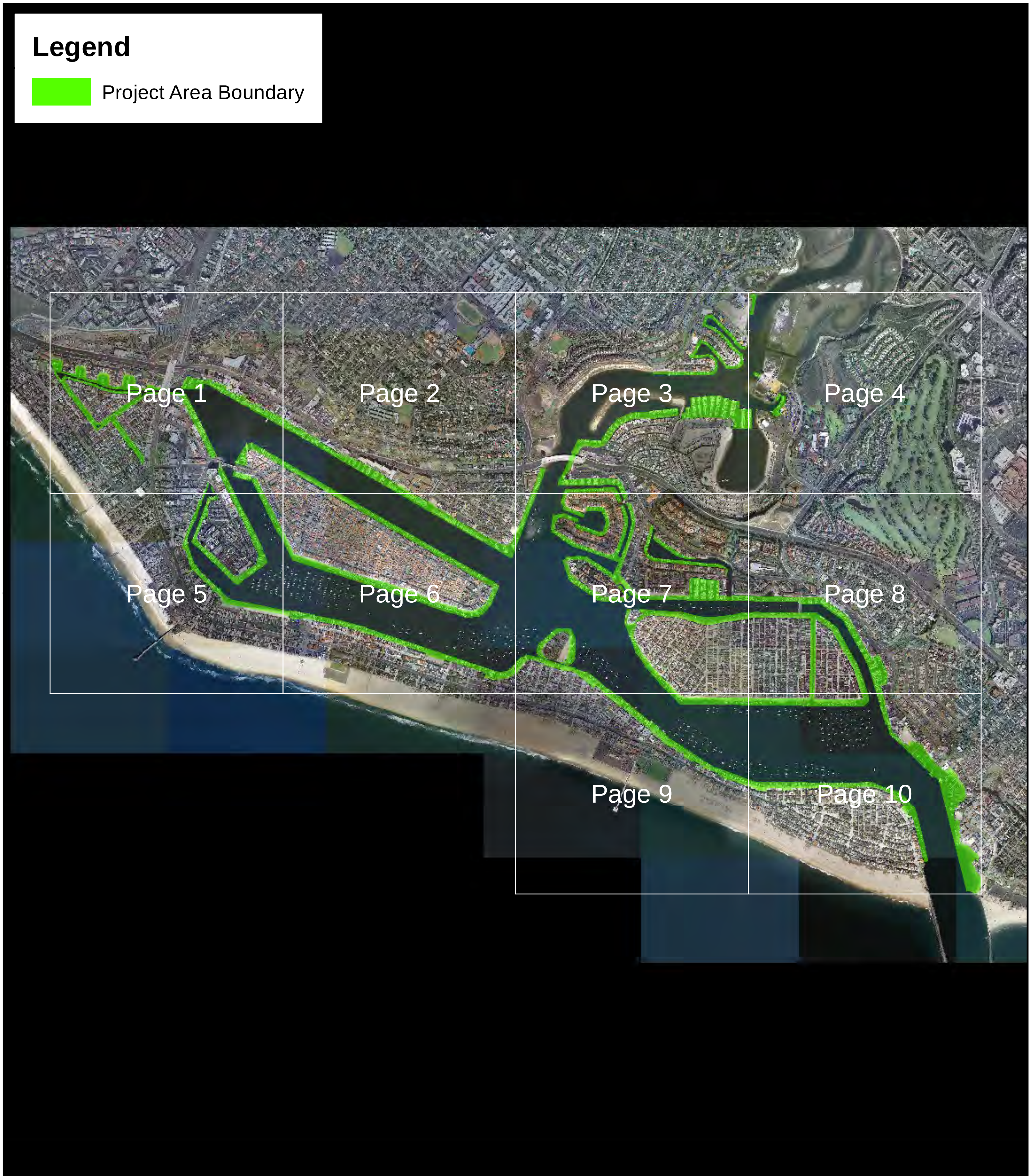

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Exhibit 3 - California Coastal Commission
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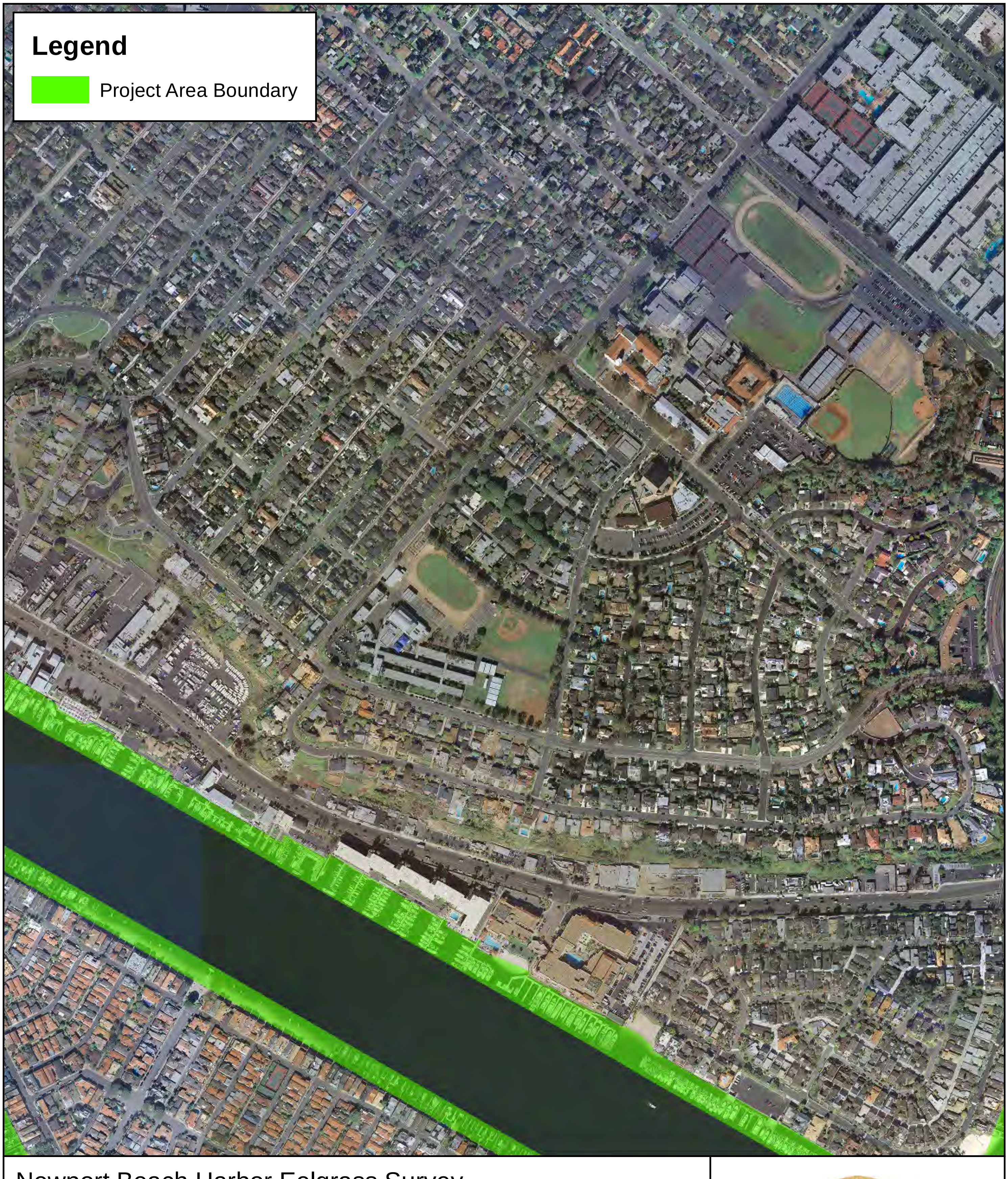

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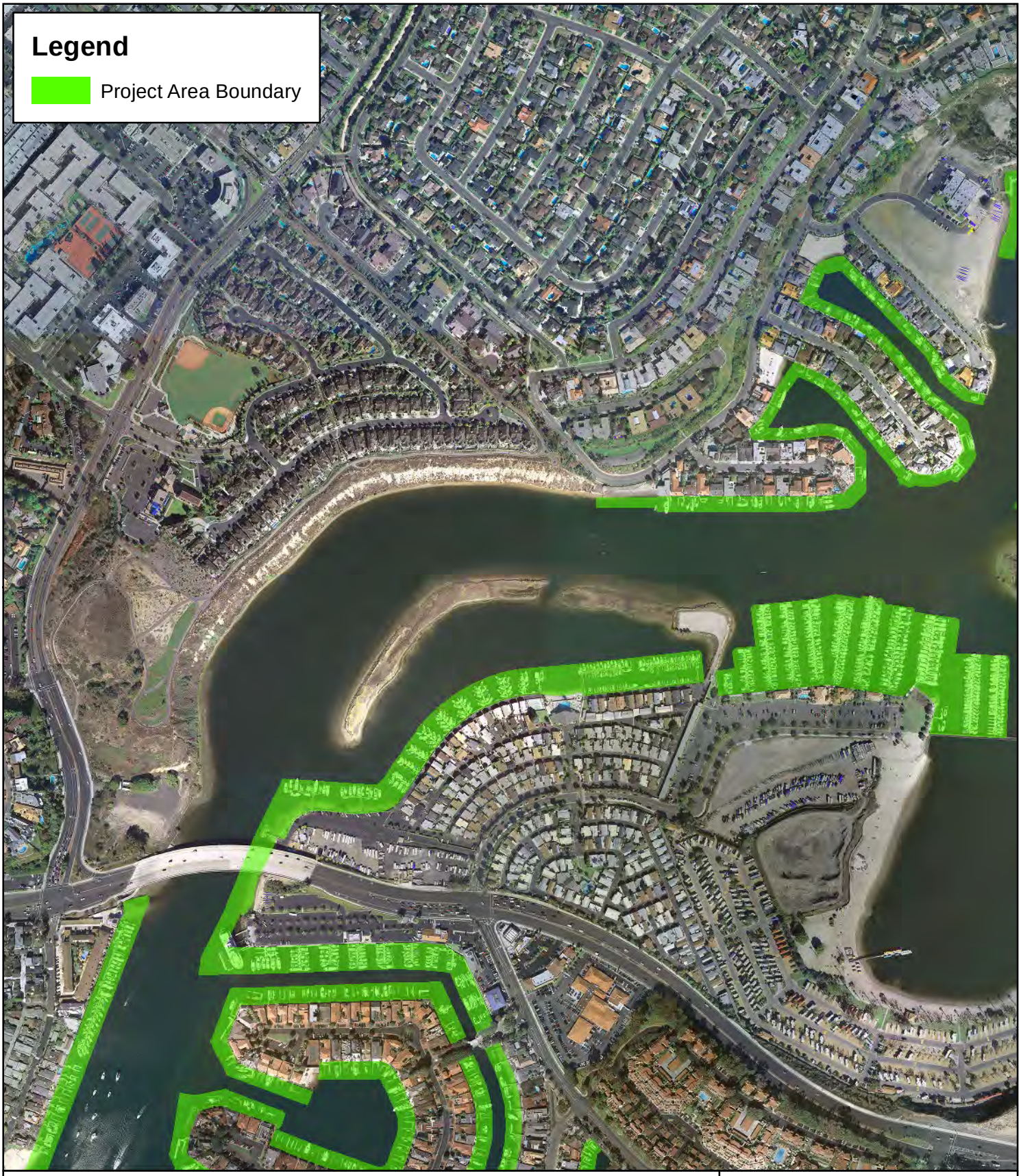

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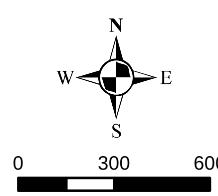

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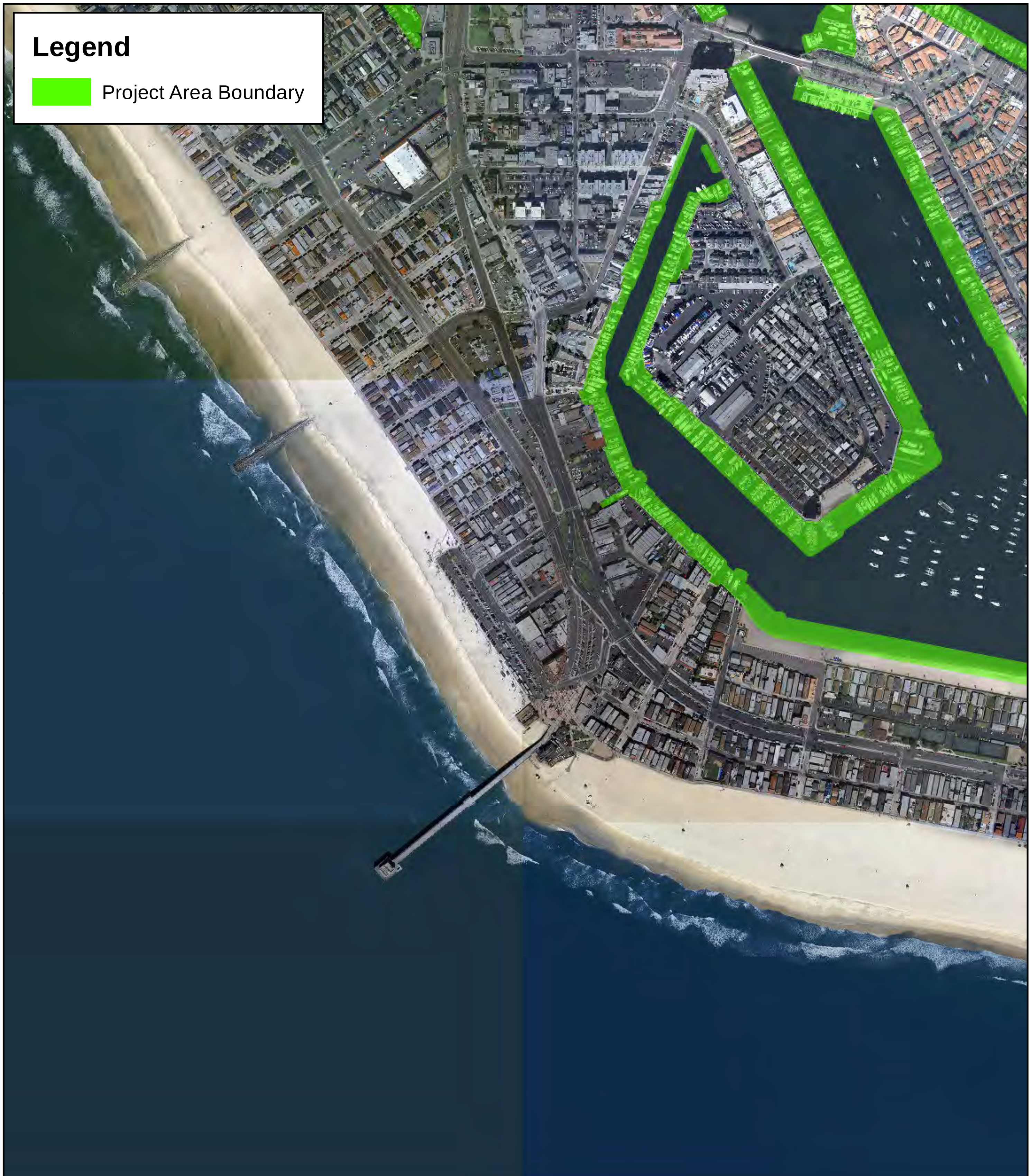

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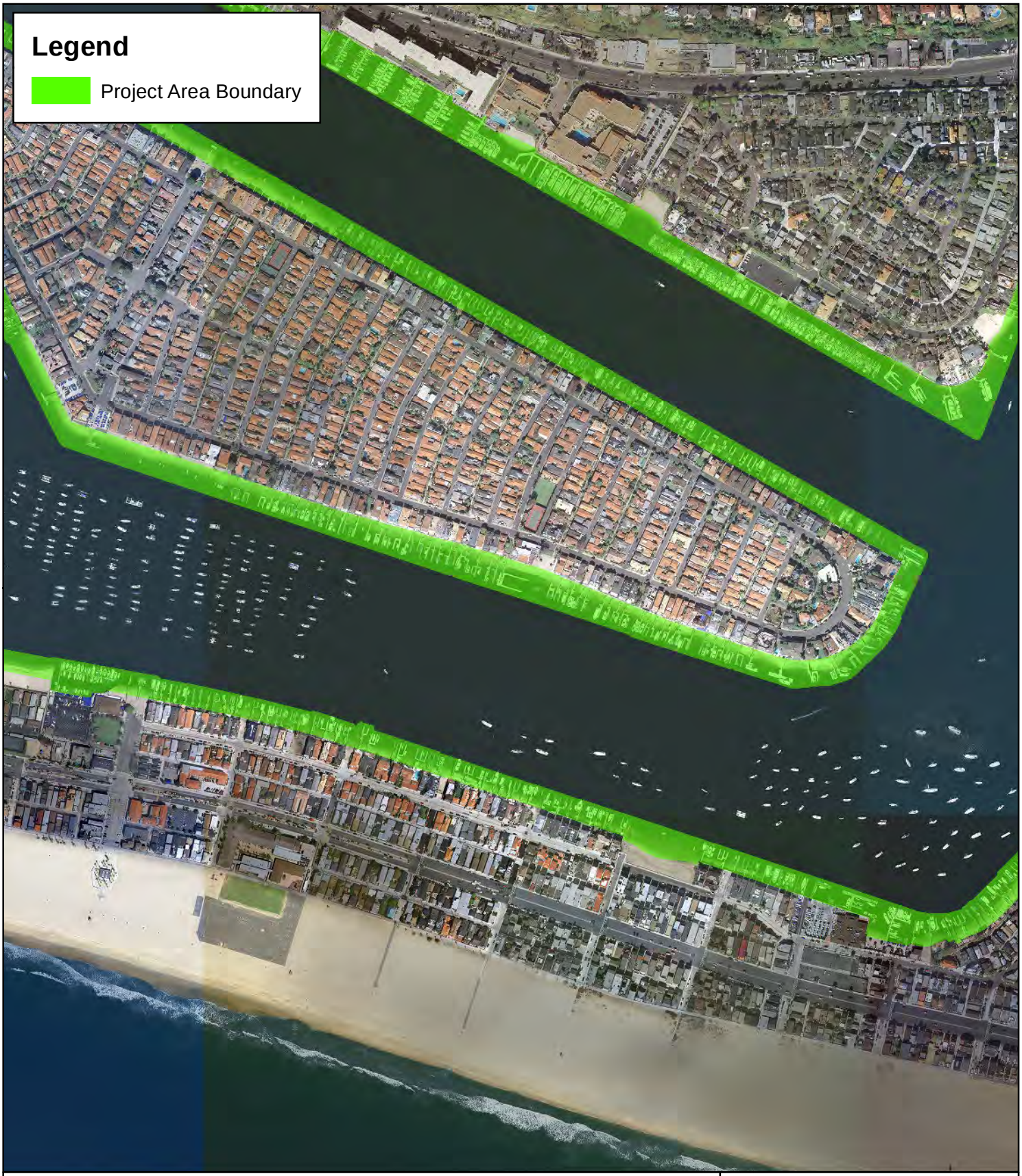

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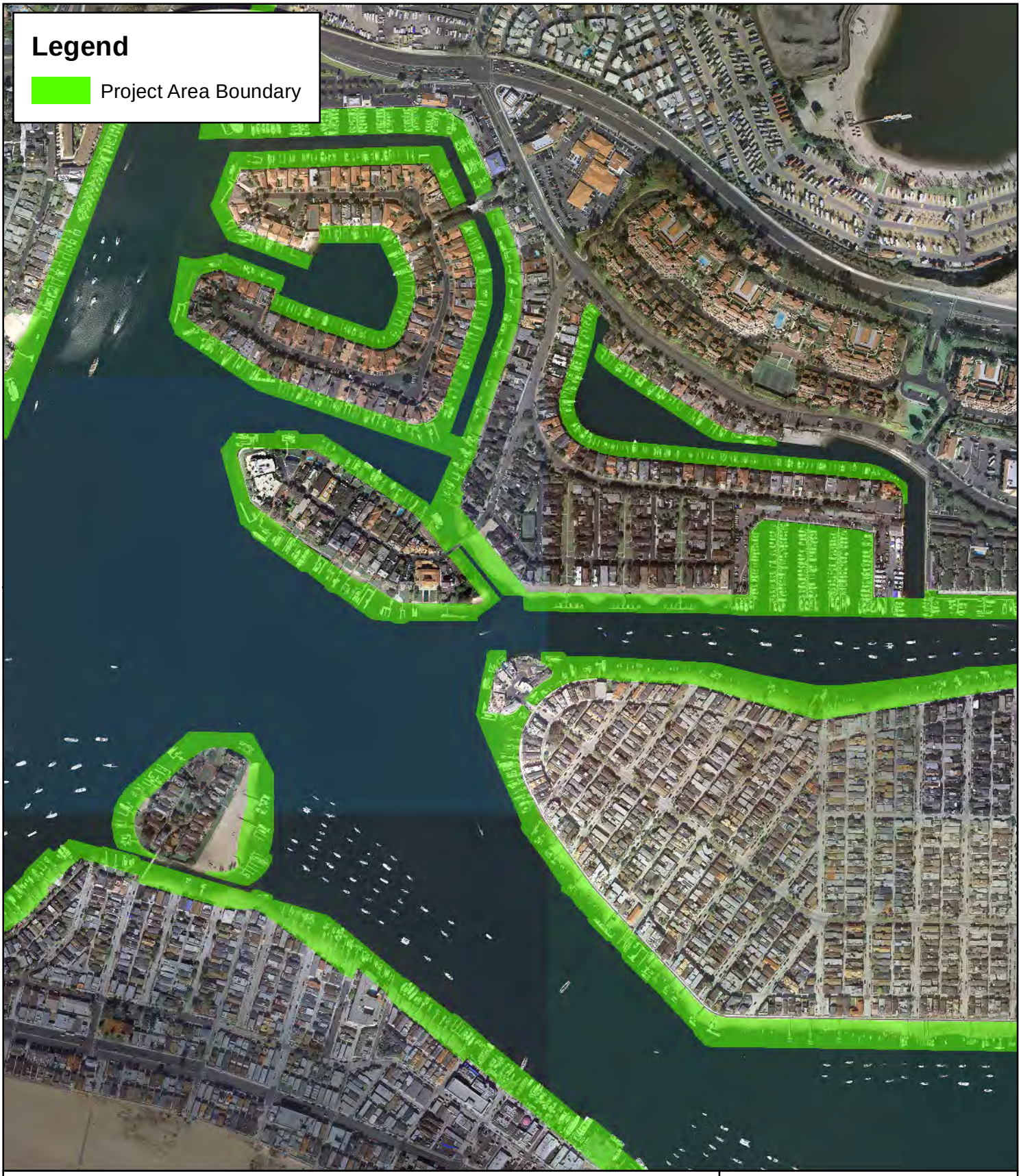

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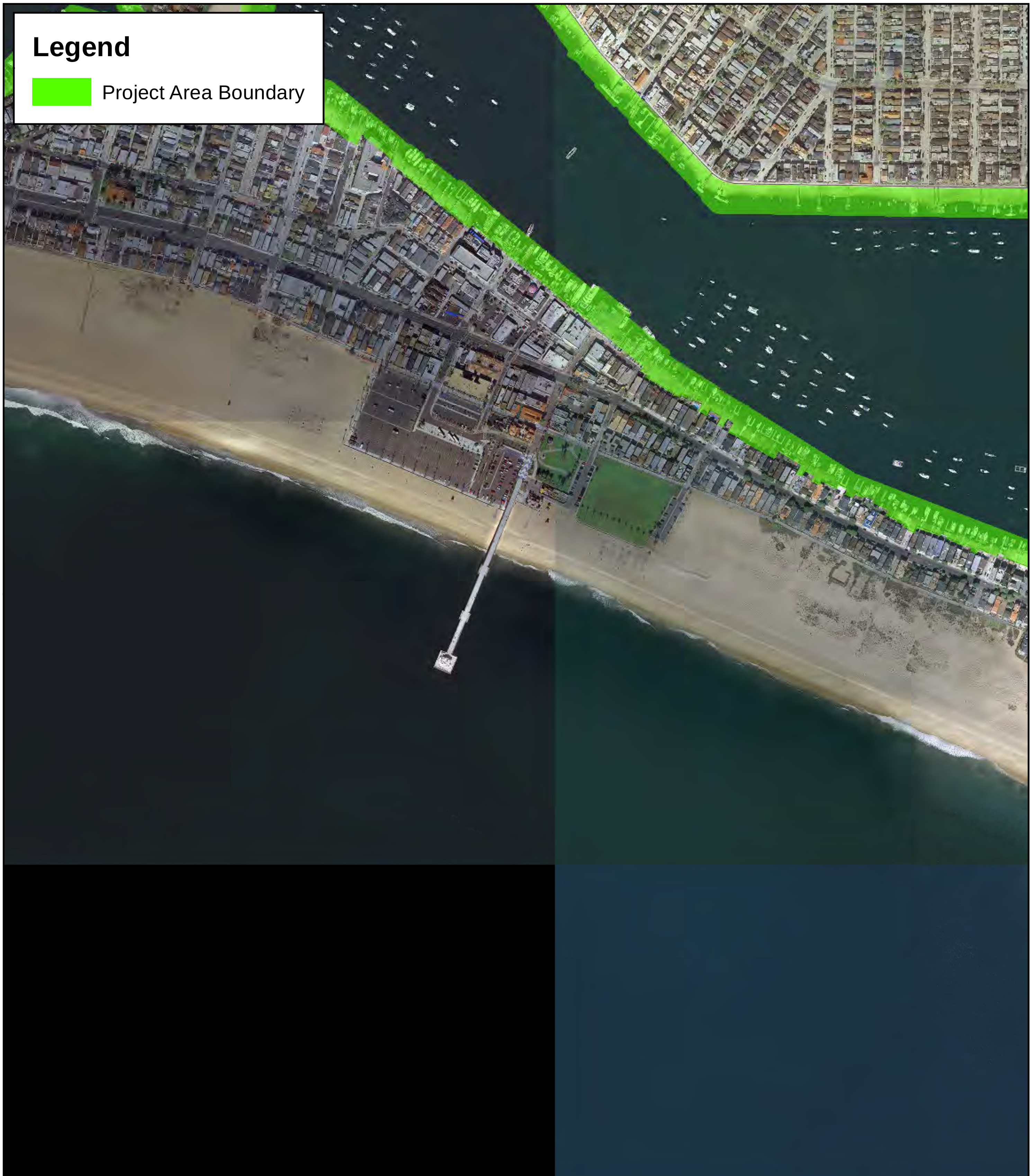

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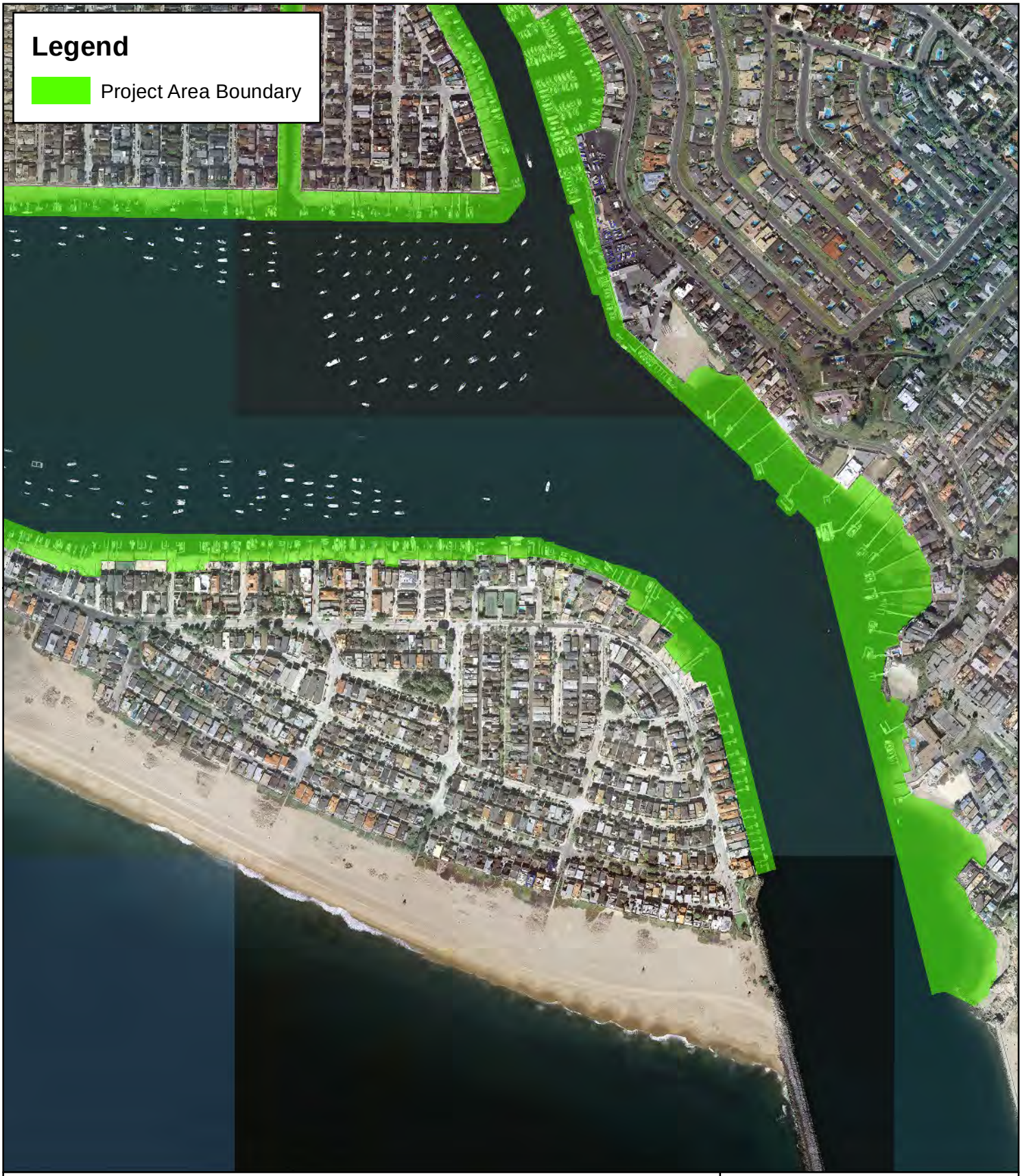

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APPENDIX B

EELGRASS SURVEY DATA FOR PLAN AREA

SUMMARY OF SURVEY DATA FROM 2003 TO 2014 FOR THE PLAN AREA

DATA FROM COASTAL MARINE RESOURCES

SHALLOW WATER EELGRASS WITHIN PLAN AREA	2003-2004	2006-2007	2009-2010	2012-2014	MEAN (acres)	STANDARD DEVIATION
STABLE ZONE						
Balboa Island/Collins Isle	4.16	3.43	2.40	3.34	3.33	0.72
Bay Island	0.11	0.05	0.04	0.27	0.12	0.11
Corona del Mar (Bayside)	8.36	8.13	8.49	9.90	8.72	0.80
East Balboa Peninsula	1.58	1.52	1.38	2.22	1.67	0.37
Grand Canal	0.9	1.14	0.62	1.06	0.93	0.23
Linda Isle Inner	0.05	0.51	0.30	0.98	0.46	0.39
Yacht Club/Basins	1.68	1.42	1.53	1.53	1.54	0.11
STABLE ZONE WITHIN PLAN AREA	***16.84***	***16.20***	***14.76***	***19.30***	***16.78***	1.90
TRANSITIONAL ZONE						
Balboa Island/Collins Isle	1.88	0.94	0.58	1.13	1.13	0.55
Bay Island	0.01	0.00	0.00	0.02	0.01	0.01
Bayshores	0.74	0.65	0.00	0.15	0.39	0.36
Castaways	0.00	0.00	0.00	0.01	0.00	0.00
Dover Shores	0.00	0.00	0.00	0.01	0.00	0.00
Dunes Marina	0.00	0.00	0.00	0.00	0.00	0.00
Harbor Island	2.22	0.62	0.40	0.90	1.04	0.82
Lido Isle	0.02	0.00	0.00	0.02	0.01	0.01
Inner DeAnza Peninsula	0.00	0.00	0.00	0.00	0.00	0.00
Linda Isle Inner	0.04	0.03	0.03	0.07	0.04	0.02
Linda Isle Outer	1.29	0.11	0.07	0.37	0.46	0.57
Mariner's Mile	0.23	0.07	0.07	0.31	0.17	0.12
North Balboa Channel and Yacht Basin	0.61	0.11	0.12	0.12	0.24	0.25
West Balboa Peninsula	0.03	0.03	0.01	0.10	0.04	0.04
Outer DeAnza Peninsula	0	0.00	0.00	0.00	0.00	0.00
Yacht Club/Basins	0.6	0.11	0.16	0.24	0.28	0.22
TRANSITIONAL ZONE IN PLAN AREA	***7.67***	***2.67***	***1.44***	***3.45***	***3.81***	2.70
TOTAL FOR PLAN AREA	**24.51**	**18.87**	**16.20**	**22.76**	**20.58**	3.75

CALIFORNIA COASTAL COMMISSION
NORTH COAST DISTRICT
1385 8th Street, Suite 130
ARCATA, CA 95521
(707) 826-8950

M E M O R A N D U M

FROM: John D. Dixon, Ph.D.
Ecologist

TO: Zach Rehm

SUBJECT: Newport Beach Eelgrass Plan

DATE: May 27, 2015

Documents reviewed:

City of Newport Beach. March 2015. Eelgrass protection and mitigation plan for shallow water in lower Newport Bay: An ecosystem based management program.

City of Newport Beach. March 5, 2015. City of Newport Beach Eelgrass protection and mitigation plan action item follow up to Coastal Commission meeting. This meeting was held at the Long Beach District Office of the CCC on February 3, 2015.

City of Newport Beach. No date. Summary of a meeting with Coastal Commission staff on May 7, 2015 with responses to J. Dixon's April 28, 2015 draft comments.

Coastal Resources Management, Inc. November 25, 2014. Results of the fourth Newport Bay eelgrass mapping survey: Status and distribution between 2012 and 2014, Newport Beach, California. A report to the City of Newport Beach.

Dixon, J.D. (CCC). April 28, 2015. Draft comments on the Newport Beach eelgrass plan with the City's amendments dated March 5, 2015. The amendments were contained in the City's March 5, 2015 action item follow up.

National Marine Fisheries Service. October 2014. California eelgrass mitigation policy and implementing guidelines. NOAA Fisheries, West Coast Region. 45 pages.

Schmitz, D. (Consultant to the City). May 26, 2015. Letter to Z. Rehm (CCC) regarding: "City of Newport Beach Regional General Permit 54 Coastal Development Application (No. 5-14-0200) – Staff Report Consideration" and containing a discussion of natural variability of eelgrass.

Newport Harbor in lower Newport Bay is a highly urbanized area where the shoreline is nearly completely developed with residential and commercial structures. There is a high density of piers, docks and wharfs[1] associated with private residences and marinas, both along the edge of the bay and on several constructed islands. As a result of continuous sedimentation, there is a periodic need to dredge both the navigational channels and the shallow areas where the piers are located. Whereas the City in cooperation with the Army Corps of Engineers is responsible for maintaining navigable

[1] These terms are used interchangeably.

waters, the owners of private piers and docks are responsible for their own maintenance activities, including the periodic dredging necessary to accommodate the mooring of vessels.

Newport Harbor also supports a significant population of eelgrass (*Zostera* spp.) that currently covers about 88 acres of bay bottom, much of it in the shallow waters around piers. Submerged aquatic vegetation, such as eelgrass, provides many important ecosystem services, has suffered widespread losses and degradation due to human activities, and is of worldwide conservation concern. The National Marine Fisheries Service (NMFS) identifies eelgrass beds as Essential Fish Habitat and supports a policy of no net loss of this habitat. To that end, NMFS developed a Southern California Eelgrass Mitigation Policy that provided guidelines for monitoring and restoring eelgrass beds. This has recently been replaced by the California Eelgrass Mitigation Policy and Implementing Guidelines (CEMP) that covers the whole state. This mitigation policy includes detailed mapping and monitoring of eelgrass at reference sites, at sites of potential impacts from development, and at mitigation sites where eelgrass is restored by seeding or planting. These restoration and monitoring procedures require trained professionals, are technically difficult, and are generally expensive.

Around piers, eelgrass tends to grow along the edges. Due to the negative effects of shading, eelgrass usually does not occupy the area directly under the pier and is often sparse or absent within the actual boat slip if the vessel is generally present. As a result, maintenance dredging around a boat slip or dock removes a relatively small area of eelgrass and the eelgrass tends to recolonize the area relatively rapidly. However, mitigating those small losses requires costly procedures similar to those required for large impacts and dock owners tend to avoid dredging even when it is needed.

Since 2003 the City of Newport Beach has funded studies in order to document the distribution and abundance of eelgrass within the harbor and to understand the factors affecting its recruitment and growth. The City has used the results of those studies as a basis for developing a plan that enables the routine maintenance dredging that is typically undertaken by individual dock owners without triggering the implementation of activities called for under the California Eelgrass Mitigation Policy. To that end, the City has developed the proposed Eelgrass Protection and Mitigation Plan (herein 'the Plan') that would have it assume the responsibility for monitoring and maintaining eelgrass within the harbor and would simplify the mitigation requirements of individual dock owners. The "Plan Area" encompasses the portions of the harbor defined as: "The bulkhead to pierhead line plus 20 feet bayward, including those exceptions for structures that extend beyond this boundary as of 2013 in conformance with harbor development regulations or policy." Based on their eelgrass studies, the plan area has been divided into a "stable zone" where eelgrass is relatively abundant and does not fluctuate much from year to year, and a "transitional zone" where eelgrass tends to be sparse, patchy, and temporally variable. Within each zone, three abundance "tiers" have been defined. Larger impacts (up to 5% of eelgrass in the zone) are allowed when eelgrass is abundant (Tier 1). Smaller impacts (up to 3% of eelgrass in the zone) are allowed when eelgrass is less abundant (Tier 2). When eelgrass is in Tier 1, the dock

owner has no mitigation responsibilities but the City institutes offsite eelgrass seeding and planting activities proportional to the amount of routine maintenance dredging undertaken by dock owners and pursues an educational program to increase the understanding of the ecological importance of eelgrass and encourage practices that contribute to eelgrass health. Under Tier 2, in addition to the activities of Tier 1, dock owners who have dredged must deploy seed bags or plant eelgrass within the dredged footprint to reduce the temporal loss. The Plan is only operational when eelgrass is relatively abundant. When eelgrass abundance falls below a defined level (Tier 3), mitigation as required by the California Eelgrass Mitigation Policy is the responsibility of the dock owner. The heart of the plan is mapping and estimating the density of eelgrass every two years in the shallow waters where piers are found and every four years throughout the harbor.

The critical assumption underlying this plan is that dredging impacts to shallow water (≤ 12 ft) eelgrass within the defined Plan area are "temporary and minimal." The amount of permissible impact is related to the size of the eelgrass population, with larger amounts of impact allowed when eelgrass is abundant and less impact allowed when the eelgrass population is smaller. In order to make these determinations, the City will continue to fund biennial surveys of eelgrass within the Plan Area and periodic comprehensive eelgrass surveys throughout Newport Harbor, including deep areas.

The assumption that the dredging impacts to shallow water eelgrass are "temporary" is based on the professional judgment of resource agency and City biologists who think that eelgrass will fully recolonize the dredged areas in about 2 years or less. The biennial eelgrass surveys provide a basis for testing this assumption. The other critical assumption is that the impacts are "minimal." For this assumption to be realized, the impacts should be small relative both to the Plan area and to the overall eelgrass population within the harbor. Since 2003, the average size of the eelgrass population in the combined stable and transitional zones of the Plan area has been about 20.53 acres. If 5% were removed each year, there would be an average annual loss of about 1.0 acre of eelgrass. If there is temporary loss for 2 years during recovery and if 50% of the lost eelgrass grows back each year, then the net annual cumulative loss after the first year would be about 1.5 acres[2] and this is the amount that would require mitigation. An average cumulative loss of 1.5 acres is about 1.7% of the 88 acres of eelgrass estimated to be present in all of lower Newport Harbor in 2012 and about 1.9% of the roughly 79 acres present there in 2008 (the deeper water eelgrass varied very little between the two surveys). This estimate of proportional loss is based on the maximum allowable impact, assuming the population is in Tier 1. The actual impacts would probably be somewhat less over time after the accumulated demand for dredging was met.

In order to insure that the amount of impact is scaled to the abundance of eelgrass, the City proposes two constraints. First, the allowable impact is a percentage of the population that is present. Second, three abundance levels or Tiers have been

[2] This area is derived as follows: Area of impact remaining at the end of year one plus the area of impact that would occur in the second year: (1 acre x 0.50) + 1 acre = 1.5 acres.

established. When the eelgrass population is within Tier 1, there may be an annual loss of eelgrass within the plan area of 5%. The allowable loss is reduced to 3% when the population is in Tier 2. If the abundance of eelgrass in the plan area falls below Tier 2, the plan no longer applies and the applicant must go through the standard permitting process and comply with the requirements of the National Marine Fishery Service's 2014 California Eelgrass Mitigation Policy. The Tier boundaries are essentially arbitrary. As originally proposed, the lower boundary of Tier 1 was the average abundance of the four surveys conducted since 2003 and the lower boundary of Tier 2 was the lower 95% confidence bound of that mean. After discussions with Coastal Commission staff and staff of the NMFS and the California Department of Fish and Wildlife, the City has agreed that the Tiers will be based on the estimated frequency with which the eelgrass population is at various abundance levels based on population estimates since 2003 and on the assumption that the samples are from a normal distribution. The tiers are set such that over the long term, the eelgrass population will be high enough to fall within Tier 1 forty percent of the time and within Tier 2 twenty percent of the time. The lowest forty percent of abundance estimates fall within Tier 3.[3] The eelgrass population within the harbor appears to be healthy and near the upper limit determined by the availability of suitable habitat. Therefore, the abundance during recent years is an appropriate touchstone for establishing fixed Tier boundaries. In order to insure that impacts are "minimal," the City has agreed to an additional constraint on dredging: No more than 1% of the estimated total abundance of eelgrass within Newport Harbor may be temporarily impacted by dredging each year.[4]

In order to be consistent with Section 30233 of the California Coastal Act, dredging impacts to marine resources must be mitigated. Since, in this case, the periodic impacts occur repeatedly in the same areas and are temporary, permanent mitigation need only be accomplished once to replace in perpetuity the occasional temporal losses. Two types of mitigation are proposed. When dredging impacts to eelgrass occur under Tier 2, the dock owner who is the responsible party must engage in on-site restoration work in the form of deployment of seed bags or planting of eelgrass turions using a surface deployable method. The dock owner is not responsible for monitoring. Assuming these activities increase the rate of eelgrass colonization, they will have the effect of reducing temporal losses, but will not mitigate for those losses.

Under the Plan, the City is the primary eelgrass steward and responsible party. In addition to significant public education and outreach to encourage compliance with the Plan and the commitment to detailed biennial eelgrass surveys necessary to implement the Plan, the City has committed to contributing $30,000 to Orange County Coastkeeper

[3] Based on the existing data, for the Stable Zone: Tier 1 is ≥ 17.2 ac; Tier 2 is ≥16.3 ac to < 17.2 ac; and, Tier 3 is <16.3 ac. For the Transitional Zone: Tier 1 is ≥ 4.5 ac; Tier 2 is ≥3.1 ac to < 4.5 ac; and, Tier 3 is <3.1 ac.

[4] When the City originally proposed a version of this plan, staff at the National Marine Fisheries Service thought that allowing temporary impacts to eelgrass without mitigation would only be acceptable if the impacts were very small, which they considered to be no more than 1% of eelgrass within the Plan Area (Bryant Chesney, personal communication to J. Dixon). The current plan caps impacts at 1% of the eelgrass throughout the lower bay, which currently is equivalent to about 2% of the Plan Area, but requires mitigation. With mitigation, this maximum amount of annual temporary impact to eelgrass is acceptable to staff at the NMFS for a 6-year trial period (Bryant Chesney, personal communication to J. Dixon).

to develop and implement eelgrass restoration methods in Upper Newport Bay. In addition, the City will deploy seed bags and transplant eelgrass using surface-deployed frames at various locations at public piers and floats. This effort will be proportional to the amount of maintenance dredging taking place. The location of these activities should be identified in the plan and appropriate reference sites should be selected.[5]

The actual impacts to eelgrass from dredging, the actual period required for eelgrass recolonization and recovery with and without on-site restoration activities, the actual eelgrass temporal losses, and the actual amount of eelgrass restoration accomplished by the City and Orange County Coastkeeper can only be determined after-the-fact. I suggest that this be considered a 6-year experimental project, which would allow it to be reevaluated after the completion of the second biennial eelgrass survey following the first dredging under the Plan.

In order to have the data required to evaluate the effects of the Plan, the following must be accomplished:

1. The location and boundaries of each dredging episode must be documented.
2. If eelgrass was present within a dredging footprint during the previous biennial survey, its presence at the time of dredging must be assumed and the size of the presumed eelgrass loss documented.
3. If eelgrass was present within a dredging footprint, that area must be examined specifically during the following biennial surveys and the distribution and cover of eelgrass documented to determine recovery time.
4. Restoration undertaken by dock owners under Tier 2 must be documented, including time and duration of restoration activities and types of activities undertaken.
5. A comprehensive eelgrass survey of the entire harbor must be undertaken during at least every other biennial survey.
6. The type, time, footprint, and location of restoration activities undertaken by the City and by Orange County Coastkeeper must be documented and success in terms of eelgrass bed size, cover, and turion density evaluated at least at the time of each biennial eelgrass survey.
7. The evaluation of the Plan after the second biennial eelgrass survey following the initiation of dredging will include (a) estimates of the time required for eelgrass recovery with and without on-site restoration activities, (b) estimates of the total temporal loss of eelgrass due to dredging (acres and acre-years), (c) estimates of the total area of off-site eelgrass restoration accomplished, and (d) the net mitigation accomplished.

[5] The success of these efforts should be assessed after the first biennial surveys following the third and fifth year from initiation of the restoration activity and at the end of the 6-year trial period.

8. Annual reports should be submitted that document dredging and restoration activities and that provide interim analysis of the effects of those activities as the necessary data become available

In evaluating recovery from impacts and the success of restoration efforts, natural trends in eelgrass abundance within shallow areas of the harbor must be considered. The California Eelgrass Mitigation Policy addresses this issue as follows: "Performance milestones may be re-evaluated or modified if declines at a mitigation site are also demonstrated at the reference site, and therefore, may be a result of natural environmental stressors that are unrelated to the intrinsic suitability of the mitigation site."[6] The final report for the 6-year trial period of the Plan will assess the net effect of dredging and restoration activities on the presence of eelgrass within the Plan Area in the context of natural trends. If there is a shortfall in the necessary mitigation to offset temporal losses of eelgrass, an eelgrass mitigation and monitoring plan should be prepared by the City to provide the necessary additional eelgrass mitigation.

[6] The City has suggested the following language for the Plan (Schmitz 2015): "The City, using the biennial survey data and reference sites within the Plan Area that have not been affected by maintenance dredging, will report on the trends in eelgrass abundance over the permit period. Should reference sites indicate a decline in overall eelgrass abundance at the end of six years, the NMFS and the CCC will evaluate the causes of such decline and use that information in assessing the success of restoration efforts undertaken by the City during the period of the Plan." This language captures the intent of the CEMP and should be incorporated into the Plan.

CITY OF NEWPORT BEACH

PUBLIC WORKS DEPARTMENT
Harbor Resources Division

Exhibit 5
Page 1 of 15
California Coastal Commission

Dredging Application

Regional General Permit 54
Corps File No. SPL-2011-00249-SME
CDP 5-06-117-A2 & CC-031-06
Water Board Consistency Permit

Applicant Name, Address, Phone Number:

Christy & Paul Razo 760 559-2411
102 Linda Isle
Newport Beach, CA 92660

Agent & Contractor Name, Address, Phone Number:

Lisa Miller-Strunk 949 548-5359
837 W. 17TH Street
Costa Mesa, CA 92627

Project Site Address: 102 Linda Isle

Assessor's Parcel Number: 050 451 26

Dredge Site: Latitude 33° 36' 54.59 N Longitude 117° 54' 7.61 W

Disposal Site: Latitude Longitude

☐ Beach Disposal
☒ Ocean Disposal (LA-3): Latitude 33 31'00"N Longitude 117 53'30"W

Purpose and Final Goal of Dredging (Effect on Bulkhead and Beaches):

For vessel navigation
No change to beach or bulkhead

Method of Dredging (Hydraulic, Clamshell, Tractor, etc...):

TBD

Vessel(s) & Captain(s): TBD

Dredging Operations Inspector: TBD

Disposal Operations Inspector: TBD

Cubic Yards Dredged and Disposed (Must be less than 1,000cy total):

458.1

Area Impacted (in acres): .091acres

If Beach Disposal, Linear Feet of Affected Beach Area: NA

Estimated Quantity of Material Dredged from or Disposed Onto the Site from Previous Activities: NA

Dredging and Disposal Operations Schedule:

TBD

Please submit the following on a separate page. Use the check boxes to ensure a complete application is filed. Incomplete applictions will not be processed.

- ☑ Scaled drawings of the project and disposal areas (plan view and cross sectional view)
- ☑ Site address
- ☑ Location within the Harbor
- ☑ Location and physical dimensions of existing structures on site (e.g. float, pier, gangway, pile, bulkhead)
- ☑ Location and physical dimensions of existing structures of existing structures on *adjacent properties* .
- ☑ Location of Bulkead, Pierhead, & Project Lines
- ☑ Dredge depth (limited to -7MLLW with a 1' allowable overdredge)
- ☑ Photos of entire dredge and disposal areas at low tide (including 30' buffer area) with empasis on Eelgrass
- ☑ Eelgrass Survey- Completed by a Certified Eelgrass Diver
  - A. Survey for the presence of Eelgrass within 30' of the entire project area (dredge & dispose site)
  - B. If Eelgrass is within 15' of project area, then the project will not be permitted via RGP 54.
  - C. If ocean disposal:
    - •Any eelgrass must be located greater than 15' from the project area
    - •No further eelgrass monitoring is required
  - D. If beach disposal:
    - •If eelgrass is not present within 30' of the project site then no further monitoring is required.
    - •If eelgrass is present 15' -30' of the project area then pre- and post-monitoring is required.
- ☑ Caulerpa Survey- Completed by Certified Caulerpa Diver
  - •Survey for Caulerpa within 30' of the project area (dredge and disposal sites)
- ☑ Grain size analysis
  - •(1) sample per 1/4 acre and/or at least (1) sample at dredge site and (1) sample at beach disposal site
  - •If beach disposal sample must be at least 80% sand
- ☐ Project is over (check one):
  - ☐ City Tidelands
  - ☐ County Tidelands (State Lands Commission Dredge Lease Approval)
- ☐ If applicable check one box:
  - ☐ The Irvine Company owner approved area
  - ☐ Bay Island owners' approved area
  - ☐ Dover Shores owners' approved area
  - ☐ Linda Isle owners' approved area
- ☐ Check for ~~$1,690~~ 1731.00 made payable to City of Newport Beach
- ☐ Check for ~~$77~~ 145.00 made payable to Santa Ana Regional Water Quality Control Board

Exhibit 5

Page 2 of 15

California Coastal Commission

Dredging is not authorized in certain areas of Newport Bay, including the Rhine Channel, portions of the West Lido Channel, areas west of Newport Boulevard, areas North of Dover Shores, portions of the Bayside Village Marina, Promontory Bay, and portions of the Balboa Yacht Basin.

I, PAUL ROZO Christ Rozo (Applicant / Agent), hereby certify that the information on this application is accurate and complete. I also certify that I have read the California Coastal Commission Permit 5-06-117-A2 & Federal Consistency Certification CC-031-06, the Army Corps of Engineers Regional General Permit No. 54 (SPL-2011-00249-SME) and the California Regional Water Quality Control Board General Certification for Regional General Permit No. 54 for maintenance dredging in Newport Harbor and that I will comply with all of the conditions in those permits. I also certify that by acceptance of this Permit, the applicant acknowledges and agrees that the site may be subject to hazards from waves and erosion.

I will further hold the City of Newport Beach harmless from and indemnify the City against any claim for damages arising out of the exercise of these permits. In addition, I shall reimburse the City of Newport Beach for all attorney's fees and other costs expended by them in defending any claim, lawsuit, or judgment arising out of the activities of the applicant carried on under the authority of such Permit.

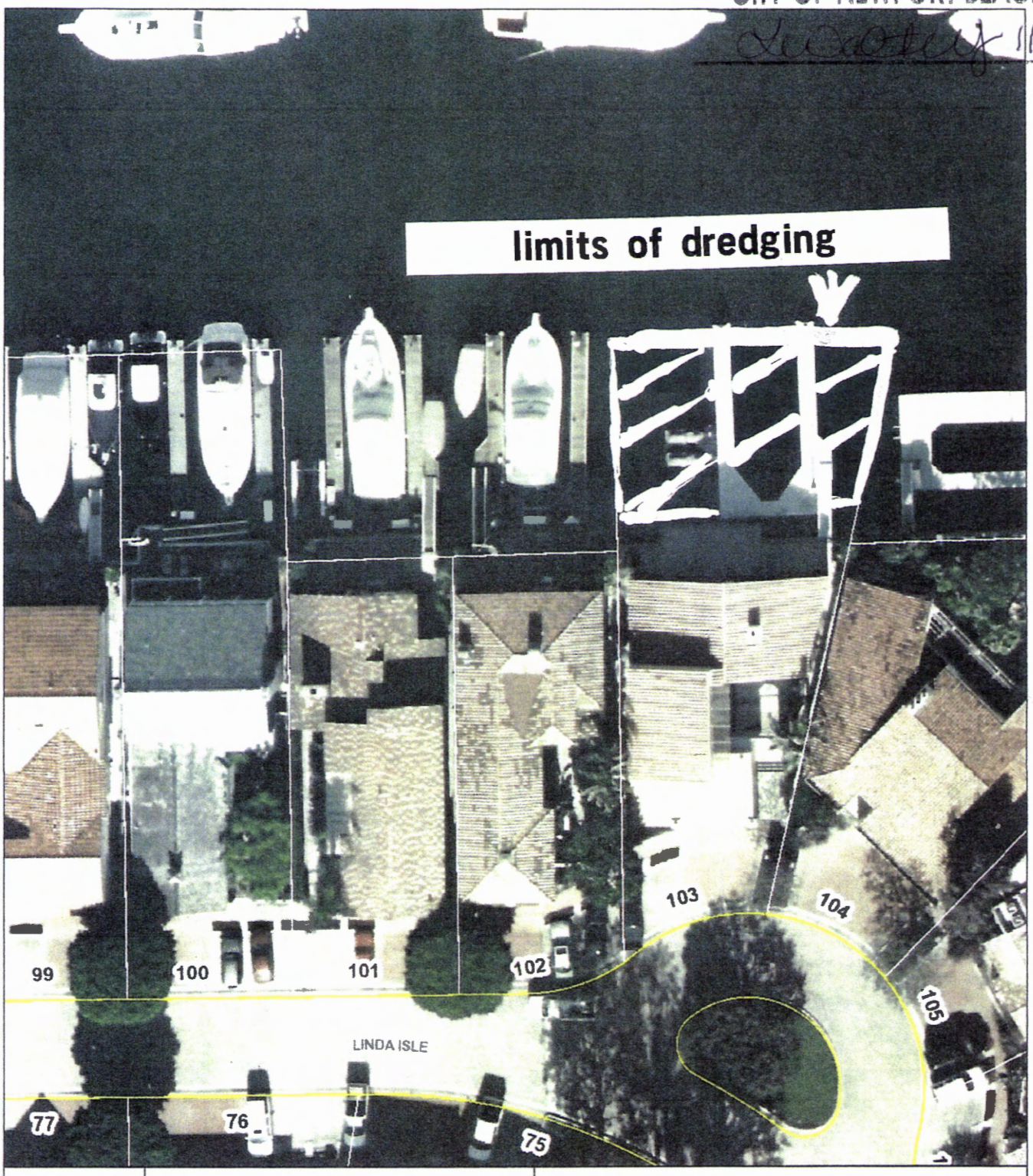
I understand that any work authorized must be completed by March 31, 2015 after which a new authorization is required. I also understand that the applicant will submit a Post Dredging Completion Report no later than 30 calendar days after completion of each dredging project. All work scheduled to be completed before 7:00 AM or after 6:00 PM (Monday – Saturday) or on Sundays or holidays must be approved by Harbor Resources.

Per the RGP Permit, all dredging applications will be processed by the various agencies through monthly batch submittals sent to them by Harbor Resources. Therefore, all dredging applications must be submitted to and received by Harbor Resources by the 1st Monday of every month. Applications submitted prior to this deadline are encouraged and appreciated.

Applicant and / or Agent Signature Christ Rozo Date 11/12/14

Exhibit 5
Page 3 of 15
California Coastal Commission

HARBOR RESOURCES DIV.
CITY OF NEWPORT BEACH
11/17/14



Newport Beach GIS

0 40 80
Feet

Disclaimer: Every reasonable effort has been made to assure the accuracy of the data provided, however, The City of Newport Beach and its employees and agents disclaim any and all responsibility from or relating to any results obtained in its use.

EEL GRASS INSPECTION

Imagery: 2009-2013 photos provided by Eagle Imaging www.eagleaerial.com

- ☐ ~~Eelgrass within 15' of project~~
- ☐ Eelgrass within 15 - 30' of project
- ☒ No Eelgrass in project area

10/7/2014

Signature

9/24/14 1-5pm
Inspection Date & Time

Exhibit 5

Page 4 of 15

California Coastal Commission

DAVID H. LEE & ASSOCIATES, INC.
GEOTECHNICAL ENGINEERING ❖ ENGINEERING GEOLOGY

DHLA

DAVID H. LEE & ASSOCIATES
Primary Business Address
23011 Moulton Parkway
Suite D-11
Laguna Hills, California
92653
Phone: 949-461-5690
Fax: 949-461-7901
email: dhla@dhla.com
http://www.dhla.com

DAVID H. LEE, PE, GE
KAREN E. GERACI, PE, GE
D. ELLIOTT LEE, PE

CONSULTANT
ANDREW R. STONE, PG, CEG

May 15, 2014

ATLAS Engineering
837 West 17th Street
Costa Mesa, CA 92627

Our Project 14.024.00

Attention: Ms. Lindsey Banghart

SUBJECT: Phi Grain Size Test Results for the Soil Sample Obtained from 102 Linda Isle, Newport Beach, California.

Dear Ms. Banghart:

Presented herewith are the results of our phi grain size analyses performed on the soil samples provided to us by Atlas Engineering. The sample is from the dredge area. The test procedures were in accordance with ASTM D 422-63 (2007) and U.S. Army Corps of Engineers Report Number CETA 79-7 criteria.

Please do not hesitate to call if you have any questions after you have reviewed the attached data.

Respectfully submitted,

David H. Lee & Associates, Incorporated

REGISTERED PROFESSIONAL ENGINEER
DAVID H. LEE
NO. GE 510
EXP. 3/31/14
GEOTECHNICAL
STATE OF CALIFORNIA

5/15/14

David H. Lee, PE, GE
Principal Geotechnical Engineer

LICENSED PROFESSIONAL ENGINEER
DAVID ELLIOTT LEE
No. 76000
Exp. 6/30/2014
CIVIL
STATE OF CALIFORNIA

May 15, 2014

David E. Lee, PE
Staff Engineer

Attachments: Plate 1 -- Grain Size Summary
Plate 2 -- Cumulative Grain Size Distribution PHI Units

Distribution: Addressee (2)

P:\PROJECTS\14.024.00\14024 PHI GS LETTER.doc\del\dhl

Exhibit 5
Page 5 of 15
California Coastal Commission

	Sieve Opening (mm)	Particle Diameter in Phi Units	U.S. Standard Sieve Size	% Material Retained by Weight	Cumulative Percent Retained
	38.1	-5.25	1-1/2"	0	0.0
	19	-4.25	3/4"	0	0.0
Gravel	9.5	-3.25	3/8"	0.1	0.1
	4.75	-2.25	4	0	0.1
	2.83	-1.50	7	0	0.2
	2	-1.00	10	0.1	0.3
	1.41	-0.50	14	0.1	0.4
	1	0.00	18	0.1	0.5
	0.71	0.50	25	0.2	0.7
	0.5	1.00	35	0.1	0.8
	0.35	1.50	45	0.4	1.2
Sand	0.25	2.00	60	1.4	2.6
	0.177	2.50	80	2.5	5.1
	0.125	3.00	120	2	7.1
	0.088	3.50	170	1.3	8.3
	0.075	3.75	200	0.3	8.6
	0.063	4.00	230	0.3	8.9
Silt-Clay	<0.063	<4.00	<230		100

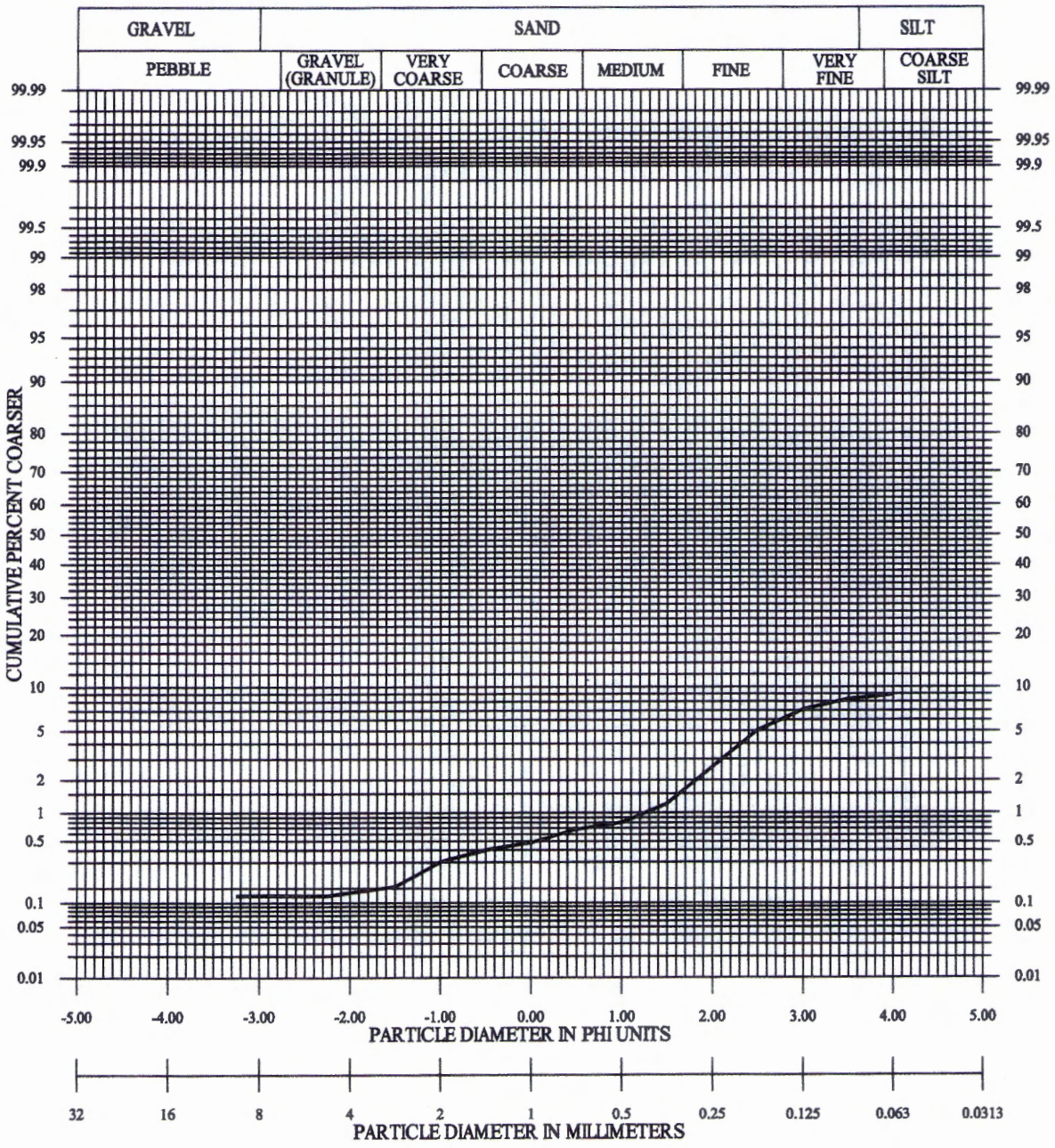
A sample was provided to David H. Lee & Associates, Incorporated in a sample bag by ATLAS ENGINEERING COMPANY. The sample consists of a Silt to Lean Clay (ML-CL): very dark gray to black (5Y 2.5-3/1); saturated; trace of fine sand; shells and shell fragments. The sample was obtained from the Dredge Area, 102 Linda Isle, Newport Beach, California.

24.00.GPJ DHLA.GDT 5/14/14

.EE & ASSOCIATES
lton Parkway #D-11
IILLS, CA 92653
949-461-5690
61-7901

PHI GRAIN SIZE SUMMARY

CLIENT: ATLAS ENGINEERING COMPANY	PROJECT: 14.024.00	DATE: May, 2014	PLATE 1



MEDIAN = N/A Φ

MEAN = N/A Φ

SAMPLE LOCATION: 102 LINDA ISLE
NEWPORT BEACH, CALIFORNIA

0.3% GRAVEL

8.6% SAND

91.1% SILT-CLAY

DAVID H. LEE & ASSOCIATES, INC.
GEOTECHNICAL ENGINEERING * ENGINEERING GEOLOGY

NEERING CO.

CUMULATIVE GRAIN SIZE DISTRIBUTION PHI UNITS

PROJECT 14.024.00 MAY, 2014

PLATE

2

Exhibit 5

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California Coastal Commission

Eelgrass Survey Reporting Form
(Version April 2009)

This form is required to be submitted for any surveys conducted for the eelgrass, *Zostera marina*, that are required to be conducted under federal or state permits and authorizations issued by the U.S. Army Corps of Engineers and the Coastal Commission. The form has been designed to assist in identifying eelgrass while ensuring that the required information is consistently documented. Surveys required to be conducted for this species are subject to modification through publication of revisions to the eelgrass survey policy. It is incumbent upon the authorized permittee to ensure that survey work is following the latest protocols. For further information on these protocols, please contact: Bryant Chesney, National Marine Fisheries Service, (562) 980-4037, or William Paznokas, California Department of Fish & Wildlife, (858) 467-4218).

* Required Information

Site Name: (common reference)	**Paul & Christy Rozo Residence** 102 Linda Isle Newport Beach, CA 92660
Survey Contact: (name, phone, e-mail)	* Debbie Karimoto (949) 887-7041 (cell) debkarimoto@cox.net
Permit Reference: (ACOE Permit No., CCC Permit No.)	RGP #54
Hydrographic System: (bay, estuary, lagoon, or harbor)	* Newport Harbor
Specific Location: (UTM, Lat./Long., datum, accuracy level, attach electronic survey area map if possible)	Approximately: Latitude: N33° 36.903' Longitude: W117° 54.125' See attached maps
Was *Eelgrass* Detected:	* _____Eelgrass within 15' of project or disposal site * _____Eelgrass within 15 – 30' of project or disposal site * ____XX_____ No eelgrass in project area or disposal site
Description of Permitted Work: (describe briefly the work to be conducted at the site under the permits identified	* Maintenance Dredging

Description of Site: (Describe the physical and biological conditions within the survey area at the time of the survey and provide insight into variability, if known. Please provide units for all numerical information).	*Depth range:*	* Depth range, 1.5-12' Tide height varied between +2.54' and +0.70' (low tide) at time of 9/24/14 survey.
	Substrate type:	Soft, silty sediment & compact sediment
	Temperature:	75°F
	Salinity:	Normal bay range of 30-33 ppt
	Dominant flora:	*Enteromorpha intestinalis*
	Dominant fauna:	*Zoobotryon verticillatum*, barnacles, oysters, tunicates, sponges, bryozoans, globe crabs, limpets, tube-dwelling anemones, round stingrays, barred sand bass, fish fry, *Navanax* and their egg masses, *Aplesia* egg masses
	Exotic species encountered:	*Zoobotryon verticillatum*
	Other site description notes:	None
Description of Survey Effort: (please describe the surveys conducted including type of survey (SCUBA, remote video, etc.) and survey methods employed, date of work, and survey density (estimated percentage of the bottom actually viewed). Describe any limitations encountered during the survey efforts.	*Survey date and time period:*	* September 24, 2014, 1 to 5 pm
	Horizontal visibility in water:	* 1-3 feet
	Survey type and methods:	* Surveillance level SCUBA survey: Diver swam transects throughout APE, including 30' beyond property line on all accessible sides, including under boats and dock floats.
	Survey personnel:	* Debbie Karimoto (949) 887-7041 (cell)
	Survey density:	~30% of APE
	Survey limitations:	* Poor but sufficient visibility
Other Information: (use this space to provide any additional	See map and proposed project sketch	

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Site Address:
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Newport Beach, CA 92660

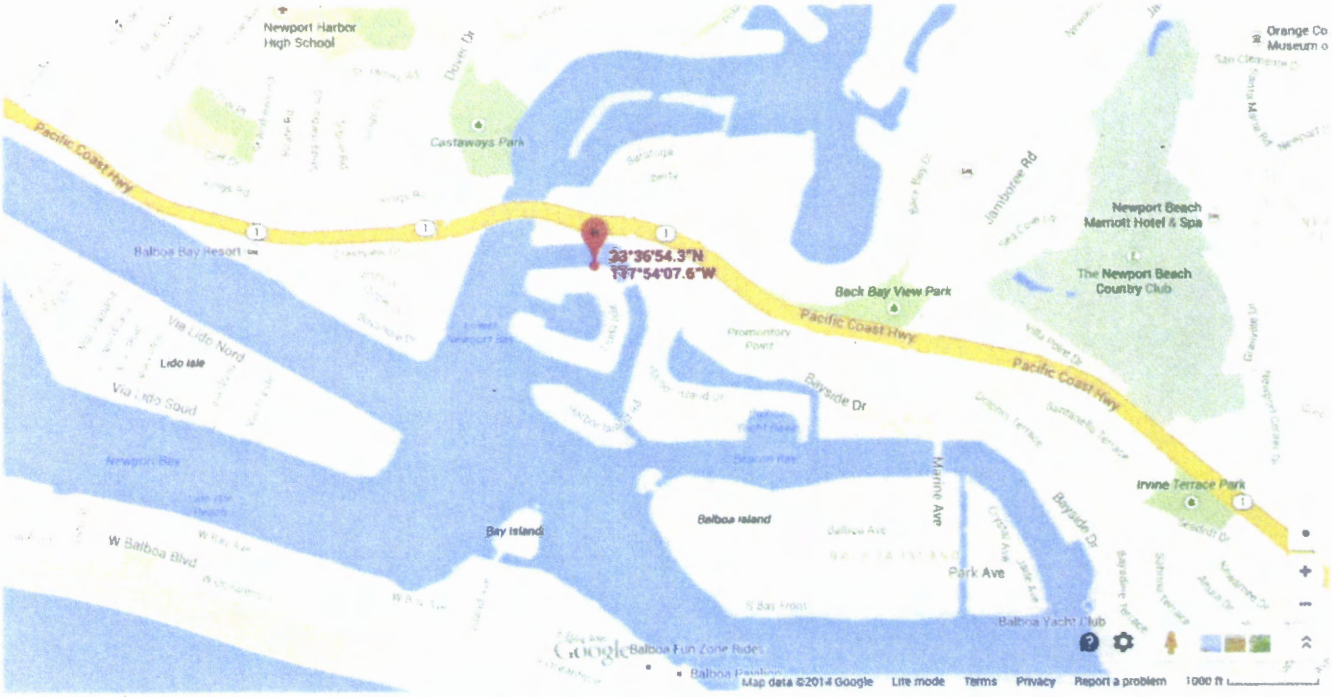

Exhibit 5
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California Coastal Commission

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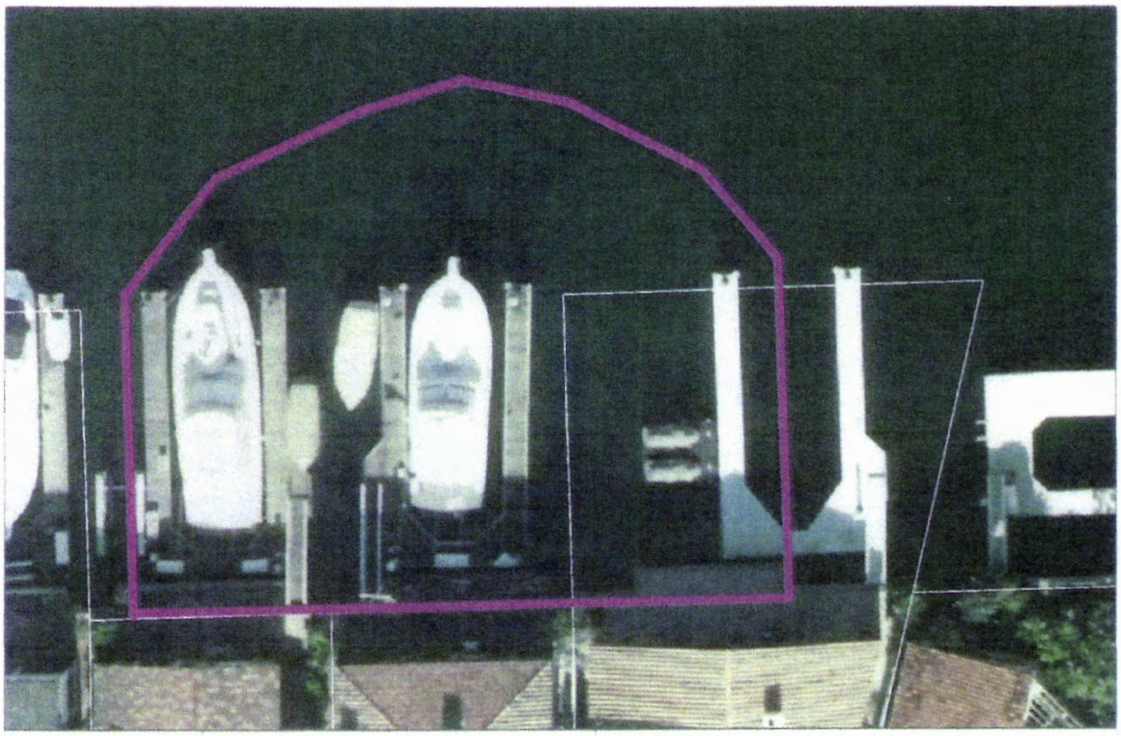
Fuchsia outline reflects dive survey perimeter which includes the subject property and 30 feet beyond the property lines.



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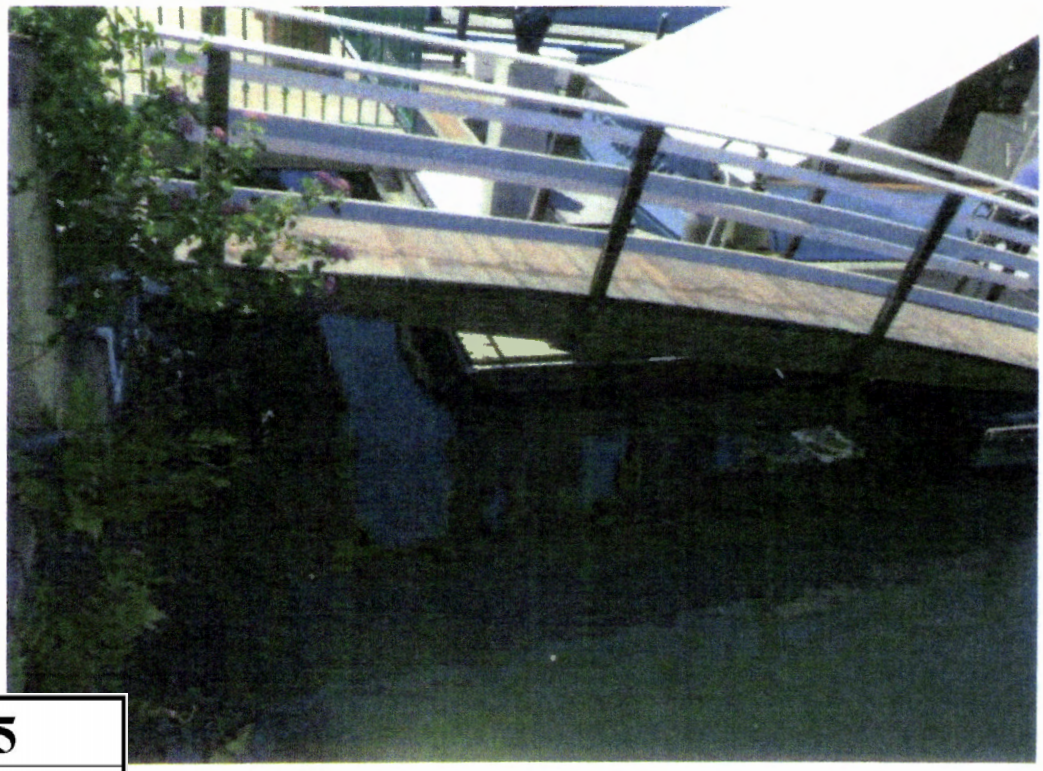
Views from subject property deck panning from left to right, including proposed project area and 30' beyond property lines.



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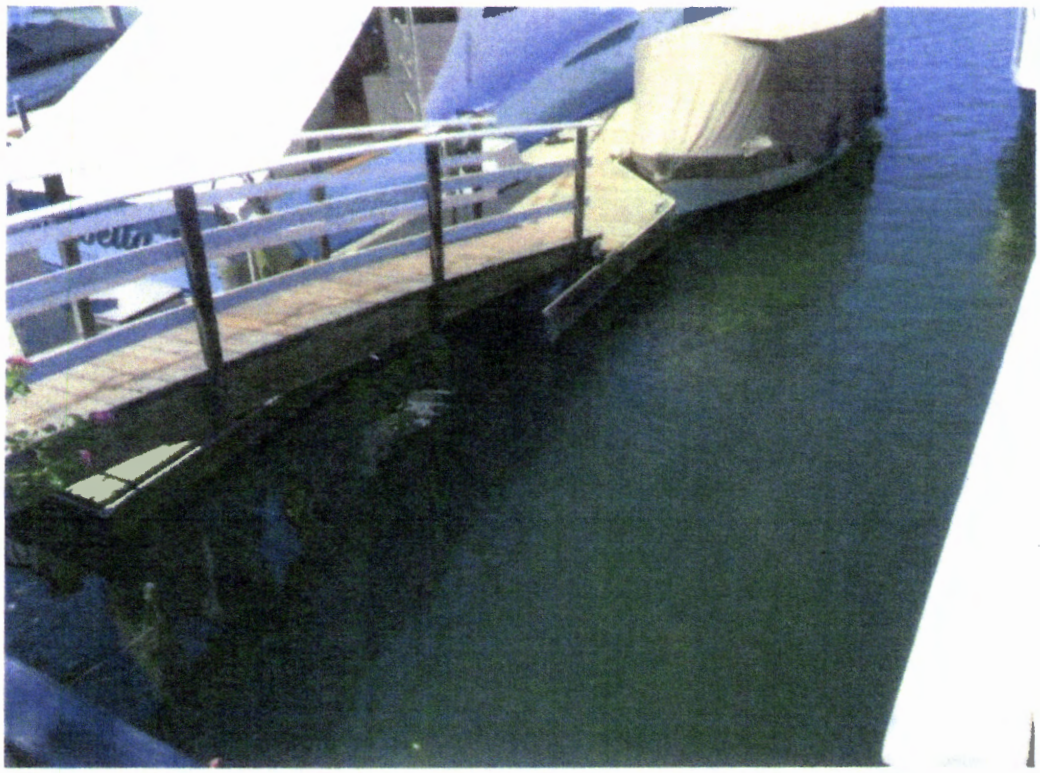

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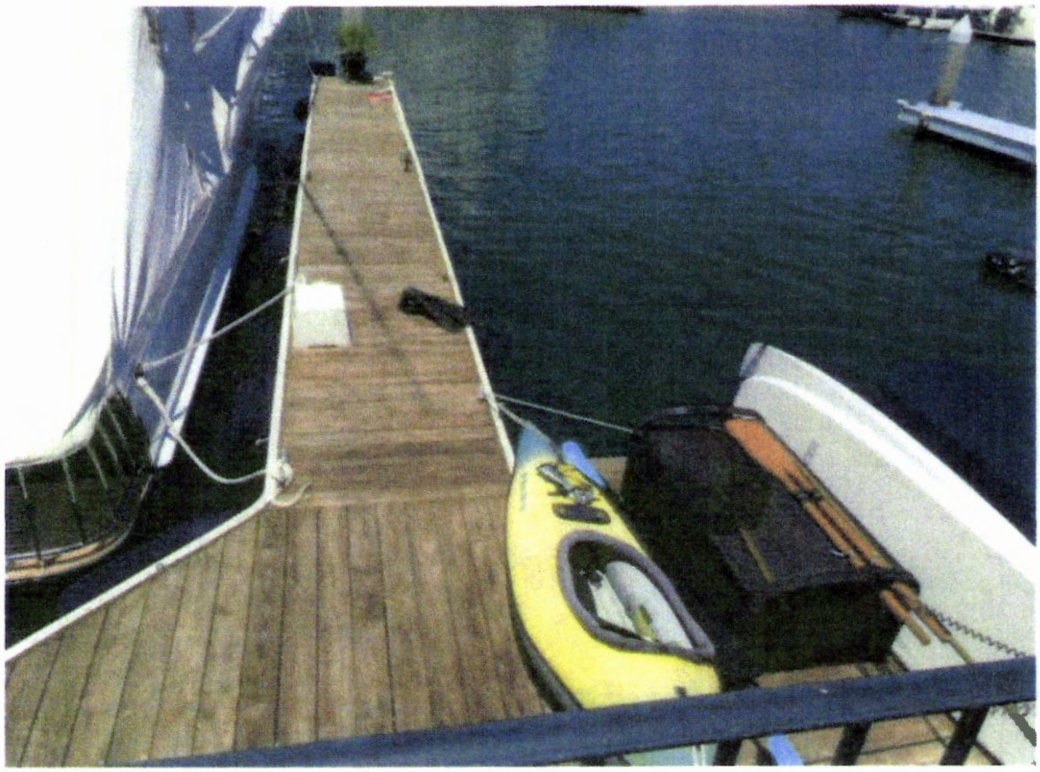

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