

**CALIFORNIA COASTAL COMMISSION**

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# W13b

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## STAFF REPORT: REGULAR CALENDAR

**CDP Application No.:** 5-21-0640

**Applicant:** City of Newport Beach

**Agent:** Adam Gale, Anchor QEA

**Project Location:** Within the central portion of Lower Newport Bay between Bay Island, Lido Isle, and Harbor Island, as well as nearshore waters in Newport Beach, Orange County.

**Project Description:** Construction of a Confined Aquatic Disposal Facility where dredged sediment unsuitable for open ocean disposal can be contained, including placement of a final 3-foot thick cap layer, deposition of clean sandy sediments along nearshore ocean beaches, and implementation of Operations Management and Monitoring Plan.

**Staff Recommendation:** Approval with conditions.

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## SUMMARY OF STAFF RECOMMENDATION

The City of Newport Beach is proposing to construct a confined aquatic disposal (CAD) site in Newport Harbor and perform beach replenishment in Newport Beach. Development within the harbor is located within the Commission's permitting jurisdiction because it includes tidelands, submerged lands, and lands that are subject to the public trust or were subject to

the public trust at any time and consequently, the standard of review is Chapter 3 of the Coastal Act. Newport Beach's certified LCP serves as guidance.

Lower Newport Bay requires periodic maintenance dredging to remove sediment that accumulates over time and impedes navigation and full use of the harbor. While some sediment from the Federal Channels maintained by the U.S. Army Corps of Engineers (USACE) has been determined suitable for open ocean disposal, another portion of the sediment has been determined unsuitable for open ocean disposal due to contamination and is proposed for placement into the CAD facility. The CAD cell would be created, filled, and covered to isolate existing pollutants in the dredged sediment from the environment in a secure location maintained by the City. The CAD cell would be excavated in the central portion of the Lower Harbor between Bay Island, Lido Isle, and Harbor Island to accommodate approximately 112,500 cubic yards of unsuitable dredged material anticipated to be generated by the Federal Channels maintenance dredging program and an additional 50,000 cubic yards resulting from maintenance dredging of primarily unsuitable material from outside the Federal Channels to be permitted separately at a later time. The proposed size of the CAD is approximately 590 feet by 590 feet and would require dredging of approximately 282,400 cubic yards of sediment from the existing mudline to the 1-foot overdredge limit, with a final floor elevation approximately 45 feet below the floor of the harbor. Up to approximately 282,400 cubic yards of clean sediment excavated from the harbor floor to create the CAD cell would be transported by bottom dump scow and placed in the littoral zone along the nearshore ocean beach, where the waves and currents would move the sand onto Newport Beach. Next, approximately 106,900 cubic yards of contaminated dredged material from the federal channels within Newport Harbor would be placed within the CAD using bottom-dump barges. The contaminated sediments at the bottom of the CAD would then be covered with approximately 9,000 cu. yds. of clean sand excavated from the federal channels to create a one-foot thick interim cap that is proposed to be in place for approximately two years, during which time the City and its residents would be encouraged to prepare plans and acquire any necessary authorizations to place dredge spoils into the CAD. Then there would be a 6-month period for the City and its residents to place up to 50,000 cubic yards of material with a priority for material determined unsuitable for open ocean disposal in the CAD facility followed by material suitable for open ocean disposal. This activity would be permitted through either the City's RGP 54 or through individual coastal development permits, depending on the scope of work.

At the end of the 6-month placement period, the final cap layer would be placed in the CAD cell by the City to physically isolate the underlying sediments from burrowing organisms and biota residing in the overlying water column. This clean sediment final cap layer has been designed to a thickness of 3 feet (made up of 33,600 cy) of additional sediment sourced by the City. Although the City has not yet specified where the sediment would be sourced, it may consist of clean sediment dredged under the City's RGP 54, maintenance dredging at the Santa Ana River as a contingency, or other sources available at the time. As the City identifies sources for the material to make up the final cap layer, testing and confirmation would need to be conducted to ensure that the sourced material meets the performance criteria of sediment tested and modelled as part of the Basis of Design Report (BODR, [Exhibit 4](#)) for grain size, chemistry, etc. Additionally, the City would be required to submit

this final cap layer plan for review and approval of the Executive Director prior to placement as recommended pursuant to **Special Condition 2**. The proposed CAD facility construction is anticipated to take place over an approximately six-month duration beginning in late 2022.

The proposed dredging of sediments from the federal channels within the Newport Harbor entrance and navigation channels is an allowable use under the Coastal Act and was approved through USACE Negative Determination No. ND-0020-22, with which the Commission concurred pursuant to Section 15 CFR 930.35(a) of the NOAA implementing regulations on May 27, 2022. The proposed Newport Beach disposal site for the clean sand is the least damaging feasible alternative and the proposed CAD facility is the least damaging feasible alternative for disposal of contaminated sediments. Mitigation measures are incorporated into the project where necessary to protect coastal resources. The project is consistent with the allowable use, alternatives, and mitigation tests contained in Coastal Act Section 30233.

The project includes dredging of sediments contaminated with elevated concentrations of chemicals including pesticides such as DDTs, polychlorinated biphenyl (PCB) and mercury, and their placement and confinement in an engineered confined aquatic disposal (CAD) facility. Once the 112,500 cy of contaminated sediment have been placed within the CAD facility, it would be covered with 33,600 cy of clean sediment to form a cap to prevent migration of contaminants into the water column or the surficial sediment layer. The contaminated sediments proposed for dredging and disposal in the proposed CAD facility would remain permanently isolated in the CAD facility and the project would not adversely affect water quality and marine resources of Newport Harbor and the adjacent waters of the coastal zone. The project, as conditioned, would be consistent with the marine resources and water quality policies of the California Coastal Act Sections 30230, 30231, 30232.

The contaminated sediments targeted for placement in the CAD currently make up the surface layer of the harbor bottom are prone to resuspension by vessel traffic especially at low tides and are therefore easily released into the water column. The proposed project would eliminate this possibility by sequestering a portion of these sediments from the Federal Channels and other areas of the Lower Harbor and relocating the impacted sediments into a deep hole (CAD facility), sequestered by a three-foot thick layer of clean sediment that would eliminate those potential risks to water quality, thereby resulting in a long-term benefit to the environment. The project would also significantly improve public access and recreational opportunities due to the placement of approximately 282,400 cy of clean and grain-size compatible sand along a stretch of eroding beach immediately upcoast of the Newport Harbor entrance. The project is consistent with the public access, recreation, and sand supply policies of the California Coastal Act.

Commission staff recommends that the Commission **APPROVE** Coastal Development Permit application 5-21-0640 as conditioned. The motion is on page 5.

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### **APPENDIX A – Substantive File Documents**

### **EXHIBITS**

**Exhibit 1 – Vicinity Map and Plan Overview**

**Exhibit 2 – Plans**

**Exhibit 3 – Permit Application Supplement: Lower Newport Bay Confined Aquatic Disposal (CAD) Construction Permit, City of Newport Beach (August 10, 2022)**

**Exhibit 4 – Basis of Design Report, Sediment Dredging and Confined aquatic Disposal, City of Newport Beach (March, 2022)**

**Exhibit 5 – Proposed Beach Replenishment Locations**

**I. MOTION AND RESOLUTION**

**Motion:**

I move that the Commission approve Coastal Development Permit No. 5-21-0640 pursuant to the staff recommendation.

**Staff Recommendation of Approval:**

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:**

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. 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.

**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

1. **Final Revised Plans.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit a document subject to the review and written approval of the Executive Director, detailing the final Lower Newport Bay Confined Aquatic Disposal (CAD) Construction Project as approved by the Coastal Commission. The format of the document shall substantially conform to the preliminary program titled “Revised Permit Application Supplement, Lower Newport Bay Confined Disposal (CAD) Construction Project,” submitted 8/10/22, and included as **Exhibit 2** in the staff report dated 8/25/22, but shall be amended to reflect the following changes:
  - A. Remove reference to the “second sediment placement opportunity during a 6-month period” to be consistent with the revised application supplement.
  - B. Establish the location for the nearshore sand placement that limits sand placement to the southern two extents labeled as “Updated Proposed Nearshore Placement Areas” in the Nearshore Disposal Area & Sand Dollar Beds map dated March 10, 2022, prioritizing as shallow placement as feasible up to -13 feet MLLW.
  - C. Construction Timing: If nearshore sand deposition is to be conducted during nighttime hours, nights with predicted grunion runs as identified by the California Department of Fish and Wildlife (CDFW) must be avoided (<https://wildlife.ca.gov/Fishing/Ocean/Grunion>).

The permittee shall undertake development in conformance with the approved final plans unless the Commission amends this permit or the Executive Director issues a written determination that no amendment is legally required for any proposed minor deviations.

2. **Final Cap Placement Plan.** NINETY DAYS PRIOR TO INSTALLATION OF THE INTERIM CAP, the Permittee shall submit a Final Cap Placement Plan, subject to the review and written approval of the Executive Director, detailing the placement of the final cap on the CAD that identifies:

- A. The final design of the final cap layer, including a thickness of no less than 3 feet.
- B. The source of the material (i.e. clean dredge spoils from the Santa Ana River or RGP 54 program).
- C. Testing results of the material and confirmation that the sourced material meets the performance criteria of sediment tested and modelled as part of the Basis of Design Report (BODR, Anchor QEA 2022).

The permittee shall undertake development in conformance with the approved final plans unless the Commission amends this permit or the Executive Director issues a written determination that no amendment is legally required for any proposed minor deviations.

### **3. CAD Maintenance and Monitoring**

**A. Bathymetric Surveys:** The Permittee shall conduct the following bathymetric surveys and submit within seven (7) days of survey completion subject to the review and written approval of the Executive Director:

- 1. A bathymetric survey of the CAD facility shall be conducted thirty (30) days prior to initiation of disposal operations to ensure the CAD facility has been constructed to meet the design specifications as outlined in this CDP.
- 2. A bathymetric survey of the CAD facility shall be conducted with fourteen (14) days after the sediments unsuitable for open ocean disposal have been placed within the CAD facility to ensure that the material has been placed evenly within the CAD facility.
  - a. A bathymetric survey of the CAD facility shall be conducted with fourteen (14) days after the interim cover containment layer is constructed to ensure that the material has been placed evenly and at the proper depth within the CAD facility.
  - b. A bathymetric survey of the CAD facility shall be conducted with fourteen (14) days after the final cap is constructed to ensure that the material has been placed evenly and at the proper depth within the CAD facility.

**B. Project Reporting.** The Permittee shall submit an Annual Report each year to the Long Beach CCC office on the anniversary of the date this CDP is issued. Annual reporting shall include documentation of compliance with all required conditions, monitoring, and applicable water quality standards.

### **4. Caulerpa Surveys Within Infected Systems.**

- A. The following survey conditions shall apply to any permitted Bottom Disturbing Activity within Infected Systems:
1. Prior to initiation of any permitted Bottom Disturbing Activity within an Infected System, two surveys, initiated not less than 60 days apart, shall be conducted within the project Area of Potential Effect (APE). The first survey shall be conducted using High Intensity Level techniques (more intensive survey using a systematic sub-sampling of the entire APE during which at least 50% of the bottom is inspected). Surveys may be accomplished using a diver or remote camera transects. Other proposed methods may be approved on a case-by-case basis by NOAA Fisheries, CDFW, and the Executive Director) and the second survey shall be conducted using Eradication Area Level techniques (most intensive survey using a systematic and comprehensive survey of the entire APE during which 100% of the bottom is inspected. Surveys must be accomplished using divers moving at a rate appropriate to the site conditions to ensure that all areas are comprehensively searched irrespective of site conditions which may complicate surveys. Other proposed methods may be approved on a case-by-case basis by NOAA Fisheries, CDFW, and the Executive Director). Both surveys shall be conducted within the same High Growth Period, unless otherwise approved by NOAA Fisheries, CDFW, and the Executive Director.
  2. At least one survey shall be conducted within 45 days of initiation of a permitted Bottom Disturbing Activity (a "Pre-Act Survey"). This survey could be the second (Eradication Area Level) survey conducted during the High Growth Period. However, project delays may require that a third survey be conducted prior to initiation of the Bottom Disturbing Activity in order to meet this 45-day requirement. If a third survey is required, this survey shall be conducted at either a High Intensity Level or Eradication Area Level as determined by the NOAA Fisheries/ CDFW Contacts based upon site circumstances and proximity to infestations. To determine appropriate survey level, please contact the NOAA Fisheries/CDFW Contacts with project specific information.
  3. If the Bottom Disturbing Activity extends for over 90 calendar days, the portions of the APE that would be expected to be impacted by a Bottom Disturbing Activity within the subsequent 90 days must be re-surveyed at a High Intensity Level. This subsequent survey must be conducted within 15 days following the first 90 days. Prolonged activities would require a repetition of this phased survey requirement.



4. If dredged material is removed from the APE and placed elsewhere in the marine environment, then no sooner than 60 days after placement of the dredged materials and during the next High Growth Period, the applicant shall conduct a Surveillance Level survey at all disposal areas except where material is disposed of within an existing U.S. EPA designated deep ocean disposal site. The specific survey requirements shall be determined by NOAA Fisheries and CDFW on a case-by-case basis.
  5. The final survey shall be submitted for the review and written approval of the Executive Director prior to commencement of any dredging activities in infested systems.
  6. Area of Potential Effect (APE) is the area surrounding an authorized project site that could be affected by a Bottom Disturbing Activity related to the implementation of the project work. This includes the project footprint, areas where equipment is stored or moored, areas where vessel prop-wash could occur in association with work, or in-water disposal areas used by the project. It does not include U.S. Environmental Protection Agency (EPA) designated deep-ocean disposal sites.
- B. If *Caulerpa* is Found:
1. If *Caulerpa* is found, then the NOAA Fisheries/CDFW Contacts shall be notified within 24 hours of the discovery. The Bottom Disturbing Activity shall not be conducted until such time as the infestation has been isolated, treated or the risk of spread from the project is eliminated.
  2. All *Caulerpa* assessment and treatment shall be conducted under the auspices of the CDFW and NOAA Fisheries as the state and federal lead agencies for implementation of *Caulerpa* eradication in California.
  3. Within seven days of notification, NOAA Fisheries and CDFW will coordinate with the Southern California Caulerpa Action Team (SCCAT) and relevant permitting and resource agencies (and project proponent, as warranted) to fully document the extent of the *Caulerpa* infestation within the project APE. *Caulerpa* eradication activities, which are subject to review and approval by NOAA Fisheries and CDFW, in coordination with the SCCAT and relevant permitting and resource agencies, shall be undertaken using the best available technologies at the time and will depend upon the specific circumstances of the infestation. This activity may include in situ treatment using contained chlorine applications, mechanical

removal, or other appropriate methods. The eradication technique is subject to change at the discretion of NOAA Fisheries and CDFW and as technologies are refined.

4. The efficacy of treatment shall be determined prior to proceeding with permitted activities. To determine effectiveness of the treatment efforts, a written Survey Plan shall be prepared. The plan shall be developed in conjunction with the CDFW and NOAA Fisheries and shall be approved by these agencies and the Executive Director prior to implementation.
  5. This policy does not vacate any additional restrictions on the handling, transport, or disposal of *Caulerpa* that may apply at the time of permit issuance or in the future. It is incumbent upon the permittee to comply with any other applicable State or Federal regulations, restrictions, or changes to the Protocol that may be in effect at the time of initiation of permitted activities.
- C. In non-infected systems, prior to initiation of any permitted Bottom Disturbing Activity, a minimum of one survey shall be conducted using Surveillance Level techniques (general survey coverage providing a systematic subsampling of the entire APE during which at least 20% of the bottom). Surveys may be accomplished using diver transects, remote cameras, and acoustic surveys with visual ground truthing. Other proposed methods may be approved on a case-by-case basis by NOAA Fisheries and CDFW and the Executive Director.
- 5. 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 excavate or dispose of dredged material subject to the program and plan approved by this CDP shall implement the following construction-related and operational best management practices (BMPs), in addition to those construction best management practices proposed by the applicant's preliminary program (titled "Revised Permit Application Supplement, Lower Newport Bay Confined Aquatic Disposal (CAD) Construction Project" submitted August, 2022):
- 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. Silt curtains shall be utilized during dredging and material placement activities to reduce turbidity by isolating the active dredging site from the rest of Lower Newport Bay. Additionally, a floating boom shall be maintained around the Project area.
- F. The silt curtains must be comprised of Type III geotextile material.
- G. The silt curtains must be maintained as a full turbidity enclosure. The silt curtains must be supported by floating debris booms in open water areas.
- H. Silt curtains must be continuously monitored for damage, dislocation, or gaps and must be immediately repaired where it is no longer continuous or where it has loosened.
- I. Silt curtains shall be located within the footprint of the CAD perimeter.
- J. Material placement would take place outside of tidal extremes. Material placement activities should be limited to neap and non-peak tides, defined as plus or minus 2 hours from slack tide, to limit the horizontal distribution of dredged or fill material placed in the CAD facility due to reduced current speeds. In addition, placement activities should be conducted during a non-peak flood tide. These measures would limit the loss of dredged or fill material outside the CAD facility during placement operations.
- K. All materials generated from the Project activities shall be managed appropriately. The Permittee shall identify all potential pollution sources associated with the Project and incorporate all necessary pollution prevention BMPs for each potential pollution source identified.
- L. All stockpiles 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.
- M. All debris and trash shall be disposed of in the proper trash and recycling receptacles at the end of each construction day.
- N. The discharge of any hazardous materials into the harbor or any receiving waters shall be prohibited.

- O. 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.
- P. Non-buoyant debris discharged into coastal waters will be recovered by divers as soon as possible after loss.
- Q. Prior to commencement of any activity authorized under this CDP, 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.
- R. 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.
- S. 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 permittee and anyone with a legal right to excavate or dispose of dredged material subject to the program and plan approved by this CDP shall include the requirements of this condition (including those BMPs proposed in the "Revised Permit Application Supplement, Lower Newport Bay Confined Aquatic Disposal (CAD) Construction Project" on all plans and contracts issued for development subject to program and plan approved by this CDP.

**6. Nearshore Sand Placement Monitoring Plan.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit a Sand Placement Monitoring Plan that will:

- A. Establish a framework for the City and/or its contractor(s) to monitor, record, and report the location and depth of sand placement events to verify material has been placed as shallow as possible.
- B. Include a final report that includes the monitoring results (including documentation and reporting) of Special Condition 6A, which shall be submitted to the Executive Director within 90 days of the construction of the CAD.

**7. Nearshore Biological Monitoring Plan.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit a Nearshore Biological Monitoring Plan that will include the following:

- A. One year post sand placement, a nearshore biological survey shall be conducted following the exact methods employed by CRM and documented in their January

26, 2022 Newport Beach Nearshore Marine Biological Survey. The post project report shall compare the pre- and post-survey results and draw conclusions regarding any potential adverse impacts of the project on the nearshore marine benthos and potential recommendations to improve future deposition events.

- B. A final report that includes the monitoring results (including documentation and reporting) and an analysis of the goals described in Special Condition 7A, which shall be submitted to the Executive Director within 90 days of the final survey.

**8. 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 U.S. 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.

**9. Assumption of Risk, Waiver of Liability, and Indemnity.** By acceptance of this permit, the permittee acknowledges and agrees (i) that the sites may be subject to hazards from wave uprush, storm conditions, and sea level rise; (ii) to assume the risks to the permittee and the properties that are 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.

**10. Cultural Resources Treatment and Monitoring Plan.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and approval a Cultural Resources Treatment and Monitoring Plan prepared by a qualified professional, which shall incorporate, at a minimum, the following measures and procedures:

- A. A specific discussion on the process for identifying unanticipated discoveries in a submerged context, including how unanticipated tribal cultural resources are identified during project activities, when the project area is not visible. The process may include pre- and post-project reconnaissance survey dives. This

process should be developed in consultation with the appropriate Native American tribal government(s).

- B. Methods of protection of Tribal Cultural Resources developed in consultation with the appropriate Native American tribal government(s). To this end, the cultural resources monitoring plan shall require that archeological and Native American monitors be present during all grading operations and subsurface construction activity that has the potential to impact cultural resources. One Native American monitor from each affected tribe shall be invited and allowed to be present during all ground disturbance.
- C. Archaeological monitor(s) qualified by the California Office of Historic Preservation (OHP) standards, Native American monitor(s) with documented ancestral ties to the area appointed consistent with the standards of the Native American Heritage Commission (NAHC), and the Native American most likely descendent(s) (MLD) when State Law mandates identification of an MLD, shall be invited to monitor all project grading and subsurface construction activity (such as excavation) that has the potential to impact cultural resources.
- D. The permittee shall provide sufficient archaeological and Native American monitors to assure that all project grading and subsurface construction activities that have any potential to uncover or otherwise disturb cultural deposits are monitored at all times.
- E. If any archaeological or paleontological, or cultural deposits, are discovered, including but not limited to skeletal remains and grave-related artifacts, artifacts of traditional cultural, religious or spiritual sites, or any other artifacts relating to the use or habitation sites, activities that have any potential to uncover or otherwise disturb resources shall cease. Treatment of the discovery shall be determined by the appropriate monitor or the MLD. Significance testing may be carried out only if acceptable to the affected Native American Tribe(s), in accordance with the attached "Cultural Resources Significance Testing Plan Procedures" (Appendix B). The permittee shall report all discovered resources as soon as possible, by phone and/or by email to the Executive Director. The permittee shall provide the significance testing results and analysis to the Executive Director, if applicable.

If the Executive Director determines that the discovery is significant or that the treatment method preferred by the affected Native American tribe(s) is in conflict with the approved development plan, the permittee shall seek an amendment from the Commission to determine how to respond to the discovery and to protect both those and any further cultural deposits that are encountered. Development shall not recommence until an amendment is approved, and then only in compliance with the provisions of such amendment.

- 11. Liability for Costs and Attorneys' Fees.** The landowner/permittee shall reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys' fees—including (1) those charged by the Office of the Attorney General, and (2) any

court costs or attorneys' fees that the Coastal Commission may be required by a court to pay—that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the landowner/permittee against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this permit, the interpretation and/or enforcement of permit conditions, or any other matter related to this permit. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission.

## **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 highly 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 is proposing to construct a confined aquatic disposal or “CAD” cell within the Lower Harbor, specifically in the central portion of Lower Newport Bay between Bay Island, Lido Isle, and Harbor Island, as well as nearshore waters ([Exhibit 1](#)), and is also proposing beach replenishment in Newport Beach in Orange County. Lower Newport Bay requires periodic maintenance dredging to remove sediment that accumulates over time and impedes navigation and full use of the Harbor. While some of the sediment from the Federal Channels (maintained by the USACE) has been determined suitable for open ocean disposal, another portion of the sediment has been determined unsuitable for open ocean disposal and is proposed for placement into the CAD facility. Maintenance dredging of the Federal Channels was permitted separately by the USACE, subject to the review of the Commission. Clean material suitable for beach replenishment generated from constructing the CAD facility would be transported and disposed along the nearshore ocean beaches ([Exhibit 5](#)).

To manage the unsuitable material that would be dredged as part of the Federal Channels maintenance dredging program, the City proposes constructing the CAD facility to accommodate approximately 112,500 cubic yards (cy) of unsuitable dredged material anticipated to be generated by the Federal Channels maintenance dredging program and an additional 50,000 cy resulting from maintenance dredging primarily of unsuitable material from outside the Federal Channels (to be permitted separately at a later time). Clean material excavated during construction of the CAD facility would be transported to, and disposed along, the nearshore ocean beaches ([Exhibit 5](#)). CAD facility construction would occur using mechanical equipment and bottom-dump barges (also called a dump scow) to excavate the depression and deposit the resulting material within the nearshore zone along

the ocean beaches of Newport Beach. The proposed CAD facility construction is anticipated to take place over an approximately six-month duration beginning in late 2022.

Approximately two years following completion of construction of the CAD facility, there would be one opportunity during a six-month period for the City and its residents to place material in the CAD facility, prioritizing material determined unsuitable for open ocean disposal. The total allowance for the opportunity would be 50,000 cy of material. If there is remaining capacity (within this 50,000-cy allowance) after material determined unsuitable for open ocean disposal is placed in the CAD before the end of the 6-month period, the City and its residents would be able to place material from the Regional General Permit (RGP) 54 Plan Area<sup>1</sup> determined suitable for open ocean disposal in the CAD facility. This activity would be permitted separately through either the City's RGP 54 CDP or through an individual coastal development permit depending on the scope of work, and not included as part of this permit application.

At the end of the 6-month placement period opportunity for the public and the City, the final cap layer would be placed in the CAD facility by the City to physically isolate the underlying sediments from burrowing organisms and biota residing in the overlying water column. This clean sediment final cap layer has been designed to a thickness of 3 feet (or 33,600 cy) of additional sediment sourced by the City. This layer would likely consist of sediment dredged under the City's RGP 54 program, maintenance dredging at the Santa Ana River as a contingency, or other sources available at the time. As the City identifies sources for the final cap layer, material would require testing and confirmation that the sourced material meets the performance criteria of sediment tested and modelled as part of the Basis of Design Report (BODR), which is attached as [Exhibit 4](#). Additionally, the City would request final review and approval prior to placement of the final cap layer. The final elevation of the CAD facility infill would be restricted to an elevation that is at or below the water depths necessary for navigation within the Lower Harbor.

The CAD cell would be excavated in the center of the harbor. The proposed size is approximately 590 feet by 590 feet at the assumed top of the CAD facility footprint and would require dredging of approximately 282,400 cy of sediment from the existing mudline to the 1-foot overdredge limit (-46 feet Mean Lower Low Water), approximately 45 feet below the floor of the harbor; the underlying sediment within the footprint of the CAD facility would be disposed along nearshore beaches ([Exhibit 2](#)). The CAD facility has been designed to accommodate 199,500 cy as outlined below:

- 112,500 cy of sediment generated during dredging of the Federal Channels (USACE Federal Channels maintenance dredging program, permitted separately)

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<sup>1</sup> The RGP 54 authorizes small-scale maintenance dredging in Newport Harbor and covers: 1) maintenance dredging under and adjacent to private, public, and commercial docks, floats, and piers; and 2) discharge of dredged material at adjacent in-bay beach sites for beach replenishment, at the LA-3 open ocean disposal site, or at an approved upland disposal site.



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- 50,000 cy of sediment generated from the RGP 54 Plan Area and/or other areas outside the Federal Channels (USACE Federal Channels maintenance dredging program, permitted separately)
- 9,000 cy of sediment that would be dredged from the Federal Channels, likely Newport Channel 3, to provide for an interim cover containment layer designed to a thickness of 1 foot (USACE Federal Channels maintenance dredging program, permitted separately)
- 33,600 cy of sediment that would be sourced by the City to provide for the final cap layer designed to a thickness of 3 feet (permitted herein)

The CAD facility's size and volume incorporates side slopes, final CAD facility elevation, and other engineering design considerations to safely accommodate the material and ensure the CAD facility's stability. Incorporation of these elements into the design results in a greater volume of material required to excavate the CAD facility (282,400 cy) as compared to the volume of material placed in the CAD facility (199,500 cy).

This coastal development permit is only for the construction of the CAD cell, deposition of suitable dredged material excavated from Newport Harbor to create the CAD cell for beach replenishment, and maintenance of the facility. The actual dredging of the federal channels, which is required for maintenance and navigability of the federal channels, was permitted separately through USACE Negative Determination No. ND-0020-22, with Commission concurrence dated May 27, 2022.

### **B. Standard of Review**

The City of Newport Beach LCP was effectively certified on January 13, 2017. Development within the harbor is located within the Commission's permitting jurisdiction because it includes tidelands, submerged lands, and lands that are subject to the public trust or were subject to the public trust at any time and consequently, the standard of review is Chapter 3 of the Coastal Act. Newport Beach's certified LCP serves as guidance.

### **C. Dredging and Filling**

Section 30233 of the Coastal Act states:

- (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 longshore current systems.

The proposed CAD and disposal project must be examined for consistency with Section 30233 of the Coastal Act. Under this section, dredging and filling of open coastal waters, including disposal of dredged materials, is limited to those cases where the proposed project is an allowable use, is the least damaging feasible alternative, and where mitigation measures are provided to minimize environmental impacts. As stated, the dredging of the federal channels in the Newport Harbor has been permitted separately. This project is an allowable use pursuant to Section 30233(a)(2), -(4), and -(6), as components of the project achieve numerous goals for the overall functionality of Newport Harbor.

### Alternatives Analysis

The City considered several alternatives for disposal of sediment unsuitable for open ocean disposal, which are analyzed here:

#### 1. No CAD Construction

Under the “no CAD construction” alternative, any dredged sediment deemed unsuitable for open ocean disposal would be dewatered and trucked to a permitted upland landfill

facility. Because the CAD facility would not be constructed, clean material suitable for beach replenishment generated from constructing the CAD facility would not be transported and disposed at an approved open ocean disposal site or along the nearshore ocean beaches resulting in a loss of beach sand and thus a potential decrease in recreational opportunities in Newport Harbor. For sediments that do not qualify for open ocean disposal, beneficial reuse or beach replenishment, other disposal scenarios must be considered.

## 2. Upland Trucking of Material to Landfill

The contaminants in the dredged material meet the qualifications for disposal at a Class III landfill, which can accept material with relatively lower concentrations of contaminants, depending on the individual landfill design and location. However, the materials must be dewatered prior to transport, which requires new infrastructure and on-land space for sediment management and dewatering equipment and must be trucked or shipped via railcar to the landfill, resulting in an increase in Green House Gas (GHG) emissions, risk of accidents spilling contaminated sediments, and other negative externalities. Generally, this approach is also not supported by the Regional Water Quality Control Board (RWQCB) because of concerns related to salinity and chloride leaching in the sediments affecting underlying groundwater reserves. As a result, marine dredging projects with large volumes of material are typically not permitted to use public landfills (such as Prima Deshecha in South Orange County) and therefore are limited to out of county or private landfills (such as Otay Landfill in San Diego, or Azusa Landfill in Azusa, California). Due to the large volume of dredged material involved and the costs associated with dewatering and transportation, landfill disposal is not considered a viable alternative.

## 3. Reduced Dredging, and Smaller CAD

Under this scenario, the CAD facility would be constructed but with a smaller footprint. Because the CAD facility would be smaller, less suitable material would be available for beach replenishment. All impacts that would occur as part of the proposed project would likely occur under this reduced project scenario, except air quality impacts and GHG emissions would likely be reduced because dredging and construction equipment use would be reduced. Under this scenario, however, there would continue to be impacts to navigation and water quality in the areas where dredging would not occur.

## 4. Alternative Location within Newport Harbor

Alternate locations in the Lower Harbor were analyzed for the potential CAD facility. The City's Harbor Commission recommended siting the CAD facility next to or within locations where sediment was determined unsuitable and would require placement in the CAD facility. According to the City, this recommendation led the siting process, and other factors were evaluated, including analysis of geotechnical data to demonstrate compliance with current engineering standards and practices; suitability of material for beneficial reuse, construction logistics, disruption of existing lower harbor moorings and

anchorage, access to deeper water that allows the barges to be filled to their capacity, and public input. Alternate locations and CAD sizes evaluated included the Turning Basin (600 ft x 600 ft), Main Channel 1 (250 ft. x 1,300), and Newport Channel 1 (590 ft. x 590 ft.) While the alternatives analysis identified some advantages to the alternate locations (closer to the unsuitable material and within areas with less impact to public residences), disadvantages included potentially greater water quality impacts because the proposed location is deeper than the alternatives, and thus contaminated sediment may be suspended longer in the water column before settling in the CAD, there are more existing moorings to be avoided, and the alternative locations were in close proximity to private residences and their docks.

The Commission finds that the proposed dredging and fill associated with the proposed project is associated with allowable uses and is the least environmentally-damaging feasible alternative for disposal of Lower Newport Harbor contaminated sediments, which includes feasible mitigation measures. Additional analysis of the feasibility of the aforementioned disposal alternatives for contaminated sediments is provided in the Water Quality and Marine Resources section of this report, below. Regarding the mitigation test of Section 30233(a), the following sections of this report discuss the mitigation measures which are incorporated into the project where necessary to protect coastal resources. Therefore, the Commission finds that the proposed maintenance dredging and disposal project is consistent with the allowable use, alternatives, and mitigation tests contained in the dredge and fill policy of Coastal Act Section 30233.

## **D. Biological Resources and 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.

Section 30232 of the Coastal Act states:

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

The Newport Beach LCP contains multiple policies implementing the referenced Coastal Act sections, including LUP Policies 4.1.4, 4.2.3, 4.2.4 and 4.2.5. Lower Newport Bay is highly developed and the rich history of agricultural and industrial activities in the watershed has resulted in a legacy of sediment contamination in Newport Bay. The contamination is a result of historical industry and storm drains adjacent to the bay as well as ongoing runoff from the surrounding watershed. One of the potential adverse effects from dredging, ocean disposal, and beach replenishment activities in this location is the re-suspension and relocation of contaminants. Dredge material can contain contaminants of concern including metals, pesticides, and PCBs. These contaminants usually are bound to finer grain material such as clay and silt.

The proposed project includes dredging of sediments contaminated with elevated concentrations of chemicals including pesticides, polychlorinated biphenyls (PCBs) and/or mercury within Lower Newport Harbor, their placement and confinement in an engineered subaqueous confined aquatic disposal (CAD) facility, and related beach replenishment accomplished with clean sediments excavated to construct the CAD facility. The engineered CAD facility is a sediment management approach where contaminated sediments are dredged via mechanical means (clamshell buckets), placed within bottom-dump barges, transported to the CAD facility, and then placed within the submerged cell. Once the approximately 112,500 cubic yards of contaminated sediment have been placed within the CAD facility, it would be covered with approximately 33,600 cubic yards of clean sediments to form a cap to prevent migration of contaminants into the water column or the surficial sediment layer. The proposed CAD facility would be located on State Lands managed by the City within the lower harbor. [Exhibit 3](#) provides information on the sediment characterization efforts undertaken by the City and the USACE.

To date, the Commission has approved several CAD projects, mainly through federal consistency determinations. These include a CAD facility within Port Hueneme Harbor (CD-016-08, U.S. Navy and U.S. Army Corps of Engineers (USACE), a CAD facility within the Port of Los Angeles' permanent shallow water habitat area just inside the San Pedro Breakwater (CD-088-94, USACE), a CAD CDP 5-95-179 (Port of Los Angeles), a CAD facility within the permanent shallow water habitat area outside the Navy Mole in the Port of Long Beach (CDP-596-231 (Port of Long Beach)), and a pilot CAD facility in the North Energy Island Borrow Pit near the mouth of the Los Angeles River offshore of Long Beach (CD-028-01 (USACE)). The proposed project includes the following characteristics which supported the Navy, USACE, and Oxnard Harbor District's consideration of CAD technology to remedy the current sediment contamination problems in Lower Newport Harbor:

- Moderate levels of contaminants in harbor sediments
- CAD design provides a low risk of failure either by fluid migration or physical exposure
- Sediments primarily contain contaminants from past practices that are not expected to re-contaminate the harbor
- CAD developers (USACE and the City of Newport Beach) are committed to a maintenance and monitoring plan that would ensure that the contaminants remain isolated in the CAD facility
- CAD location ensures that it can be adequately maintained by the CAD developers

### **Purpose and Recommendation for Proposed CAD**

Lower Newport Bay requires periodic maintenance dredging to remove sediment that accumulates over time and impedes navigation and full use of the Harbor. Based on USACE harbor-wide bathymetric surveys conducted in 2018 (and recently updated in 2020), sedimentation has occurred in many areas of Lower Newport Bay resulting in approximately 879,900 cy of material approved for maintenance dredging within the Federal Channels, which has been permitted separately. Of that total, 773,000 cy of material has been determined suitable for open ocean disposal and 112,500 cy has been determined unsuitable for open ocean disposal and is proposed for placement into the CAD facility.

On July 28, the inter-agency Dredged Material Management Team (DMMT) provided a preliminary nearshore disposal sediment suitability determination for the underlying sediment within the footprint of the CAD facility. Additionally, in coordination with the DMMT, the City committed to the development of a Sediment Management Plan (SMP). The SMP is a planning document that builds on previous harbor-wide planning tools to assist the City in managing sediment in Newport Harbor. Specifically, the SMP identifies sediment management options depending on sediment characteristics, including developing alternate disposal locations and permitting requirements.

### **Operations Management and Monitoring Plan.**

A Revised Basis of Design Report included an Operations Management and Monitoring Plan (OMMP; March, 2022) for the CAD site, and has been developed for implementation by the City of Newport Beach and the USACE. The OMMP describes the management and monitoring objectives for the CAD facility, a communications plan covering the entire CAD construction and sediment disposal process, construction monitoring and post-disposal monitoring plans, contingency plans, annual monitoring plans, and long-term management plans for the CAD once it has been capped.

The OMMP describes objectives of the plan as follows:

*The primary objective of the City's CAD facility OMMP is to describe the plan for managing the CAD facility as a disposal site for sediments unsuitable for open ocean disposal during a phased, multiuser project conducted by the City and USACE. This document discusses the administrative steps and physical process of placing the material into the CAD facility, covering (or capping) it with clean material to prevent the release of contaminants, and the details of an ongoing and long-term monitoring program to monitor for potential environmental impacts associated with the project.*

*The purpose of the OMMP is to provide the construction and monitoring framework through which the City and USACE will conduct the disposal of their dredged material. The OMMP describes the conditions for use of the CAD facility; for example, the OMMP requires that specific, identified best management practices (BMPs) are employed during disposal and capping activities (see Sections 6.3 and 6.4), and that the City employ short- and long-term monitoring activities (see Section 7).*

*The CAD facility would be managed by the City, under the terms and conditions of the OMMP and would be permitted by the regulatory and resource agencies as an approved disposal location for a phased, multi-user project. In this way, the disposal site would be permitted for use, the conditions for use would be known in advance of dredging, and the City would be responsible for ensuring that the framework established by this OMMP is followed. Documentation of the regulatory agency decision-making process and environmental analyses that leads to approval of the CAD facility as an acceptable disposal alternative is currently under way. Results from the City's Environmental Impact Report, currently being conducted in compliance with the California Environmental Quality Act (CEQA), and agency permits and special conditions will augment this OMMP as appropriate.*

The OMMP next describes the legal authority and responsible parties for the CAD construction and long-term management and monitoring:

*The City is financially responsible for constructing the CAD facility. Following completion, the City will assume responsibility for the long-term management of the CAD facility, which includes the following components:*

- *Pre- and post-disposal monitoring of the CAD facility*
- *On-site monitoring of all disposal and capping operations within the CAD facility including the disposal and capping operations for sediments within Lower Newport Bay but outside the Federal Channels that are not suitable for open ocean disposal under the City's Regional General Permit 54 (RGP 54) program*

- *Design of the final isolation cap placed on the surface of the CAD facility at the conclusion of all disposal operations*
- *Preparation of monitoring reports for the regulatory agencies that document compliance with this OMMP*

The OMMP next describes the process for future modifications to the OMMP:

*This OMMP has been developed as a “working document” and may require modification during the operation and monitoring phases of the CAD facility development. Final modification of the plan is at the discretion of the City, in consultation and consensus with the USACE, U.S. Environmental Protection Agency (USEPA), California Coastal Commission (CCC), and California Regional Water Quality Control Board (RWQCB).*

*If modifications to the OMMP are required, addenda sheets will be issued to each party that is involved. The addenda sheets will clearly identify the addendum number, date of the revision, and where the addenda sheet is to be placed in the OMMP. Additionally, the plan identification number for each plan holder will be shown. These sheets can be inserted into the plan (via a 3-ring binder) in the appropriate section. A list of the names of all of plan holders and their plan identification numbers will be compiled and maintained. This list will be used to ensure that all addenda are distributed to every plan holder. All addenda will be distributed with return receipt requests to ensure that all plan holders receive all addenda.*

The OMMP concludes with a section on “Construction Monitoring and Post-Disposal Requirements” and excerpts are provided below. The section begins with a review of the development of a pilot CAD project in Port Hueneme in Oxnard, California:

*Monitoring of CAD facility’s (Port of Hueneme, California and Long Beach, California) have demonstrated that sediments unsuitable for open ocean disposal could be placed into a CAD facility and capped with clean sediments without causing significant environmental impacts to the overlying water column or surrounding sediments. The methods and results of the recently completed 10-year monitoring conducted for the CAD facility at Port Hueneme are finalized and are available upon request prior to construction of the Lower Newport Bay CAD facility. Included in that study were field investigations conducted during disposal, immediately after capping, and consecutively for 10 years after construction. The construction monitoring and post-disposal requirements proposed for the Lower Newport Bay CAD facility have been informed by the lessons learned during the Port Hueneme CAD facility study.*

This is followed by the monitoring elements of the OMMP:



**7.1 Construction Monitoring.** *Using the results of the extensive field monitoring conducted at Port Hueneme as a general example of successful disposal and capping operations, construction monitoring for sediments unsuitable for open ocean disposal at the CAD facility will focus on the following two main objectives: 1) ensure that significant quantities of sediments are not deposited outside of the designated CAD facility; and 2) ensure that chemicals in the sediment remain fully isolated and do not affect resident aquatic organisms. To achieve these objectives, the following field and laboratory parameters will be monitored during and immediately after construction:*

- *Field operations will be monitored and documented to ensure proper equipment placement prior to disposal and volumes/depths for all material placed into the CAD facility.*
- *Water column turbidity monitoring shall be conducted on a routine basis at reference and downcurrent locations to assess sediment transport during disposal operations.*
- *Water column samples will be collected periodically and analyzed for dissolved and particulate metals to monitor for chemical release and transport during disposal operations.*
- *During dredging, silt curtains may be required to reduce turbidity by isolating the active dredging site from the rest of Lower Newport Bay.*
- *A bathymetric survey of the CAD facility will be conducted prior to initiation of disposal operations to ensure that it has been constructed to meet the design specifications.*
- *A bathymetric survey of the CAD facility will be conducted after the sediments unsuitable for open ocean disposal have been placed within the CAD facility to ensure that the material has been placed evenly within the CAD facility.*
- *A bathymetric survey of the CAD facility will be conducted after the interim cover containment layer is constructed to ensure that the material has been placed evenly and at the proper depth within the CAD facility.*
- *Bathymetric surveys will be conducted periodically during the disposal operations for sediments unsuitable for open ocean disposal under the City's existing RGP 54 program to ensure that the material has been placed evenly within the CAD facility. A bathymetric survey of the CAD facility will be conducted after the final cap is constructed to ensure that the material has been placed evenly and at the proper depth within the CAD facility. If not, the contractor will be required to repair any irregularities.*

**7.1.1 Water Quality Monitoring.** *Water column monitoring will occur at set distances directly downcurrent of the disposal operations. The proposed downstream sampling distances for each operation will include at a minimum 150, 200, and 250 feet, and the nearest sample will be collected within 15 minutes of the*

*disposal event. At each station, continuous depth profiles will be collected a minimum of three times per week for light transmission, dissolved oxygen, and conventional field sampling measurements (i.e., salinity, temperature, and pH). Three sample depths (3 feet below the water surface, 1 foot above the bottom, and midway between these two points) will be monitored for TSS three times per week. Samples will be processed by the laboratory for a 7-day turnaround. Water column monitoring for dissolved metals, polychlorinated biphenyls (PCBs) and DDT, and tributyltin (TBT) concurrent with the TSS samples will be conducted three times per week for the first 2 weeks of disposal operations, then weekly, thereafter, if no water quality exceedances are observed. Reference or upcurrent stations within Lower Newport Bay will also be sampled at similar depths and frequency for comparison. Figure H-5 depicts the conceptual locations for monitoring of the water column. Water column monitoring at the dredging operations will be conducted at similar distances, depths and frequencies and be tested for the same chemical parameters. If no elevated chemicals are observed during the first 2 weeks of monitoring, sample frequency will be reduced to once per week.*

**7.1.2 Construction Operations Monitoring.** Proposed monitoring procedures to meet the objectives related to cap design include the following:

- Recording tonnage/volume of sediment dredged and placed within the CAD facility
- Tracking location of sediment placement within the CAD facility
- Recording tonnage/volume of capping sediment dredged and placed within the CAD facility
- Completing progress bathymetric surveys to verify sediment placement location
- Tracking operational information such as dredge production rates, downtime, and barge discharge time
- Completing a bathymetric survey of the CAD facility after the interim cover containment layer
- and final cap have been placed over the CAD facility to ensure that the cap material has been placed evenly over the entire facility

**7.2 Immediate Post-Construction Monitoring Description.** *Monitoring immediately after construction is completed is required to ensure that placement of the sediment is successful, which, in this case, is measured by achieving the desired minimum cap thickness over the entire CAD facility while minimizing the incidence of off-site transport of sediment outside of the CAD facility. These parameters will be measured using during- and post-construction bathymetry surveys and post-construction sediment coring of the cap layer. Each parameter is described in greater detail below.*

**7.2.1 Bathymetric Surveys.** *Bathymetric surveys will be conducted prior to initiation of disposal activities to establish the baseline conditions for the CAD facility and routinely during disposal operations to monitor successful placement of sediments into the CAD facility. A post-construction cap bathymetric survey is also required to quantify the final configuration and elevations of the capped site. This bathymetric survey will be conducted after the placement of the interim cover containment layer and after placement of the final cap. This information will help determine whether design criteria are met and provide a baseline for comparison to long-term bathymetric surveys of the CAD facility.*

**7.2.2 Cap Coring.** *Post-construction coring is required after the placement of the final clean sediment cap to provide information both on the physical characteristics of the final cap and the underlying sediment (i.e., final cap thickness, horizontal coverage, and extent of mixing between layers) and the chemical characteristics of the final cap once it has been placed. Core chemistry data will be collected to establish a baseline profile of chemicals in various layers of the final cap and in the underlying sediment. Final cap core chemistry information will also help to quantify the extent of mixing between the final cap and underlying sediment that occurred during placement. This baseline chemistry profile will be compared to long-term monitoring core chemistry data to determine whether any chemicals are migrating from the underlying sediment into the final cap sediment. Because diffusion of chemicals through sediment is a time-dependent process, migration from underlying sediments will be observable first in the deepest layers of the final cap. If long-term monitoring reveals increases in chemicals only in surface layers of the final cap, it would be indicative of chemicals from sources outside the CAD facility being deposited on the final cap surface (rather than migration of chemicals from beneath the cap).*

**7.3 Long-Term Post-Construction Monitoring.** *Long-term monitoring after construction of the final clean sediment cap is completed is required to verify that the CAD facility has maintained its physical integrity and that the cap is maintaining its ability to sequester underlying contaminants. These parameters will be measured using periodic post-construction bathymetric surveys and sediment coring of the cap layer. Each parameter is described in greater detail below. The key elements addressed by the monitoring program included the following:*

- *Determining if the CAD facility cap has maintained its physical integrity*
- *Confirming that chemicals remain isolated below the cap surface*

**7.3.1 Bathymetric Surveys.** *Bathymetric surveys will be conducted 3, 6, and 12 months after completion of final cap construction to quantify the configuration and elevations of the capped site. Then, bathymetric surveys will be taken periodically and reported to the responsible state and federal regulatory agencies (CCC, RWCQB, USEPA, and USACE). If there is consensus among the regulatory agencies that the final cap is performing as predicted after 10 years of monitoring,*

*the applicants may apply to the Executive Director of the CCC to narrow the focus or modify this aspect of the long-term monitoring program. This information will help determine whether design criteria continue to be met and quantify rates of erosion or deposition at the CAD facility.*

**7.3.2 Cap Coring.** *Twelve months after completion of final cap construction, sediment coring will be conducted to provide information on the physical characteristics of the final cap and underlying sediment (i.e., final cap thickness, horizontal coverage, and extent of mixing between layers) and the chemical characteristics of the final cap for comparison to baseline data collected immediately after final cap construction. Core chemistry data will be collected at a minimum of five locations distributed across the CAD facility to establish a profile of chemicals in various layers of the final cap and in the underlying sediment. This chemistry data will be compared to the baseline chemistry data to determine whether any chemicals are migrating from the underlying sediment into the final cap sediment. Because diffusion of chemicals through sediment is a time-dependent process, migration from underlying sediments will be observable first in the deepest layers of the cap. As such, bulk chemistry and porewater samples will be taken within 1 foot of the interface between the underlying material and the final cap material to determine if there has been significant movement of contaminants. At least five samples will be taken 12 months after completion of the final cap and then every 5 years thereafter. A report will be submitted to the responsible state and federal regulatory agencies. If there is consensus among the regulatory agencies (CCC, RWCQB, USEPA, and USACE) that the final cap is performing as predicted after the third round of samples, the applicants may apply to the Executive Director of the CCC to narrow the focus or modify this aspect of the long-term monitoring program. If long-term monitoring reveals increases in chemicals only in surface layers of the cap, it would be indicative of chemicals from sources outside the CAD facility being deposited on the final cap surface (rather than migration of chemicals from beneath the final cap).*

**7.3.3 Adaptive Management.** *After the first year of post-construction monitoring has been completed, an adaptive management plan will be developed based on an analysis of the data collected during the year. The long-term management plan will be developed based on the existing conditions of the site and current technological developments and will be designed to ensure long-term cap stability and isolation of contaminants. Monitoring requirements, such as timing of the events, will be determined at that time. At a minimum, however, long-term monitoring will include the following:*

- *Completing bathymetric surveys to rates of erosion and deposition*
- *Coring for chemistry in bulk sediments and porewater*

*The exact scope and frequency of the long-term monitoring program will be evaluated and developed after the first year of post-construction monitoring data are available and have been reviewed.*

**7.3.4 Environmental Monitoring Reports.** *The City will prepare and submit to the regulatory agencies an annual environmental monitoring report to document and discuss the results of all CAD facility monitoring activities conducted during the previous year. Sampling will be based on the calendar year, and reports will be completed by January 31 of the following year and will include a discussion of current and past monitoring data for the site, as well as proposed future monitoring planned for the site.*

## **Biological Resources**

Section 30230 of the Coastal Act requires that uses of the marine environment be carried out in a manner that will sustain the biological productivity of coastal waters for long-term commercial, recreational, scientific, and educational purposes. Section 30231 of the Coastal Act requires that the biological productivity and quality of coastal waters be protected to maintain optimum populations of marine organisms and human health. Newport Bay contains habitat for a diverse variety of wildlife. Upper Newport Bay is characterized by mudflat, salt marsh, freshwater marsh, riparian, transitional and upland habitats. Most of this area is primarily a salt marsh system with freshwater influence. The lower one-third of Upper Newport Bay has undergone dredging and filling for housing development, marinas, a boat launch, and recreational swimming. The Newport Bay watershed is bounded by the Newport Mesa bluffs to the west and the San Joaquin Terrace to the east, which drain toward the Pacific Ocean via Upper Newport Bay. The watershed is a major contributor of suspended sediments, nutrients, and other pollutants into the Bay ecosystem.

Upper Newport Bay is especially rich with sensitive habitat and wildlife. For instance, several sensitive listed bird species, including Beldings savannah sparrow and Ridgeway's rail, nest and breed in Upper Newport Bay and forage in the upper and lower bay. In addition, California least terns nest near the Santa Ana river mouth and forage in nearby estuaries and bays and nearshore waters, and Western snowy plovers nest, roost and forage on beaches north of the Santa Ana river mouth and roost and forage on beaches west of the Newport Harbor mouth. Construction of the CAD in lower Newport Harbor and deposition of beach quality sand in nearshore waters just west of the Newport Harbor mouth is not expected to cause significant adverse impacts to non-listed or sensitive bird species that nest, roost, and forage in the area. While CAD construction work will involve noise making heavy equipment, the work will be focused on a limited area during daylight hours far away from any nesting sites and in a concentrated area that birds can avoid. Furthermore, any CAD construction project induced turbidity should be limited in scope as silt curtains are required during construction of and filling of the CAD by **Special Condition 5**. Moreover, the nearshore sand placement work will occur in water greater than 13 feet in depth and will not impact Western snowy plover roosting and foraging that takes place on the beach. California least terns can avoid nearshore sand placement activities while foraging and any turbidity from sand placement should be limited to just around the disposal barge and will be short lived because the sand will settle on the bottom quickly.

Newport Harbor also supports a significant population of eelgrass (*Zostera* spp.) that currently covers about 112 acres of bay bottom, much of it in the shallow waters around piers. Submerged aquatic vegetation such as eelgrass provides many important ecosystem services such as providing habitat for fish eggs, juvenile fish rearing, and waterfowl foraging. Based on the results of a harbor-wide eelgrass survey conducted in 2020, no eelgrass patches were identified within or near the proposed CAD site. Eelgrass impacts are not anticipated to occur as a result of the proposed project.

The proposed CAD construction will involve 282,400 cubic yards of sand excavation from the middle of Lower Newport Bay. Marine life in the approximately 348,000 sq. ft. footprint of the proposed CAD facility consists of benthic epifaunal and infaunal invertebrates. The soft-bottom harbor habitat is dominated by annelid polychaete worms (segmented worms that live in aquatic habitats). The annelids are numerically dominant with crustaceans, mollusks, minor phyla, and echinoderms following in decreasing order of abundance. Excavation of this area will likely result in mortality of many individual invertebrates inhabiting this area. However, as described in more detail below, soft bottom habitat is the most abundant habitat in harbors and bays and in nearshore waters south of Point Conception and the project footprint represents an extremely small fraction of this habitat type. Furthermore, none of the respective invertebrate species are sensitive or rare and the project is not expected to cause a significant adverse impact to populations of these marine invertebrate species.

Clean beach quality sandy sediment excavated during construction of the CAD facility is proposed to be transported to and disposed in nearshore waters west of the harbor mouth, along the open ocean shoreline. Marine Taxonomic Services, Ltd. and Coastal Resources Management (CRM), Inc. performed a nearshore marine biological survey on November 17<sup>th</sup>, December 2<sup>nd</sup> and December 3<sup>rd</sup>, 2021 in support of the City's permit application requirements for nearshore disposal of ocean-suitable, beach compatible dredge materials along the Newport Beach shoreline (CRM, January 26, 2022 Newport Beach Nearshore Marine Biological Survey Report). The purpose of the survey was to identify marine organisms, populations, and communities in the subtidal nearshore waters with the potential to be adversely impacted by dredge material disposal.

A total of 13 macrofaunal invertebrate and four fish species were identified during the dive surveys including two cnidarians: the sea pansy (*Renilla kollikeri*) and the sea pen (*Stylatula elongate*); two polychaete worms *Owenia collaris* and *Diopatra splendidissima*; three crabs (*Loxorhynchus grandis*, *Loxorhynchus crispatus*, and *Cancer productus*); four echinoderms: the ochre sea star (*Pisaster ochraceus*), the sand star (*Astropecten armatus*), the brittle star (*Amphiodia occidentalis*), and sand dollars (*Dendraster excentricus*); three gastropods (*Polinices recluzianus*, *Lithopoma undosa*, and *Kelletia kelletii*); and four fish including: lizard fish (*Sunodus lucioceps*) speckled sand dabs (*Citharichthys stigmaeus*), California halibut (*Paralichthys californicus*), and an unidentified turbot (*Pleuronichthys* sp.).

An important fish that also occurs in nearshore waters along the coast of California is the California grunion (*Leuresthes tenuis*), a silverside fish about 6 inches long related

to jacksmelt and topsmelt. Grunion are best known for their unique nighttime spawning habit of catching waves onto the beach during the highest tides associated with full and new moons and leaving fertilized eggs buried in the sand along the high tide line. Grunion may run as early as March and into September but peak spawning season is from April through June.

The City is proposing to conduct nearshore sand deposition up to 24 hours per day, 7 days per week, to allow for the efficient use of dredging equipment during normal construction hours and to complete the proposed Project as quickly as possible. However, in order to avoid adverse impacts upon adult grunion, grunion spawning, or newly hatched grunion, the Commission is requiring that the applicant submit revised plans pursuant to **Special Condition 1**, avoiding nighttime sand deposition activities during grunion runs identified by the California Department of Fish and Wildlife (CDFW). During daytime hours, adult grunion in nearshore waters can swim away from areas where sand deposition is occurring, and the location where females bury eggs to be fertilized by males occurs along the highest tide mark on the beach beyond the influence of the sand deposition work.

Sand dollars were the most numerically dominant organism observed in a series of beds located between Newport Pier and L Street (see [Exhibit 5](#)). Sand dollar density ranged from between 0.3 (Transect A) to 184.9 (Transect C) per 20 m<sup>2</sup>. Two main beds were identified that varied in width from approximately 60 to 207 feet at depths between -12 feet to -33 feet MLLW. The density of all other invertebrate species was less than 10 per 20 m<sup>2</sup> with the sand star, sea pansy and sea pen constituting the majority of the remaining abundances.

The nearshore biological survey summarized that the nearshore disposal of beach quality sand could result in a short-term reduction in the abundance of benthic invertebrate epifauna and infauna due to burial in the immediate sand placement locations depending on the amount of material disposed at any one time. Specifically, the sand dollar population area may be affected by sand placement through partial or complete burial, depending on the depth of the burial. The ability of sand dollars to survive would be a function of their ability to excavate sediment and move to the surface. According to the survey, a partial reduction could potentially occur in the short-term with recovery within 1 to 3 years, given that environmental conditions are adequate to support recolonization. Under natural conditions, sand dollar beds may experience a rapid increase that is followed by a rapid decline, and they may disappear entirely (Survey, citing David and VanBlaricom, 1978).

While sand dollars are a unique organism that form large beds in soft bottom nearshore waters they are quite common and do not have any special rarity ranking. However, in recognition of their special bed forming and unique nature, **Special Condition 1** requires that the dredge material disposal area be limited to the southern two extents labeled as "Updated Proposed Nearshore Placement Areas" in the Nearshore Disposal Area & Sand Dollar Beds map dated March 10, 2022, prioritizing as shallow placement as feasible up to -13 feet MLLW, to avoid the densest sand dollar aggregations. The

rationale for this is the Coastal Resources Management (CRM) January 26, 2022 Newport Beach Nearshore Marine Biological Survey that found the lowest densities of sand dollars in these areas and the highest aggregations of marine invertebrates between 6.4 (19 ft.) and 9 (27ft.) m. Furthermore, to document any resulting impacts to nearshore marine benthos, **Special Condition 7** requires a Nearshore Biological Monitoring Plan to compare pre and post project survey results to inform future deposition events.

Section 30230 of the Coastal Act requires that uses of the marine environment be carried out in a manner that will sustain the biological productivity of coastal waters for long-term commercial, recreational, scientific, and educational purposes. Coastal Act Section 30231 of the Coastal Act requires that biological productivity be maintained to maintain optimum populations of marine organisms. Nearshore soft bottom habitat is the most abundant habitat along the California coast south of Point Conception. The footprints of the CAD disposal site in Newport Harbor and the nearshore sand placement locations are an extremely small fraction of the amount of soft bottom habitat available for biological productivity. While there will likely be some mortality of benthic epifaunal and infaunal invertebrates, the CAD site is a relatively small area and the sand disposal locations are conditioned to avoid impacting the sand dollar beds and highest densities of other invertebrates such that the populations of the macroinvertebrate species will not be significantly impacted.

Therefore, as conditioned for revised plans limiting the locations for sand disposal to avoid contiguous sand dollar beds as shown in [Exhibit 5](#), in addition to avoiding nighttime sand deposition to avoid potential negative impacts to grunion, Commission staff finds the project consistent with Sections 30230 and 30231 of the Coastal Act.

### **Dredging, Disposal, Contaminants and Water Quality**

As stated, Lower Newport Bay is highly developed, and the rich history of agricultural and industrial activities in the watershed has resulted in a legacy of sediment contamination in Newport Bay. The contamination is a result of historical industry and storm drains adjacent to the bay, as well as ongoing runoff from the surrounding watershed. One of the potential adverse effects from dredging, ocean disposal, and beach replenishment activities in this location is the re-suspension and relocation of contaminants. Contaminants of concern in the Lower Newport Harbor include DDTs, PCBs and mercury. 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. These tests are reported in the Sediment Management Plan, Newport Beach California (November 24, 2020).

As discussed more fully in the Revised Basis of Design Report (March 2022), the applicant conducted various scientific studies, engineering analyses and modeling to demonstrate that the proposed CAD construction and the isolation and capping of the



contaminated marine sediments in Lower Newport Harbor is feasible from a water quality, biologic and engineering perspective.

### **Short-Term Water Quality Impacts from Construction**

On behalf of the City, Anchor QEA developed a set of scenarios to evaluate potential sediment dispersion patterns associated with a disposal operation within the proposed CAD as well as predict compliance with applicable water quality criteria using the Short-Term Fate (STFATE) model.<sup>2</sup> Five scenarios were developed to represent the various potential sediment sources that may be placed in the CAD: 1) unsuitable material dredged from within the Federal Channels, 2) qualifying “clean” material for use as interim cap dredged from within Federal Channels, 3) unsuitable material dredged from within the Newport Bay RGP 54 area, 4) alternative interim cap material dredged from the Entrance Channel, and 5) finest-grained unsuitable material dredged from within the Federal Channel. The scenarios included maximum expected current velocities during ebb and flood tide conditions, three grain size classes, and two placement locations.

Anchor QEA’s analysis was reviewed and evaluated by a Research Civil Engineer at USACE’s Engineering Research and Development Center (ERDC), the center that developed and validated the STFATE model. ERDC’s review of the analysis confirmed Anchor QEA’s appropriate use of the model, its inputs, parameters, and assumptions and concluded that the analysis was likely to be conservative (i.e., overpredict dispersal outside the CAD) due to the assumption of a constant water depth and uniform currents. The modeling results as described in the Revised Basis of Design Report (BODR) informed when and how sediment placement events should be limited and predicted the fate of disposed sediments as follows:

- *During spring tides, best management practices should be implemented to limit placement events during non-peak tidal current velocities (i.e., plus or minus 2 hours from slack tide) to limit the horizontal distribution of fill material.*
- *Disposal events occurring during non-peak ebbing tides result in 10% to 21% of material lost outside the proposed CAD facility.*
- *Most of the material lost outside the proposed CAD facility would deposit within 75 feet.*
- *The greatest amount of material lost outside the proposed CAD facility occurred during ebbing tides when placement of material suitable for use as an interim cover containment layer or final cap layer was occurring. Because*

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<sup>2</sup> STFATE is a sediment transport model designed to evaluate the short-term fate of dredged material disposed in open water for prediction deposition and water quality effects. The model was created by the USACE Engineering Research and Development Center (ERDC)  
[https://cfpub.epa.gov/si/si\\_public\\_record\\_Report.cfm?Lab=REGION%2009&dirEntryID=17857](https://cfpub.epa.gov/si/si_public_record_Report.cfm?Lab=REGION%2009&dirEntryID=17857)

*this material would be sequenced after placement of unsuitable material, any material deposited beyond the boundaries of the proposed CAD facility would act as thin layer cover over any unsuitable material that may have been “lost” from the proposed CAD facility.*

- *Disposal events occurring during non-peak flooding tides result in 6% to 9% of material to be lost outside the proposed CAD facility.*
- *The maximum observed thicknesses of deposited material ranged from 1.3 to 2.3 feet within the model grid cell directly associated with the placement location. Deposit thicknesses rapidly decreased within 75 feet.*
- *The water quality standards for dissolved copper, dissolved mercury, and total PCBs were not violated.*
- *The water quality standard for total DDx was exceeded during the modeled disposal events for all material types. However, predicted water quality concentrations 4 hours after material placement were equal to the existing background water quality concentrations.*

*Predicted water column concentrations for total DDx do not exceed the Lower Newport Bay organochlorine compounds Total Maximum Daily Load (TMDL) acute water quality targets; however, they do exceed the TMDL’s chronic water quality targets.*

- *Water quality monitoring following placement of materials from Scenarios 1 through 4 (listed above) may have limited practicality because predicted total DDx concentrations are similar to typical method detection limits currently achieved by regional analytical laboratories. Predicted total DDx concentrations following placement of materials from Scenario 5 (listed above) were greater than typical method detection limits. Strategies to minimize the volume of material from Scenario 5, such as mixing with material from other dredge units, should be used to minimize water quality impairments.*

Water quality impacts can be defined as being either acute (short-term) or chronic (long-term), and an analysis of water quality impacts for in-water construction projects should consider both for each chemical of concern. For this study, potential water quality impacts were evaluated for dissolved copper, dissolved mercury, total PCBs and total DDT compounds (referred to as DDx). In all instances, chemicals of concern were below RWQCB acute standards and, except for DDx, would all be below the more conservative chronic standards as well.

While the modeling indicates that DDx water column concentrations are predicted to slightly exceed the chronic water quality standard by a fraction of a percent during certain disposal events (under Scenario 5 that analyzed the finest grained unsuitable sediment from the federal channels), even under these conditions, DDx concentrations would be the same as or similar to the ambient water column concentrations currently occurring in the Bay naturally. In other words, the existing water quality of Newport Bay is already negatively affected by the presence of DDx compounds and is not predicted to appreciably change as a result of the proposed placement of DDx containing sediments into the CAD. Further, by collecting, concentrating and burying contaminant

laden sediments below a clean cap within the proposed CAD that are currently dispersed across Newport Bay, the proposed project may result in water quality improvements.

Nevertheless, a variety of protective measures can be implemented to help ensure that potential adverse impacts to water quality from the proposed project are avoided and minimized. Mitigation measures are required by this CDP which were informed by Commission staff's close collaboration with the RWQCB to be utilized during disposal operations into the CAD facility include project-specific BMPs such as the use of silt curtains that would reduce potential impacts to surrounding water of Newport Bay. The use of silt curtains during all material placement activities would reduce turbidity and the potential spread of contaminated sediments or waters by isolating the active dredging site from the rest of Lower Newport Bay. Additionally, a floating boom would be maintained around the project area. Finally, water quality monitoring based on sampling parameters that will be established by the RWQCB will also be required utilizing the protocol outlined in **Special Condition 5**. The additional BMPs required by **Special Condition 5** would also minimize any short-term effects to water quality and material loss outside the CAD facility by requiring more robust use of silt curtains and bathymetric surveys to identify and remove any observable losses.

As conditioned, Commission staff has determined that the removal, placement, and permanent containment of DDT-contaminated Lower Newport Bay sediments at the proposed CAD facility would not adversely affect water quality over the short term and may ultimately help enhance water quality within the Bay.

### **Long-Term Water Quality Impacts**

Once the CAD is constructed and material placed into it, the potential for resuspension of the contaminated sediments is very low as material will be physically isolated from currents and other physical processes able to resuspend the sediments. The primary potential for contaminants to be mobilized into areas of potential exposure to the marine ecosystem and recreational environment would be via groundwater. Chemical isolation modeling was conducted following USEPA and USACE guidance to simulate the transport of mercury, DDTs, and PCBs through the final cap layer over a 100-year assessment period. Concentrations six inches below the surface of the final cap are predicted to remain below the porewater criteria (California Toxics Rule for porewater) and sorbed phase (when contaminants are attached to the sediment) criteria (NOAA effects range medium) for more than 100 years. The OMMP proposed as part of the project would also require long-term monitoring of near surface porewater to monitor any potential migration of contaminants from beneath the final cap.

### **Suitability of Interim and Final Caps**

To evaluate and design a permanent three-foot cap layer for the CAD facility in Lower Newport Harbor that would physically contain and isolate the contaminated sediment from reemerging the applicant evaluated the potential erosive forces acting on the CAD

facility's surface and bioturbation from burrowing organisms and biota residing in the overlying water column.

Bioturbation is the mixing and overturning of sediments caused by organisms residing in soft bottom marine substrates. Anchor QEA determined the design bioturbation depth by estimating the most extreme burrowing depth of organisms with the potential to reside at the site. Ultimately, the maximum burrowing depth of six inches was selected given the depth of the CAD which limits the types of species present and monitoring at a similar CAD facility in Long Beach.

Erosive forces in the harbor that could potentially disturb the CAD facility's final cap layer include propeller wash from vessels traveling overhead and vessel anchors dragging along the seafloor. Propeller wash scour depths were estimated at three elevations, which included the one-foot interim containment layer at -30 feet MLLW, material outside the federal channels at -25 feet MLLW, and the final cap layer elevation at -22 feet MLLW, which were intended to represent the various elevations that will result during various stages of the CAD's construction and fill. Representative sediment information was used based on surrounding sediment data previously gathered for the DMMT, and hydrodynamic conditions were considered and utilized various representative tide conditions. The results demonstrated that maximum scour depths of the final cap layer utilizing various potential propeller wash velocities are estimated to range from 0.1 to 0.3 feet, which occur at tide levels less than MLLW. The cap thicknesses were determined by the City to be sufficient to prevent exposure from propeller related scour.

Another potential for physical disturbance of the cap layers is from boat anchors. Vessel anchoring would typically occur within the area proposed for the CAD facility and capped area footprint, as it is proposed to be located near the Newport Harbor Yacht Club mooring area and within a portion of the harbor's anchorage area between Lido Island and Bay Island. The applicant estimates that private vessel anchors will likely penetrate up to one foot into the seabed. Although these disturbances are expected to be quickly filled in by surrounding sediments, the applicant is proposing to temporarily relocate the anchorage area in the vicinity of the CAD to the turning basin for the two year "interim cap" period, inclusive of the six-month placement period to avoid disturbance of the interim cap.

### **General Construction Impacts and Marine Debris**

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 could result in adverse impacts upon the marine environment that could 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 5** 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.

### **Sand Supply**

Section 30233(b) of the Coastal Act requires that suitable dredge materials be transported to appropriate beaches for beach replenishment:

(b)... Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable longshore current systems.

The City is proposing nearshore placement of beach-appropriate sediment as a beneficial reuse of the material dredged to create the CAD facility. Based on geotechnical data collected in and adjacent to the area of the proposed CAD facility, most of the material is coarse grained and would likely be disposed in the nearshore for ocean beach replenishment. Finer-grained sediment would be transported to LA-3 for open ocean disposal, and clean sand material (greater than 80% sands) would be transported and disposed along nearshore ocean beaches. For sediment bound for nearshore disposal, tugboats would transport barges out through the Main Channel to the nearshore disposal zone. The bottom-dump scows would then release the material in the defined disposal area, which is typically in areas shallower than -30 feet MLLW.

The applicant has determined that up to 282,400 cubic yards of clean sands that would be excavated from the Newport Harbor to create the CAD facility are suitable for beach replenishment. These materials would be placed on or in the nearshore waters off Newport Beach in order to bolster existing sandy beaches. As opposed to direct placement of sandy material on dry beaches, nearshore placement involves depositing sand at permanently submerged depths offshore where waves and currents can shape and transport sand within the littoral system to the beach. A similar nearshore placement in Newport Beach was conducted in 1992 which included a robust monitoring program that demonstrated its effectiveness as a means of contributing vital sand to the beach system.<sup>3</sup>

The City had initially proposed a broad nearshore placement area spanning much of the southern Balboa Peninsula. Because portions of this area would potentially lead to permanent loss of sand into the submarine Newport Canyon upcoast of the project area, **Special Condition 1** requires sand to be placed sufficiently far east from the head of the submarine canyon to ensure it reaches the beach. Because the proposed nearshore placement would occur at average depths potentially deeper than the 1992

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<sup>3</sup> Mesa, C. (1996). Nearshore Berm Performance at Newport Beach, California, USA

placement, **Special Conditions 1 and 6** require prioritization of sand placement as shallow as feasible verified by monitoring and reporting of the locations and depths of nearshore sand placement.

In conclusion, the Commission finds that the proposed project as conditioned would transfer sands currently isolated in Newport Harbor back into the littoral system off Newport Beach, and is therefore consistent with the Section 30233(b) sand supply policy of the Coastal Act.

### **Updated *Caulerpa* Survey Protocol**

*Caulerpa* comprises a group of highly invasive green algae that poses a substantial threat to marine ecosystems in California, particularly to areas with extensive eelgrass meadows and other benthic ecosystems that make coastal waters such a rich and productive environment. Infestations of two *Caulerpa* species, *C. taxifolia* and *C. prolifera*, have been detected in California. Both species can rapidly colonize new areas from small fragments and have the potential to cause substantial negative impacts on native ecosystems.

*Caulerpa taxifolia* had previously been detected in 2000 but was eradicated in two locations in Southern California. In March 2021, *Caulerpa prolifera* was discovered in Newport Bay. In response, the Southern California *Caulerpa* Action Team implemented eradication efforts shortly thereafter, and those efforts are ongoing. Other infestations of *Caulerpa* species may also exist but remain undetected.

In order to detect existing infestations as well as avoid the spread of these invasive species within other systems, new provisions have been established for California nearshore coastal and enclosed bays, estuaries, and harbors from Morro Bay to the U.S./Mexican border. **Special Condition 4** outlines the protocol for surveying and reporting guidelines that property owners, contractors, and the City of Newport Beach must follow for dredging projects associated with this permit. Because Newport Bay is defined as an infested system, two high-intensity surveys for *Caulerpa* must be conducted by a qualified diver and reported to the resource agencies prior to any dredging activities.

An eradication effort is underway and some *Caulerpa* has been removed from the harbor, but *Caulerpa* fragments have been observed drifting with the currents and the invasive species cannot be assumed to have been eradicated until multiple surveys of the entire harbor have been conducted and the invasive species has not been observed for a period of up to five years. To ensure that all dredging permits comply with the most current *Caulerpa* survey protocols moving forward, **Special Condition 4** requires all applicants to conduct a minimum of two *Caulerpa sp.* surveys during the period of active eelgrass growth and submit the final survey for the review and written approval of the Executive Director prior to dredging activities. Furthermore, all applications submitted since April 2021 under CDP 5-14-0200 must also submit two site-specific *Caulerpa* surveys consistent with **Special Condition 4**. Once the resource agencies determine

that Newport Bay is no longer an infested system, **Special Condition 4** requires applicants to submit a minimum of one *Caulerpa* survey prior to dredging activities.

Therefore, only as conditioned is the proposed project consistent with Sections 30230, 30231 and 30233 of the Coastal Act.

## **E. Coastal Hazards**

Section 30251 of the Coastal Act states, in pertinent part:

[...] Permitted development shall be sited and designed... to minimize the alteration of natural land forms [...]

Section 30253 of the Coastal Act states, in pertinent 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 areas subject to tidal action. The tidal environment is dynamic and there are risks associated with development in such areas. Furthermore, the proposed project would involve substantial excavation and filling of submerged sediments requiring careful consideration to both short term and long term geologic stability.

Slope stability of the CAD facility was evaluated using standard engineering methodology i.e., quantitative slope stability analysis. Rapid or irregular sediment placement in the CAD could potentially lead to instability of the CAD facility's underlying materials, which can be controlled by limiting the rate of material placement and depositing material in reasonably uniform layers known as "lifts." Each lift would have no more than a 2-foot variation in elevation and would be monitored by bathymetric surveys. The frequent surveys provide an effective means of quality control and allow for corrective measures to be approved by the project engineer.

The dredged sediment would undergo some degree of initial "bulking" during the dredging and dumping process as pore space increases, filling with the ambient seawater. Once placed, the sediment would then experience both initial and long-term consolidation as pore water is expressed from the weight of the sediments. Anchor QEA expects the total amount of consolidation to be two to six feet relative to its initial in situ volume. This consolidation could provide opportunities for future increases to the final cap layer should they be necessary.

Sea level rise will affect the coastal processes at the site by raising mean sea level elevations that would influence the currents, depths, and wave energy at the various locations of the proposed project. Sea level rise is expected to decrease the potential for vessel scour and tidal currents at the site of the CAD by increasing average depths. Conversely, sea level rise is expected to increase erosion of the sandy beach where nearshore placement is proposed. The additional sand that would be placed as part of the project is expected to contribute to efforts to minimize the hazards of flooding from high tides and waves experienced on the ocean beaches of Newport Beach.

The dredging within the harbor would not occur to an unsafe depth and is limited by the conditions of approval. Therefore, the proposed project minimizes risks. Because this risk of harm cannot be completely eliminated, the Commission requires the applicant to waive any claim of liability against the Commission for damage to life or property that may occur as a result of the permitted development. The applicant's Assumption of Risk, Waiver of Liability and Indemnity, as required by **Special Condition 9**, will show that the applicant is aware of and understands the nature of the hazards which exist on the site, and that may adversely affect the stability or safety of the subject development, and will effectuate the necessary assumption of those risks by the applicant. The Commission also imposes **Special Condition 11** to notify the City of the Commission's immunity from liability for costs and attorneys' fees should litigation arise regarding this project. With these measures, the proposed project will not adversely affect coastal resources, and therefore, the project is consistent with Coastal Act Sections 30251 and 30253.

## **F. 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 30220 of the Coastal Act states:

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

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.

Section 30222 of the Coastal Act states:

The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.

The Newport Beach LCP contains multiple policies implementing the referenced Coastal Act sections, including, but not limited to LUP Policies 3.1.1-1, 3.1.1-27 and 3.2.1-1.

One of the basic goals of the Coastal Act and referenced in the certified Newport Beach LCP 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 would mitigate beach erosion and provide for the continuing and increased recreational use of the City beach by the public by increasing the size of the ocean beaches and would provide a larger area for recreational use. In addition, the proposed dredging components of the project would allow for continued use of coastal waters for recreational boating because the existing anchorage in the proposed CAD project area will be temporarily relocated to the Turning Basin. Furthermore, the construction activities associated with the proposed nearshore placement would not have any significant effects on recreational use due to the limits on dump scows not navigating shallower than -13 feet MLLW and would be closely coordinated with City services (e.g., Public Works and Lifeguards).

Newport Beach has a number of popular surf breaks. Surfing is one of several ocean-dependent recreational activities protected by the Coastal Act. Surf breaks are highly sensitive to nearshore bathymetry which can shape incoming waves including how and where waves break. Previous nearshore placements in Newport Beach have demonstrated temporary positive effects to surfing quality; however, the impacts of sand placement (independent of other forcings such as swell magnitude and direction) are typically very challenging to isolate, leading to substantial uncertainty. To ensure sand supply and protect existing biological resources, the areas of nearshore placement would be limited by **Special Condition 1** and would be far enough away from known surf breaks to avoid and minimize any impacts as a result of the project.

The proposed project would 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 beach replenishment would maintain and improve recreational use of State Tidelands. Sand replenishment around public beaches is consistent with the City's Tidelands grant.

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 replenish beaches within the grant area without prior approval from the CSLC. Such approval has been granted through a tidelands lease from CSLC.

As conditioned, the proposed development would 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, 30213, 30220, 30221, and 30222 of the Coastal Act.

## **G. 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, including visual resources, which must be protected under the Coastal Act. Excessive disposal of sediment or disposal of contaminated sediment in these areas could negatively impact coastal resources, including by discouraging visitors to Newport Bay's beaches and waterways. However, as conditioned, the Commission finds that with these measures, the proposed project would not adversely affect visual resources of the coastal zone, and therefore, the project is consistent with the policies of the Coastal Act.

## **H. Cultural and Archaeological Resources**

Section 30244 of the Coastal Act states:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

These resources may include sacred lands, traditional cultural places and resources, and archaeological sites. The first question under Section 30244 is to determine what, if any, archeological (including tribal and cultural resources) or paleontological resources exist in the project vicinity that could be adversely affected by the proposed development.

The proposed project is located within the ancestral lands of the Gabrieleno/Gabrielino Tongva peoples. Much of the wetland areas in Newport Beach, including the subject site(s), are part of a cultural landscape that supported multiple villages, including the sacred site of Puvungna and other important ceremonial areas that continue to provide cultural resources to Native Americans with ties to the area.

The site is believed to contain archeological resources because many tribal resources have been recorded in the larger vicinity, although no specific known resources are present in the project site. The proposed project involves excavation of the seafloor. While the top two to five feet of the seafloor have been previously dredged to authorized design depth by the USACE, the remaining portion to be excavated consists of native soils that have never been dredged and could potentially contain individual archaeological deposits. Furthermore, the site is considered a sacred land and may be part of a Traditional Cultural Property or Tribal Cultural Landscape, and its cultural significance is potentially broader than individual archeological deposits. For example, the water onsite is a culturally significant resource.

To further understand the cultural sensitivity of the site and the potential for tribal cultural resources to exist, on June 23, 2022, Commission staff initiated government to government consultation with Native American Tribes in accordance with the Commission's Tribal Consultation Policy. Joyce Perry of the Juaneño Band of Mission Indians, Acjachemen Nation - Belardes requested a formal consultation with Commission staff that took place on August 8, 2022. Ms. Perry described the importance of the area to the Acjachemen and raised concerns about impacts to water quality. She also stated that the Tribe supports all of the mitigation measures and safeguards that are being put in place to protect the ocean and its inhabitants.

Commission staff also consulted with Chairman Andrew Salas and Matthew Teutimez of the Gabrieleño Band of Mission Indians – Kizh Nation, which took place with Commission staff on August 17, 2022. Chairman Salas and Mr. Teutimez expressed concerns regarding the project including, recent cultural resource discoveries in the project vicinity, impacts to tribal cultural resources (including biological and water resources) during excavation, disturbance, and transportation of contaminated sediment, and lack of early input on project alternatives. Chairman Salas stated that the Kizh Nation was not in general support of the project, but if the project is approved by the Commission, then Native American monitoring should be required. The

representatives discussed previous monitoring efforts that involved investigation of dredge spoils on boats and underwater monitoring.

The City has proposed to stop work, contact a qualified archeologist, and notify the Kizh Nation and Acjachemen Nation if an artifact or unusual amount of bone, shell, or non-native stone is encountered (MM-CHR-1). However, given the use of bottom dump scows to deposit dredged sediment, which would be difficult to observe, and the likelihood and sensitivity of resources described by the consulting Tribes, this measure alone may not be sufficient and there are other reasonable mitigation measures that would have a higher potential to protect archeological, paleontological, and tribal cultural resources. Thus, **Special Condition 10** is imposed to require the applicant to consult with affected tribes to prepare a Cultural Resources Treatment and Monitoring Plan that would lay out the best methods of Native American monitoring of construction activities, which might include pre- and post-construction reconnaissance dives, requirements for Native American and archeological monitoring during all construction activities that have the potential to impact such resources, and procedures to follow in the event resources are discovered.

## I. California Environmental Quality Act

Section 13096 of the Commission's administrative regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified 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 approval of a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant impacts that the activity may have on the environment. The Commission's regulatory program for reviewing and granting CDPs has been certified by the Resources Secretary to be the functional equivalent of CEQA. (14 CCR § 15251(c).)

In this case, the City of Newport Beach is the lead agency and the Commission is a responsible agency for the purposes of CEQA. The City released a Draft Environmental Impact Report on December 4, 2020, and a Final Environmental Impact Report on May 20, 2021. The Commission finds that the project, as conditioned, is consistent with Coastal Act requirements and will not cause new adverse impacts to the environment. Feasible mitigation measures which will minimize all adverse environmental impacts have been required. Therefore, the Commission finds that the proposed project, as conditioned, complies with the applicable requirements of the Coastal Act to conform to CEQA.

## **APPENDIX A—SUBSTANTIVE FILE DOCUMENTS**

1. City of Newport Beach certified LCP
2. CDP Application File 5-21-0640
3. USACE Negative Determination No. ND-0020-22
4. Commission Concurrence with USACE Negative Determination No. ND-0020-22, dated May 27, 2022.