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COASTAL DEVELOPMENT PERMIT APPLICATION

Application number ..... **3-10-040, Monterey Harbor Dredging**

Applicant..... City of Monterey (Harbor Department)

Project location ..... Monterey Harbor/Marina and Del Monte Beach in the City of Monterey (Monterey County).

Project description..... Dredge up to 10,000 cubic yards of sediment annually for ten years at the Monterey Harbor/Marina (between Municipal Wharf's I and II), and deposit/dispose of dredge sediments through beach nourishment at two Del Monte Beach receiver sites just upcoast of Wharf II.

File documents..... California Coastal Commission Coastal Development Permit (CDP) file 3-10-040; *Sediment Sampling and Analysis Plan* (Olberding Environmental, June 2010).

Staff recommendation ..... **Approve with Conditions**

A.Staff Recommendation

1. Summary of Staff Recommendation

The City of Monterey Harbor Department proposes to dredge and use for beach nourishment up to 10,000 cubic yards of sediment annually for ten years at the Monterey Harbor and Marina in the City of Monterey, Monterey County. The Harbor Department would dredge in two general locations to a depth of –12 feet below mean lower low water, including in the area surrounding the 450 slip Marina and the Coast Guard Pier/Breakwater area, and would dispose of the dredged sediments at two sandy beach areas along Del Monte Beach just upcoast of Municipal Wharf Number 2 in order to nourish the beaches there. The Harbor Department indicates that sand shoaling has limited the use of harbor facilities, and the proposed project is necessary to maintain existing depths in navigational channels, berthing areas and boat launching ramps for use by recreational boaters, commercial fisherman, other commercial operations, researchers, and other Harbor users, including other coastal-dependent and coastal-related operations that make use of the Harbor facilities. The Commission has historically permitted such activities within Monterey Harbor since at least 1993.

While the proposed dredging and nourishment facilitate high priority uses under the Coastal Act, the project nevertheless raises Coastal Act issues related to the protection of marine resources, coastal water quality, and public recreational access.

The Coastal Act requires that projects involving the dredging or filling of coastal waters provide measures to minimize adverse environmental effects, and that marine resources and the biological productivity of coastal waters be maintained. Several special-status fish species are identified as having the potential to occur in the Harbor area, and the sandy beaches surrounding the project site are potential California grunion spawning areas. Dredging and beach nourishment operations may also increase suspended particulates and turbidity in the Harbor area, and sediment re-suspension has the potential to reduce dissolved oxygen levels, potentially leading to adverse biologic impacts (such as potentially smothering and scouring benthic habitats, etc.). To protect these resources from such potential adverse impacts, the recommended permit conditions limit dredging activities to times when potentially affected species are not expected to be present, and include management measures to ensure that dredge and nourishment operations do not otherwise adversely impact such marine resources.

In addition, dredging operations can lead to other water quality related impacts because dredge operations can change a number of water quality-related variables (including dissolved oxygen, pH, salinity, total suspended solids, and turbidity). While changes to these water quality variables would result from the proposed dredge operation, pre-dredge ambient water quality conditions should recur shortly after each dredge episode, and impacts to these water quality variables are expected to be short-term and minor in magnitude and scope. Furthermore, the recommended permit conditions require proper dredge equipment maintenance to further address such water quality issues.

The Coastal Act requires that dredge material suitable for beach replenishment be used for such purposes. As described, the proposal would provide for up to 10,000 cubic yards of dredged sediment to be deposited annually at two onshore locations along Del Monte Beach in the Harbor vicinity. Such sediments have been tested and deemed appropriate for nourishment (according to the Clean Water Act), and recommended conditions require the sediments to be sampled, tested, and deemed “clean” and appropriate for beneficial reuse before future iterations of dredge/nourishment can occur. The sediments in question are almost all sand (98%, generally), and with the recommended conditions will be appropriately applied to nourish the beaches upcoast of the site. Should any future testing show otherwise, recommended conditions would require such materials to be disposed of at an appropriate inland facility.

The Coastal Act requires that public recreational access opportunities be protected and maximized. Although the project as a whole will help protect public access and recreation opportunities by nourishing beach areas with sand, dredge operations can also displace public recreational access uses when they take place in the same areas (e.g., the flexible pipelines used to transport suitable dredge materials to designated beach replenishment sites can create an impediment to pedestrian travel along or to the beach as well as interference with vessel navigation; materials themselves can impede and/or adversely impact access opportunities, etc.). In this case, adverse impacts to public recreational access are limited by virtue of the limited duration for potential dredging (i.e., between October and March,

when limited beach use is occurring), by the use of small (8" diameter) dredge pipe that will be near the back beach area and will not require significant equipment to put in place. To further minimize the potential for such impacts, the recommended conditions require the dredge operations plans to avoid public recreational access areas and impacts by design, including through managing the placement of dredge pipelines so that they do not interfere with public access or navigation.

Finally, the City has applied for a ten-year permit. The Commission has historically authorized five-year dredge permits in the Central Coast area as a means of ensuring that such projects can be appropriately reassessed and modified as necessary in light of new understandings and information and in a reasonable period of time (e.g., here in Monterey Harbor, in Santa Cruz Harbor, in Port San Luis, etc.). The proposed ten-year time frame is simply too long to allow for the reassessment process to effectively address changes in circumstances, particularly as they relate to sediment management in an area experiencing ongoing shoreline erosion when sea levels are rising. Thus, in addition to allowing for minor beneficial resource changes subject to Executive Director review and approval (as a means of providing for appropriate operational flexibility), Staff recommends a five-year CDP term overall consistent with the Commission's past Central Coast practice to allow overall re-review at that time.

Overall, and subject to the recommended conditions, the dredge/nourishment program is necessary and appropriate to protect priority uses, is essential to support commercial fishing, recreational boating, and other priority Harbor uses, will avoid adverse environmental impacts to coastal marine resources, and will protect and enhance public access and recreation. **Therefore, Staff recommends that the Commission approve a CDP with conditions for the proposed dredging and dredge material nourishment project.** The necessary motion is found directly below.

2. Staff Recommendation on CDP Application

Staff recommends that the Commission, after public hearing, **approve** the CDP for the proposed development subject to the standard and special conditions below.

> **Motion.** I move that the Commission approve coastal development permit number 3-10-040 pursuant to the staff recommendation, and I recommend a yes vote.
>
> **Staff Recommendation of Approval.** Staff recommends a **YES** vote. Passage of this motion will result in approval of the coastal development 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 to Approve a Coastal Development Permit.** The Commission hereby approves the coastal development permit on the ground that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the coastal development 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 amended development on the environment; or (2) there are

no feasible mitigation measures or alternatives that would substantially lessen any significant adverse effects of the amended development on the environment.

Report Contents

B.Findings and Declarations

The Commission finds and declares as follows:

1. Project Location and Background

The Monterey Harbor and Marina is located on the south end of Monterey Bay in the historic town of Monterey. From the earliest days of California's recorded history, Monterey Harbor has been a key port of call and a welcome refuge for mariners. In its current configuration, major components of the Harbor include the Coast Guard Breakwater, the tourist-oriented Fisherman's Wharf (also known as Municipal Wharf I), commercial fishing-oriented Municipal Wharf II, launch ramps, and mooring and berthing facilities, including space for approximately 450 vessels within the Monterey Marina, and both permanent and seasonal moorings for another 140 vessels outside the main Marina basin (see Exhibit A for location maps). Monterey Harbor services commercial fishing, diving, whale watching, and sailing

charter vessels, as well as vessels with recreational fishing and sailing interests. The harbor is also a key entry point to Monterey Bay for the research/scientific community (e.g., Monterey Bay National Marine Sanctuary, Monterey Bay Aquarium, etc.) as well as the U.S. Coast Guard.

As indicated above, the Harbor lies at the south end of Monterey Bay and is bound by the Coast Guard Pier/Breakwater to the west (downcoast) and the City's Municipal Wharf II to the east (upcoast). Del Monte Beach extends upcoast past Wharf II. The Marina facilities are tucked inside the Harbor between Municipal Wharves I and II. While the Coast Guard Pier/Breakwater generally provides adequate protection from large northwesterly swells, high-energy surges can still produce strong currents and movements of water within the harbor. Shoreline dynamics at this location, such as natural littoral drift, longshore transport, and tidal action, lead to the deposition of sediment into calmer Marina and Harbor areas, leading to what appears to be unavoidable shoaling of the launch facilities and navigational areas. Shallow areas have formed within the boat docking and launching facility, and the material to be dredged is interfering with the normal use of the Municipal Wharf I and II boat storage and launching facilities. Although shoaling within the Marina has generally been slow, over time this process has created unsafe conditions at certain times, including at lower tides.

The Harbor Department has historically dealt with shoaling through small-scale maintenance dredging events, most recently in 1997 and 2005. During the 1997 event, the Harbor Department used its own work force and equipment consisting of a small sand and gravel pump. The material was decanted in a plastic lined container built of K-rail and later disposed of at an upland City location. The 1997 dredging event involved approximately 1,000 cubic yards of material consisting of nearly 100% medium grained sand. In 2005, approximately 10,000 cubic yards of material were removed from five locations within the Marina, plus a sixth location near the breakwater. The material dredged from the breakwater (about 500 cubic yards) was decanted in another K-rail containment area and taken to an upland City disposal site. The sandy material removed from the five marina locations was deposited above the high tide line on Del Monte Beach and groomed with a tractor.

2. Project Description

The City proposes: (1) to annually dredge up to 10,000 cubic yards (cy) of sediment primarily between the months of October and January from two general locations within the Monterey Harbor and Marina, down to a depth of –12 feet below mean lower low water (MLLW) for the next ten years; and (2) to annually deposit the up to 10,000 cubic yards of material onto two locations with designated boundaries on Del Monte Beach upcoast of Wharf II to nourish the beach there (see Exhibit B for a map of the proposed Monterey Harbor dredging and disposal sites).

The Harbor Department has identified three areas where such dredging would occur in the short term (i.e., during the 2010-2011 winter). All three areas have experienced shoaling since the last dredging episode in 2005 resulting in unsafe navigational conditions. Sand accumulation has reduced water depths within the berth area to –2 feet to –5 feet MLLW. The Harbor Department estimates that approximately 5,000 cy of material will be removed during this initial dredging event, and that this work would be done using a portable 8-inch hydraulic cutter head dredge and an experienced dredge crew

from Santa Cruz Port District (the Santa Cruz Harbor dredges approximately 300,000 cubic yards of material or more every year). The disposal/nourishment location will have a worker assigned with a bulldozer vehicle to manage the pipe and groom the beach on a daily basis.

3. Coastal Development Permit Determination

The proposed project takes place within the Commission's retained coastal permit jurisdiction. The City has a certified Land Use Plan, but not a certified Implementation Plan (and thus not a certified LCP), which can serve as non-binding guidance to the Commission, but the standard of review is the Coastal Act.

A. Land Use Priorities

The Monterey Harbor and Marina accommodates a number of coastal-related and coastal-dependant activities including among other things, commercial fishing and recreational boating. The proposed project includes maintenance dredging to remove accumulated sediment from the boat berthing and launching areas, and navigational channels. Coastal-dependent and coastal-related developments are among the highest priority Coastal Act uses.

1. Applicable Policies

The Coastal Act defines coastal-dependent and coastal-related as follows:

> ***§ 30101:*** *"Coastal-dependent development or use" means any development or use which requires a site on, or adjacent to, the sea to be able to function at all.*
>
> ***§ 30101.3:*** *"Coastal-related development" means any use that is dependent on a coastal-dependent development or use.*

Coastal Act Section 30001.5 states in part:

> *The Legislature further finds and declares that the basic goals of the state for the coastal zone are to:*
>
> *(a) Protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources….*
>
> *(c) Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners.*
>
> *(d) Assure priority for coastal-dependent and coastal-related development over other development on the coast…*

Coastal Act Sections 30234 and 30234.5 also provide:

> ***§ 30234:*** *Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or*

adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.

§ 30234.5: *The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.*

2. Analysis and Conclusion

Monterey Harbor is one of only two commercial harbors located in Monterey County (the other being in Moss Landing) and the southern most harbor/marina in Monterey Bay. The next nearest harbor to the south is over 200 miles away in San Luis Obispo County. Monterey Harbor provides docking, mooring, and commercial fish processing facilities. In addition to commercial fishing activities, the harbor is also a popular sport fishing and recreational destination for the public. The Harbor also provides a home base for commercial visitor serving endeavors (e.g., whale watching, etc.), research activities, and the U.S. Coast Guard. The proposed dredging activities not only support coastal-dependent and related uses, but also are integral to such uses and therefore have a priority under the Coastal Act. Accordingly, the proposed development supports high priority Coastal Act uses that are consistent with the land use priorities of Coastal Act Sections 30101, 30101.3, and 30001.5.

Section 30234 of the Coastal Act provides that facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Section 30234.5 states that the economic, commercial, and recreational importance of fishing activities shall be recognized and protected. Commercial and recreational boating and fishing are coastal-dependent priority uses that cannot function at Monterey Harbor/Marina without sufficient harbor depths. Hence, the maintenance of adequate berthing and navigational depths in the Harbor is essential, and is considered a high priority under the Coastal Act. Therefore, the Commission finds that the project is consistent with Coastal Act Sections 30234 and 30234.5.

B. Marine Resources

1. Applicable Policies

Coastal Act Sections 30230, 30231, 30232, and 30233 afford protection of marine resources and their associated biological productivity and state:

§ 30230: *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.*

§ 30231: *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.

§ 30232: *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.*

§ 30233: *(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:*

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

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

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

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

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

(6) Restoration purposes.

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

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

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the l9 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

Finally, Coastal Act Section 30234, previously cited, also protects coastal dependent marine industries and facilities such as those necessary for the continuance of commercial fishing and recreational boating opportunities.

2. Analysis

Biologic Resources

Monterey Harbor and Marina is located at the south end of Monterey Bay. Monterey Bay supports a diverse complex of marine and marine-related habitats including open ocean, kelp forests, rocky seashore, nearshore intertidal, sandy beaches, coastal streams, estuarine systems, and wetlands. These habitats support a wide variety of marine life, including benthic communities, marine mammals, and fish, including sensitive species such as the state threatened long-fin smelt (*Spirinchus thaleichthys*), the locally rare California grunion (*Leuresthes tenius*), the federally threatened South/Central California Coast steelhead (*Oncorhynchus mykiss irideus*), the federally threatened Chinook salmon (*Oncorhynchus tshawytscha*), and the federally threatened North American green sturgeon (*Acipenser medirostris*).

In 1992, Monterey Bay proper became part of the Monterey Bay National Marine Sanctuary, though the Monterey Harbor/Marina area was explicitly excluded from this designation. Although Monterey Bay is known for its aquatic diversity and habitat value, the specific areas of the Harbor/Marina proposed for dredging activities are not known to be sensitive in this respect. There are no creeks or tributaries that occur in the area of the Harbor, and the sandy substrate underlying the marina area is generally devoid of sea grasses or kelp. In short, the project area is a fully developed and functioning marina that has been managed and maintained for such purposes for many decades, and there is generally a lower abundance and diversity of marine life at this location due to the ongoing uses of the site for these purposes.

All dredging activities would occur within Monterey Harbor at two specifically demarcated locations around the greater marina area and immediately adjacent to the Coast Guard Pier and breakwater. No fish or shellfish habitat will be adversely impacted by the proposed dredging due to the lack of spawning areas or shell fish beds in the immediate area of the harbor and marina. Monterey Harbor is not within the migratory route of anadromous fisheries due to the lack of nearby tributaries to upstream spawning grounds, and the Harbor/Marina area is not known as providing habitat for sensitive species.

That said, and as indicated above, Monterey Bay waters overall do serve as fish habitat for a variety of species that spawn, feed, migrate, and breed within its waters. Accordingly, the proposed dredging events are timed to coincide with periods outside the typical spawning and feeding periods for potentially affected fish species. Additionally, proposed mitigation measures include the use of a suction dredge during all dredging activities and placement of dredge spoils onshore in order to minimize hazardous plumes in the water and other impacts to the bay and its inhabitants.

Commission staff has observed seals and sea lions resting upon piers and jetties, sea otters, a variety of fish species, and shorebirds resting upon the various poles, masts, and other structural developments within the Harbor. Coastal Act Sections 30230 and 30231 require protection of marine resources and

their associated biological productivity. In order to avoid direct impacts to marine mammals and other animals consistent with the Coastal Act, Special Condition 4(a) prohibits dredging from occurring outside of the clearly demarcated areas around the Marina and immediately adjacent to the south side of the Coast Guard Pier/Breakwater as shown on Exhibit C to this report. This prohibition is necessary to avoid heavy equipment encroachment and disturbances in areas that may be frequented by these marine inhabitants.

Additionally, the disposal and grooming of dredge spoils on beach areas has the potential to adversely impact seasonal California grunion (*Leuresthes tenuis*) spawning events because these activities can smother individuals or eggs, and can interfere with the grunion's affinity for a specific beach location. Grunion spawn during the highest nighttime spring tides. Female grunion swim ashore with the rising high tide and lays eggs in the sand which are then fertilized by the male grunion. The eggs incubate in the sand for 10-14 days and then hatch on the next high tide. Although use of the adjacent Del Monte Beach for grunion spawning is rare, it is possible that proposed beach replenishment could impact such activities if they were to coincide. Thus, in order to avoid adverse impacts to grunion during spawning periods, Special Condition 4(b) requires monitoring during grunion spawning season (March 1 – September 1) and, if identified, requires that all dredge activities cease until grunion spawning has been completed.

In addition to grunion, several state and federally listed terrestrial plant and wildlife species have the potential to occur within the Del Monte Beach nourishment areas based on general habitat types and a search of the California Natural Diversity Database (CNDDB) (including Monterey spineflower, Sand Gilia, Tidestrom's Lupine, Smith's Blue Butterfly, Western snowy plover and others). The preferred receiver location for the dredge spoils is on Del Monte Beach immediately east of Wharf II and seaward of the "Adventures by the Sea" building. This is a heavily used urban beach, which is regularly groomed and maintained for public access and recreation purposes. The area is almost entirely devoid of any plant material and is considered unsuitable habitat to support the variety of the special-status plant, invertebrate, and bird species that could potentially occur on site. The alternative receiver site is located approximately one-third of a mile to the east (upcoast) of the preferred receiver site. This location fronts a small residential subdivision and appears to have more potential for some of the identified terrestrial plant and animal species including landscape vegetation between the townhomes and the beach. The City proposes to install orange construction fencing around these areas to protect these areas and ensure that no work is conducted nor any dredge material placed within the demarcated area. These measures would eliminate the potential for adverse impacts to any of the species identified above that could potentially be present. In addition, the dredge event and disposal will occur outside the identified breeding season for Western snowy plover and will not affect nesting or brooding activities, should they occur in the area.

Dredging and Dredge Spoils Disposal

Dredging operations must meet the 3-part test of Section 30233(a) of the Coastal Act (i.e., the allowable use, alternative, and mitigation tests). Under Section 30233(b), the project must also provide that dredge spoils suitable for beach replenishment be transported for such purposes to appropriate beaches or into

suitable long shore current systems.

The project is an allowable use for dredging under Section 30233(a)(2) because it is for the purpose of maintaining existing berthing and launching opportunities and navigational area depths. Continued sediment inflows can be anticipated in this area. This can, at times, result in severe impairment of harbor capacity and risk to vessels if no action is taken.

The second test under Section 30233(a) includes an analysis of available alternatives such as the no project alternative, other permanent solutions, or reducing/relocating the proposed dredging and related activities. Other permanent solutions to the problem might include: extending fixed groins, permanent sand retention structures, and opening the breakwater to limit sediment shoaling. All of these permanent structural solutions have significant costs associated with them, and have been ruled out by the City as being infeasible for the relatively small harbor and marina facility. With respect to the alternatives analysis, this leaves the Harbor Department with three options: 1) allow sand to continually shoal within the harbor and marina unabated; 2) reduce or relocate existing harbor facilities; or 3) continue removing sediment in the marina and breakwater areas as it has in the past. The no project alternative is infeasible because it will not maintain facilities used by commercial fishermen and recreational boaters as required by Coastal Act Section 30234. Similarly, a reduced or relocated project would not adequately maintain existing boating facilities, or enhance their usability by the public and commercial fishing industry, and would interfere with the objectives contained in Coastal Act Section 30234. Therefore, the proposed project, as conditioned by this permit, is considered the least environmentally damaging alternative available. As discussed below, mitigation measures to avoid and reduce adverse impacts on coastal resources are both proposed as a component of the project, and required as conditions of project approval.

The calculations that the Harbor Department used to arrive at the annual 10,000 cubic yard estimate were intended to be a very rough estimate that would provide the department with some operational flexibility. The estimate assumes that a combined 10,000 cubic yards of sediment would be removed from the marina and/or breakwater each year. This is likely an overestimate of the potential material that would need to be dredged from the site in any one year given that only once during the past two dredging episodes has the harbor department come close to dredging up to the proposed maximum annual 10,000 cubic yard. The 1997 dredging event resulted in approximately 1,000 cubic yards of sandy material being dredged. After a seven year hiatus, the 2004 dredging episode moved approximately 10,000 cubic yards from five locations in the marina and a sixth location near the Coast Guard Pier. Now, six years later, the current dredging proposal is for three locations in the marina with a total estimate of approximately 5,000 cubic yards of material. Accordingly, it is unlikely that the maximum volume threshold allowed under this permit would be reached, and in fact actual dredging may be much lower; particularly if historic dredging rates continue. In any case, this approval is conditioned to limit dredging to a maximum of 10,000 cubic yards annually, as that is the amount proposed and evaluated herein (see Special Condition 1).

Section 30233(b) requires that dredge spoils be disposed of in a manner that avoids disruption to habitats. Dredge spoils must be suitable for beach replenishment and placed on appropriate beaches or

within suitable longshore currents. To be considered suitable for beach nourishment, sediment must be free of chemical contamination and consist primarily of sand of an acceptable grain size (usually approximately 80% sand, although another commonly used "rule of thumb" is that the material should ideally fall within 10% of the percentage of sand content at the receiver beach). If placed on the dry upland portion of the beach, the grain size should ideally be compatible with the predominant grain size on the receiver beach as well.

In the past, test results have shown that the material to be dredged is almost entirely sand. Results of particle size analysis indicate that all samples can be characterized as medium grained, ranging from 96%- 99% sand. On the whole, chemical contaminants have not been an issue at the Harbor. This is supported by past letters from the project biologist and the U.S. Environmental Protection Agency's (EPA's) concurrence with the Army Corps of Engineer's (ACOE's) determination that the proposed dredged materials are chemically and physically suitable for beneficial reuse as beach nourishment. Nevertheless, these results may change over time, so a precautionary approach is warranted. Therefore, Special Condition 3 requires that all dredge materials be tested within 180 days before each annual dredging and beach nourishing event and that they meet all ACOE, EPA, and Central Coast Regional Water Quality Control Board (RWQCB) disposal standards.

Finally, to ensure that adequate and effective mitigation measures to protect coastal resources are provided during dredging, dredging operations plans are required before each annual dredging season (October – March) (see Special Condition 4), and the effective timeframe of the permit is limited to a five-year period or until the ACOE dredging permit expires, whichever comes first (see Special Condition 2). With respect to the latter, the areas subject to dredge operations are dynamic environments that are and will continue to be subject to a variety of natural and man-made processes. There are a myriad of potential future changed circumstances that may affect the adequacy of the currently proposed measures (including potential future listing of species that occur within harbor areas; an unforeseen rise in contaminant levels of harbor sediments from new upstream land uses or spill events; new dredging technologies; beach use patterns; continued erosion and sea level rise; etc.). Thus, in order to enable the implementation of this permit in a manner which best addresses potential future changed circumstances, the Commission finds that, only as conditioned by Special Condition 2, which limits this permit to a period of five years or until the ACOE dredging permit expires (whichever comes first), can the project be found consistent with the resource protection polices of the Coastal Act.

Water Quality

Potential impacts of dredging on marine water quality include temporarily increased turbidity, reductions in dissolved oxygen, and potential re-suspension, remobilization, and redistribution of any chemical contaminants present in the sediments. While these impacts could occur, the pre-dredge operation ambient water quality condition is expected to recur shortly after each dredging episode in this case, and thus the impact to these water quality variables is expected to be adverse but short-term and minor in magnitude and scope.

To avoid potential water quality impacts associated with the proposed dredging activities, the biological, chemical and physical characteristics of the sediments must be evaluated through the sediment sample

analyses described above. As described above, sediment dredged from the marina berthing and launching areas has historically been almost entirely "clean" medium-grained sand. However, the location of the secondary dredge site adjacent to the Coast Guard Pier and refueling dock, although also comprised of 99% medium-grained sand, has historically also exhibited higher concentrations of lead, and thus warrants a precautionary approach in order to ensure impacts to water quality (and related marine resources) is avoided under this current permit. Thus, sediment samples are required to be collected from all of the proposed dredging areas and tested under the most current guidelines of ACOE, EPA, and RWQCB (see Special Condition 3).

Finally, Special Condition 5 requires the permittee to show evidence of other regulatory agency approvals from the ACOE, EPA, and RWQCB, or show that none is necessary.

3. Conclusion

The proposed project represents a multi-year program for dredging activities necessary to maintain and improve navigation channels and berthing areas for recreational boating and commercial fishing. Because there are no known feasible less environmentally damaging alternatives available to maintain adequate depths within Monterey Harbor and Marina; because feasible mitigation measures are applied through the special conditions of this approval to avoid and/or to minimize adverse environmental effects; and because suitable sediments will be conveyed to appropriate beach replenishment sites, the proposed dredging project, as conditioned, can be found consistent with the Coastal Act's marine resource protection policies as discussed in this finding.

C. Public Access and Recreation

1. Applicable Policies

Coastal Act Sections 30210 through 30224 specifically protect public recreational access opportunities. In particular:

> ***§ 30210:*** *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.*
>
> ***§ 30211:*** *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*
>
> ***§ 30212 (a):*** *Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects….*
>
> ***§ 30213.*** *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.*

§ 30220. *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

§ 30221. *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.*

§ 30222.5. *Oceanfront land that is suitable for coastal dependent aquaculture shall be protected for that use, and proposals for aquaculture facilities located on those sites shall be given priority, except over other coastal dependent developments or uses.*

§ 30223. *Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.*

§ 30224. *Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent land uses that congest access corridors and preclude boating support facilities, providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.*

2. Analysis

The Coastal Act requires public recreational access opportunities to be maximized, including lower cost visitor facilities and water-oriented activities (like recreational boating), and protects areas near and at the shoreline for this purpose. Monterey Harbor provides public access and recreational opportunities of regional and statewide significance. These include boat launching, berthing for commercial vessels and recreational boats, marine-related retail/commercial businesses, kayaking, whale watching, safety and enforcement, and diving. The proposed dredging project will strongly benefit public access and recreation, in two ways: (1) by restoring and maintaining adequate water depths in the harbor's navigation channels and berthing areas, and (2) by directing suitable sandy dredge spoils onto nearby beach areas for beach replenishment.

Adverse impacts to public access from the dredge operations are possible (e.g., displacement of activities in dredge and disposal areas, sedimentation of nearshore waters, presence of dredge pipes impacting access, etc.). For example, the pipelines used to transport suitable dredge spoils to designated beach replenishment sites can create an impediment to navigation and pedestrian access to the beach in certain circumstances. Fortunately, these types of impacts can be minimized in this case through dredge operation design. Specifically, the pipelines are approximately 8 inches in diameter, and can generally be traversed by persons walking across the beach. In addition, according to the Harbor Department, placement of these pipelines can be managed so that they do not form a continuous barrier to access, particularly for less nimble beach visitors. Similarly, the area to be taken up by the nourishment activities is generally fairly small, located in the back beach, and in an area where it will not significantly reduce the area available for typical and normal public beach recreational pursuits. Also, sedimentation of the nearshore environment from nourishment has not been a significant impact in the

past, and is not expected in this case. Thus, public beach recreational activities should not be significantly adversely affected by the proposed project. To ensure this is the case, this approval is conditioned to ensure that dredging operations are conducted in such a manner as to avoid, to the greatest extent possible, interference with public recreational access in the Monterey Harbor area and adjacent Del Monte Beach (see Special Condition 4(c)). With respect to dredge pipelines specifically, such measures may include, but are not limited to, uncoupling segments to allow unimpaired pedestrian movement, building small-scale sand ramps over pipelines, pipeline removal during times of peak beach use, etc. (see Special Condition 4(c)).

3. Conclusion

In conclusion, the dredge program is necessary to protect Coastal Act priority uses. Although the transport of dredge materials to beach replenishment sites may temporarily impact public access in Monterey Harbor and its surrounding beaches, such impacts can be addressed through conditions of approval and the dredge program is essential to allow for commercial and recreational boating access, and the nourishment efforts should serve to build beaches in the area. The permit is conditioned to minimize public recreational access impacts, including any possible continuous barrier effects due to pipelines at beach replenishment sites.

The project, as conditioned, will protect boating and other public recreational opportunities consistent with the Coastal Act. Therefore, as designed and as conditioned by Special Condition 4, which mitigates for potential public beach recreational access impacts, the proposed project will preserve public access and recreational opportunities and, as such, is consistent with the above-cited public access and recreational policies of the Coastal Act.

4. Coastal Development Permit Conditions of Approval

A. 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 Permittee 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 Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

B. Special Conditions

1. **Maximum Dredge Parameters. Annual d**redging and disposal events shall occur between the months of October and March and shall not exceed 10,000 cubic yards of materials per year unless authorized by the Executive Director. The Executive Director may authorize dredging outside of the identified annual work window and/or increases in dredge amounts only if they: (1) are deemed reasonable and necessary; and (2) do not adversely impact coastal resources.

2. **Permit Expiration**. This coastal development permit shall be valid for either 5 years from the date of Commission approval (i.e., until February 11, 2016) or until expiration of the Army Corps of Engineer's dredging permit, whichever occurs sooner.

3. **Sediment Sampling and Testing Required**. PRIOR TO ANY DREDGING WITHIN ANY ANNUAL DREDGING SEASON , the Permittee shall submit to the Executive Director for review and approval two copies of each of the following within 180 days of any such dredging:

   (a) Sampling Analysis Plan. A sampling analysis plan (SAP) that clearly describes and delineates sediment sampling locations and applicable testing protocols. The SAP shall ensure that representative sample locations applicable to authorized dredging areas are tested and that they were tested within 180 days of the commencement of the annual dredging and beach nourishing event.

   (b) Sediment Testing. An analysis of all sediment samples identified by the SAP (i.e., chemical, physical, and biological analyses) using the most current ACOE and EPA testing methods and procedures. If any such samples do not meet ACOE, EPA, and RWQCB dredge disposal standards, then the materials from the sampled area shall not be allowed to be deposited on beaches, but rather shall be properly disposed of at an inland location outside of the coastal zone (i.e., landfill or equivalent). All other dredge materials shall be deposited in the two locations identified by the Harbor Department (see Exhibit C).

4. **Dredge Operations Plan**. PRIOR TO THE COMMENCEMENT OF EACH DREDGING EPISODE, the Permittee shall submit for Executive Director review and approval two copies of a detailed dredge operations plan (DOP) that clearly identifies all dredge operations (including, at a minimum, identification of areas to be dredged, dredging depths, overdredge depths, quantity of materials to be dredged, specific location of dredge spoils disposal, all methods for spreading/grooming beach nourishment areas, all timing (including dredge start and stop days, hours of operations, etc.), all pipeline locations, all measures to be taken to define and delineate dredge activity areas, equipment to be used, etc.). All such DOPs shall, at a minimum, incorporate the following provisions:

   (a) Dredge Prohibition Areas. Dredging operations shall not occur outside of the identified dredge location around the marina and in the vicinity of the Coast Guard Pier/ Breakwater as shown in

Exhibit D. Prior to the commencement of dredging activities, all areas to be avoided shall be clearly demarcated with floatable buoys, or other devices which are clearly visible on surface waters, so as to allow dredge equipment operators to easily identify dredge prohibition areas.

(b) Grunion Spawning Protection. If disposal and/or grooming of dredge spoils will be conducted on beaches during the California grunion spawning season (i.e., from March 1st through September 1st), the affected beach area shall be monitored during all such activities by a qualified professional biologist, approved by the Executive Director, to determine if grunion runs are occurring. If grunion runs are observed, the Permittee shall cease all such beach disposal and grooming operations during any forecasted spawning period, and if any eggs are found, all activities on the beach shall cease until the grunion eggs have hatched.

(c) Public Recreational Access Protection. Dredging operations shall be conducted in such a manner as to avoid, to the greatest extent possible, interference with public recreational access in the Monterey Harbor and Del Monte Beach area. At a minimum, all measures to be implemented to avoid public recreational access impacts due to dredge pipelines shall be identified (such measures may include, but are not limited to, uncoupling segments to allow unimpaired pedestrian movement, building small-scale sand ramps over pipelines, pipeline removal during times of peak beach use, etc.).

(d) Equipment Maintenance. All dredging equipment (e.g. pipelines, pumps, etc.) shall be maintained and inspected by Harbor Department staff on a regular schedule to ensure proper operation and to eliminate any potential for spills, waterway or beach access conflicts.

The Permittee shall undertake development in accordance with the approved DOPs.

5. Other Agency Approvals. PRIOR TO THE COMMENCEMENT OF THE FIRST DREDGING EPISODE ALLOWED UNDER THIS PERMIT, the Permittee shall submit to the Executive Director for review a copy of a valid permit, letter of permission, or evidence that no permit is necessary for the project authorized by this CDP from the following agencies: ACOE, EPA, MBNMS, and RWQCB.

5. California Environmental Quality Act (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of Resources as being the functional equivalent of environmental review under CEQA. The Commission has reviewed the relevant coastal resource issues with the proposed project, and has identified

appropriate and necessary modifications to address adverse impacts to such coastal resources. All public comments received to date have been addressed in the findings above. All above findings are incorporated herein in their entirety by reference.

The Commission finds that only as modified and conditioned by this permit will the proposed project avoid significant adverse effects on the environment within the meaning of CEQA. As such, there are no additional feasible alternatives nor feasible mitigation measures available which would substantially lessen any significant adverse environmental effects that approval of the proposed project, as modified, would have on the environment within the meaning of CEQA. If so modified, the proposed project will not result in any significant environmental effects for which feasible mitigation measures have not been employed consistent with CEQA Section 21080.5(d)(2)(A).

Monterey Peninsula

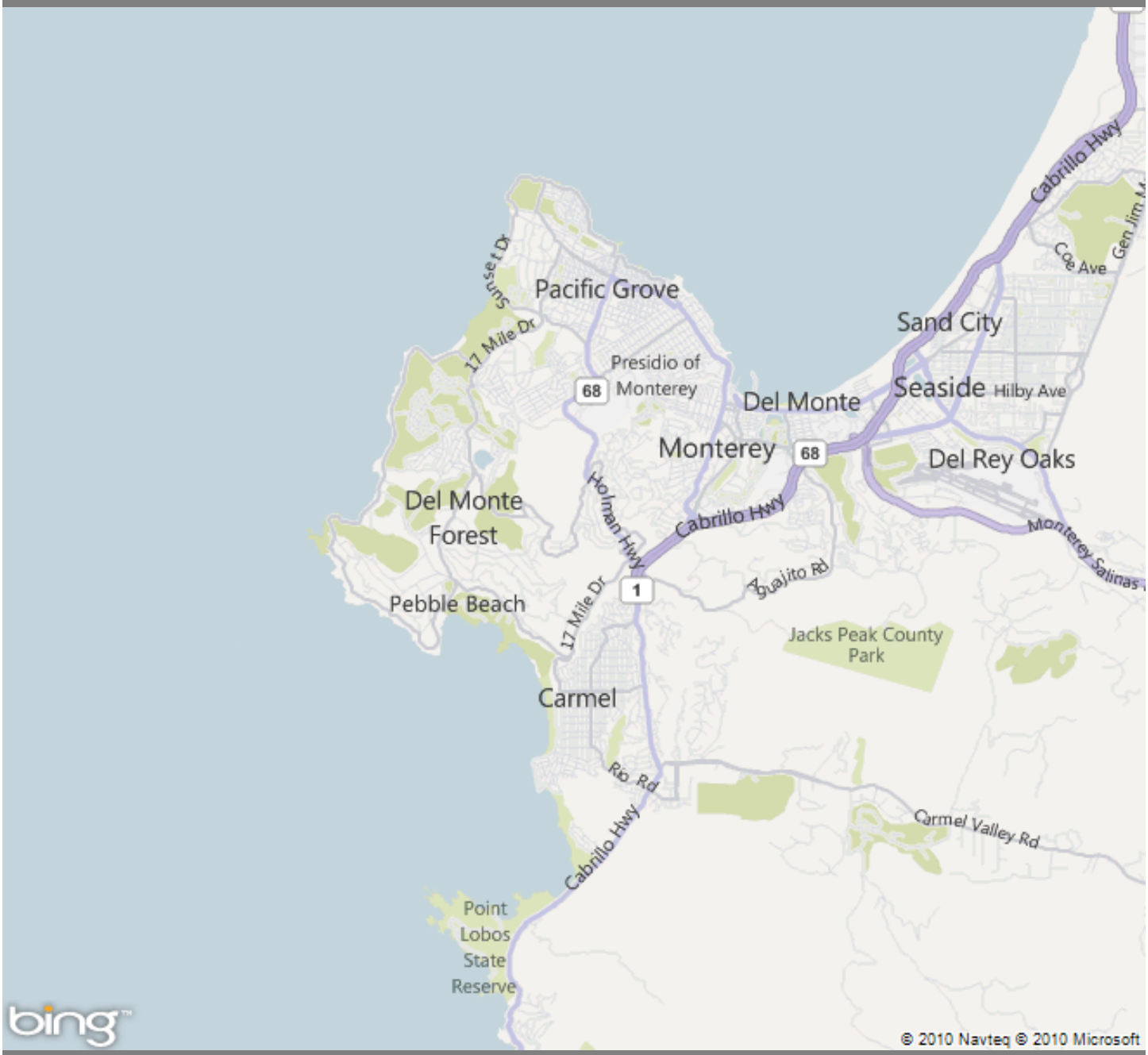

Exhibit A: Regional Location Map
3-10-040; Monterey Harbor Dredge

Monterey Harbor and Marina

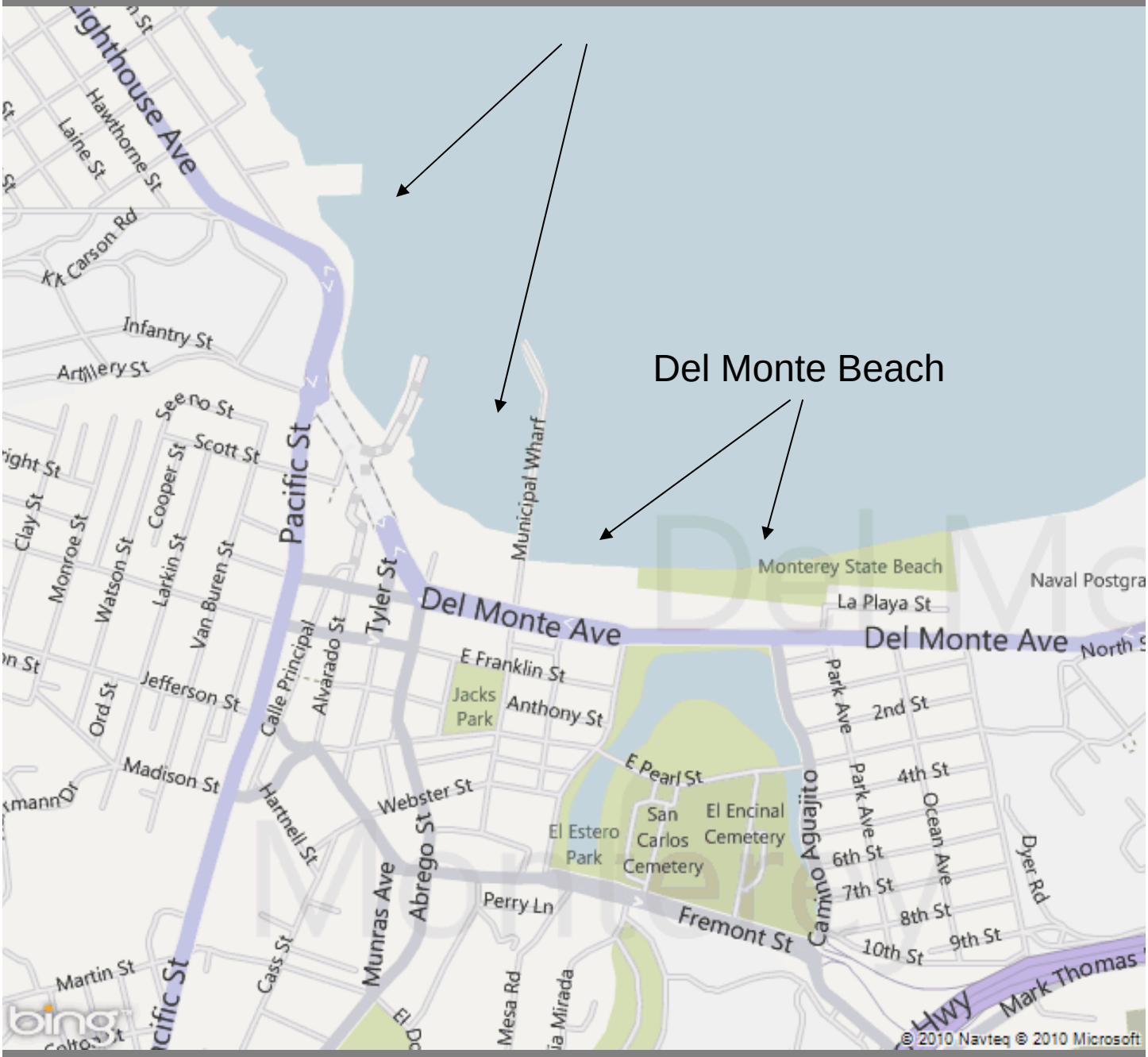

Exhibit A: Regional Location Map
3-10-040; Monterey Harbor Dredge
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Monterey Harbor and Marina

Exhibit B: Harbor Aerial
3-10-040; Monterey Harbor Dredge
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Monterey Harbor Dredge/Disposal Sites

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This document is not intended for detail design work.

Figure 9
Project Site Overview Map (Aerial)
Monterey, California

Monterey Marina Dredge Sites

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Figure 11
2010 Dredge Aerial
Monterey, California

Exhibit C: Dredge/Disposal Sites
3-10-040; Monterey Harbor Dredge
Page 3 of 4

Dredge Disposal Area “B”

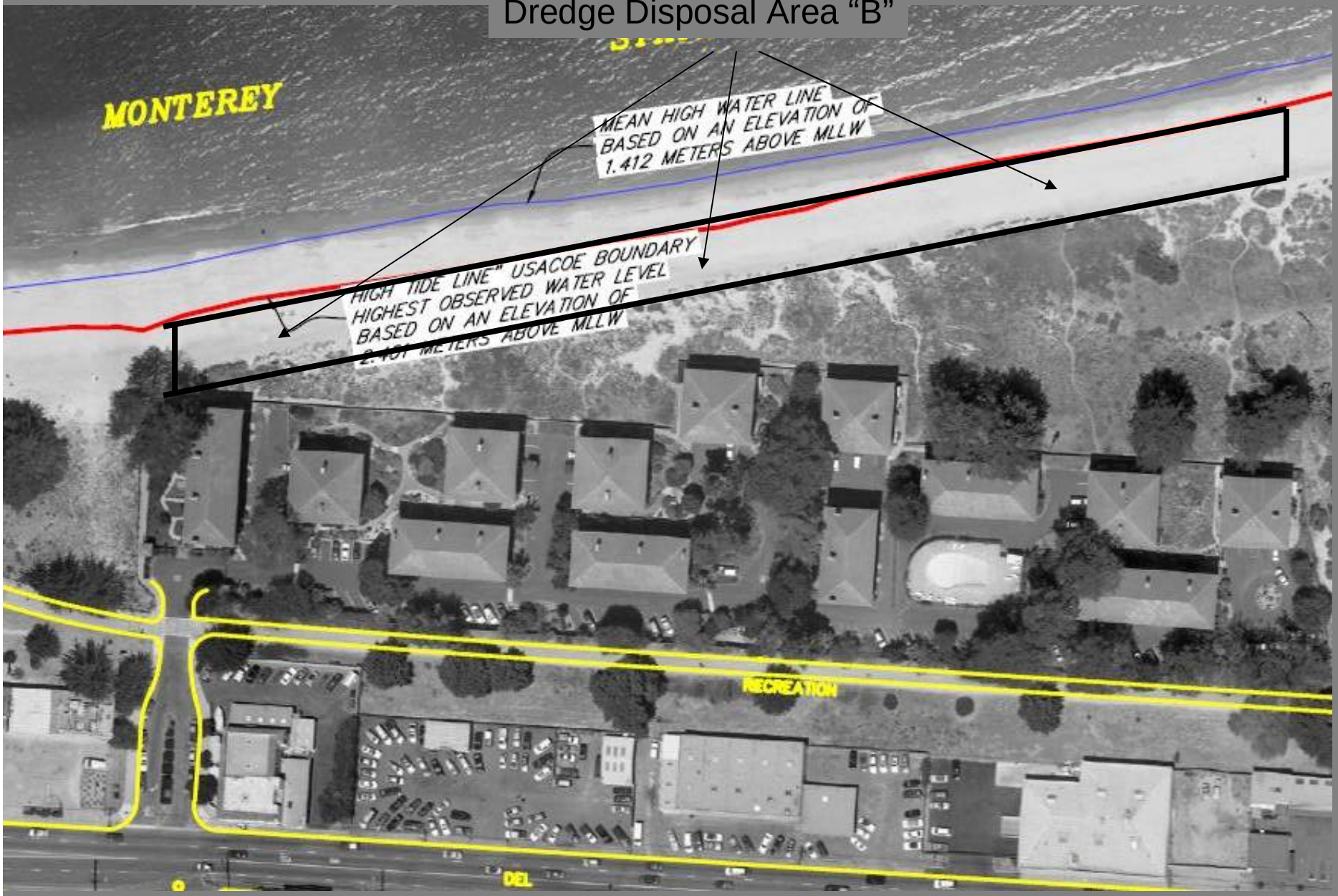

Exhibit C: Dredge/Disposal Sites
3-10-040; Monterey Harbor Dredge
Page 4 of 4

Monterey Marina

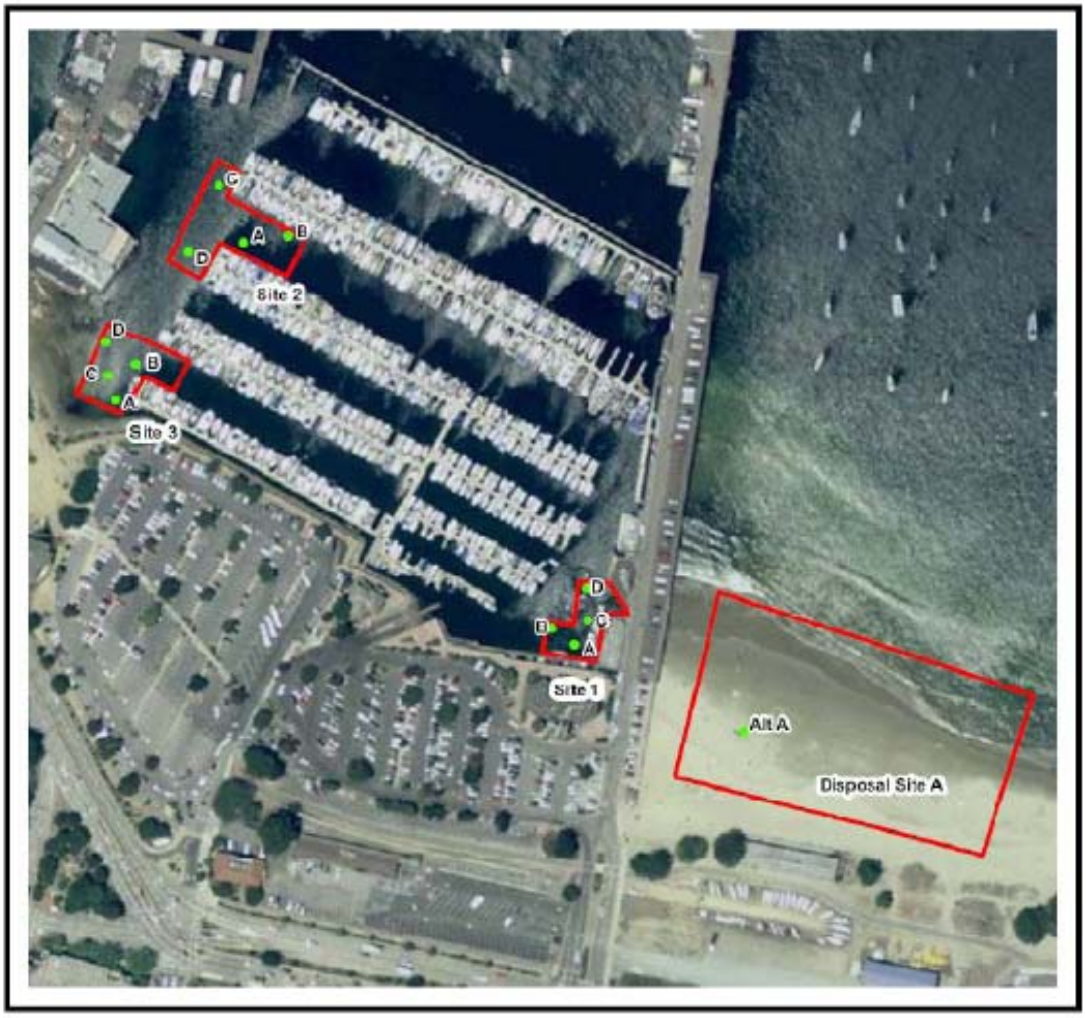

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Figure 14
2010 Sediment Sample Location Map
Monterey, California

Exhibit D: Sediment Sample Locations
3-10-040; Monterey Harbor Dredge
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