



San Francisco Bay Regional Water Quality Control Board

Sent via electronic mail: No hard copy to follow

July 15, 2021

City of Oakland, PBD, Development Planning Division
Attn: Catherine Payne, Acting Development Planning Manager
250 Frank Ogawa Plaza, Suite 2114
Oakland, CA 94612

Governor's Office of Planning & Research

July 15 2021

STATE CLEARINGHOUSE

Via email to: cpayne@oaklandca.gov

**Subject: Brooklyn Basin Marina Expansion Project DSEIR Comments
SCH No. 2004062013**

Dear Ms. Payne:

San Francisco Bay Regional Water Quality Control Board (Water Board) staff appreciates the opportunity to review the *Draft Supplemental Environmental Impact Report for the Brooklyn Basin Marina Expansion Project* (DSEIR). The DSEIR evaluates the potential environmental impacts associated with expanding the Brooklyn Basin Marina (Expansion Project) in Oakland.

Project Summary. The Expansion Project site is bounded by Fallon Street and Jack London Square to the west, Embarcadero and Interstate 880 to the north, the Oakland Estuary to the south, and 10th Avenue to the east. Estuary Park, the southern portion of Lake Merritt Channel, Clinton Basin, and the Ninth Avenue Terminal are included in the Project site.

Zarsion-OHP 1, LLC (Project Applicant) proposes the Expansion Project as a modification of the previously approved 64.2-acre Oak to Ninth Project (Original Project) analyzed under a 2009 EIR. The modifications to the Original Project include: a residential density increase of 600 units (for a Project site total of up to 3,700 units); an update to the parking ratios to current zoning code requirements in other zoning districts; an expansion of the approved marina infrastructure and operation including increasing the number of boat slips by 158 (from the current 167) and water surface area coverage by approximately 10 acres (from the current 7.95 acres approved by the City of Oakland, but not by the Water Board); and incorporating provisions with the marina improvements to accommodate an existing water taxi/shuttle service currently operating on San Francisco Bay.

Summary of Water Board Comments. In 2015, the Water Board issued Waste Discharge Requirements and Clean Water Act Section 401 Water Quality Certification

JIM McGRATH, CHAIR | MICHAEL MONTGOMERY, EXECUTIVE OFFICER

(Order) for the Original Project, which was subsequently renamed the Brooklyn Basin Project. The Order, not including its attachments, is enclosed with this letter. Neither the 7.95 acres of water surface impacts for marina facilities that have been approved by the City of Oakland (City) subsequent to the Order's adoption, nor the proposal to further expand the water surface impacts by 10 acres for the Expansion Project are consistent with the Order's mitigation requirements. In addition, mitigation required by the Order appears to be about three years delayed and the Discharger named in the WDRs and Certification does not appear to have been submitting stormwater treatment plans for the Original Project to the Water Board for review prior to construction, as the Order requires. As such, the DSEIR is inconsistent with the Water Board's Order. While the Board could consider amending the Order to incorporate proposed Project changes, that amendment would need to require mitigation sufficient to address the Project's impacts to waters of the State. The DSEIR does not appear to provide sufficient mitigation for the Expansion Project's impacts to waters of the State. As part of identifying sufficient mitigation, the DSEIR should use as the environmental baseline a condition in which the Clinton Basin marina is not present at the site.

Comment 1. As part of the mitigation required for the Oak to Ninth Project's impacts to waters of the State, the Order required the permanent removal of marina facilities from the Project site.

The Water Board's Order for the Original Project (Order No. R2-2015-0005, CIWQS Place ID No. 748052) was adopted on January 21, 2015. Mitigation for the Original Project's impacts to waters of the State is discussed in Order Findings 34 and 35 and Provisions C.11.c and C.20.c. Required mitigation for the Original Project included the permanent removal of 0.59 acres of floating fill, which was to consist of removing the existing Clinton Basin marina. Table A in Order Attachment 2 specifies that the floating fill in Clinton Basin was to be removed during Phase II of the Original Project, sometime between 2016 and 2018.

The Order required the complete and permanent removal of floating fill from the Original Project site. Therefore, the proposal to implement the City's approved installation of 7.95 acres of marina facilities and expand the marina facilities by an additional 10 acres is not consistent with the Order's requirements.

In addition, the 0.59 acres of floating fill at the Clinton Basin Marina should have been removed at least three years ago. According to DSEIR Section IV, the floating fill is still present in Clinton Basin.

Comment 2. The status of compliance with Order Provision C.23 is not clear.

At the time that the Order was adopted, the Water Board had been provided with preliminary designs for post-construction stormwater treatment measures for each phase of the Original Project. Order Provision C.23 required that:

No later than 90 days prior to the start of construction for each of the four phases of the Project, the Discharger shall submit final plans for the post-construction stormwater treatment measures for the impervious surfaces that are to be created in that phase of the Project to the Executive Officer for

review and approval. Stormwater treatment measures shall be consistent with the designs and phasing in Attachment 3 to this Order and findings 38, 39, and 40. Construction of each Project phase shall not start until the Executive Officer has approved the final designs for the post-construction stormwater treatment measures to be constructed for that phase (Note: "Construction of a phase" does not include work that is solely necessary to implement the RP/RAP described in Finding 6 of this Order).

In 2017, Water Board staff reviewed revisions to the stormwater treatment plans for Phases 1 and 2. These revised stormwater plans had been submitted for review by the City, but had not been provided to the Water Board until we became aware of and requested them. Water Board staff should be provided with any subsequent revisions to stormwater treatment plans for our review. Failure to receive Water Board approval of final stormwater treatment plans prior to construction of each Original Project phase would be a violation of the Order.

Comment 3. For the purpose of assessing potential impacts to waters of the State during the permitting of any new marina facilities at the Expanded Project site, the baseline is the absence of existing floating fill.

Potential impacts on special status species habitat as a result of marina expansion are discussed in Impact BIO-2 on DSEIR pages IV:1-8 through IV:1-13. This discussion acknowledges that:

The marina expansion component of the Project Modifications would result in a net increase in the area of over-water structures and shading. The shading of the water column and benthic habitat as a result of overwater structure installation has the potential to reduce the quality of fish habitat within the area shaded by the structure. Overwater shading has been demonstrated to reduce the growth rates and establishment of aquatic vegetation, decrease primary productivity, alter predator-prey dynamics, compromise the invertebrate community by changing the species composition, and reduce the overall density of benthic invertebrates (Helfman, 1981; Glasby, 1999; Struck et al., 2004; Stutes et al., 2006)

In addition to the habitat issues noted in the DSEIR, near-shore habitat is especially valuable to rearing fish, who find refuge from predation in near-shore waters.

The size of the floating fill impact is described as follows in the DSEIR:

Current shading due to over-water structures in the Project area can be attributed to the existing unusable marina in Clinton Basin, which spans approximately 28,150 square feet. Following installation of the proposed marina expansion (which would include removal of the existing marina in Clinton Basin), the area of shading by over-water structures would increase by approximately 86,225 square feet, for a total area of approximately 114,375 square feet.

For the purpose of permitting any expansion of the marina, the baseline condition is the absence of any floating fill, since all floating fill in Clinton Basin was required to be

removed by the Order and this removal was to have been completed in 2018. Also, the Order does not allow the replacement or expansion of the Clinton Basin marina. Any requested modifications to the Order must address both the delayed provision of the mitigation provided by the removal of the existing Clinton Basin marina and the mitigation necessary for all new floating fill.

Comment 4. The discussion of the need to obtain a permit from the Water Board does not acknowledge that the proposed Expansion Project is not consistent with the requirements of the existing Water Board Order for the Brooklyn Basin Project.

In the discussion of Impact BIO-4, the DSEIR acknowledges that the proposed Expansion Project will require a permit from the Water Board (p. IV:1-17). As noted above in Comment 1, the Order for the Original Project required the permanent removal of all floating fill at the Project site. Implementation of the proposed Expansion Project cannot occur until the Order has been revised. As the Order was adopted by the Water Board at a public meeting, any modifications to the Order similarly must be considered by the Water Board, following a public review period of at least 30 days. Any modifications must include measures to compensate for delayed mitigation and for any elements of the Original Project that have been constructed without Order-required pre-construction approval from the Water Board's Executive Officer.

Comment 5. The proposed shoreline mitigation is out-of-kind and may not be legally feasible.

The DSEIR proposes the following mitigation measures for the proposed Expansion Project's impacts to jurisdictional waters:

The project applicant shall further enhance the shoreline from Lake Merritt Channel to Clinton Basin. The primary objective of the enhancement shall be to improve the habitat value for shorebirds, gulls, ducks, and other avian life that frequent the area. Components of the restoration plan shall include 1) restoration of the tidal marsh, 2) enhancement of roosting areas for shorebirds and water birds, and 3) increase in habitat diversity. Shoreline enhancements shall include removal of debris, including concrete riprap, and excavation of the shoreline at Channel Park to create marsh vegetation along this area. Excavation shall provide a shoreline slope that falls between the MTL elevation (approximately -2.4 mean sea level) to the MHW) to allow for the colonization of marsh habitat and the creation of high marsh habitat (p. IV:1-18).

As discussed above in Comment 3, the proposed installation of the new marina will impact habitat for fish. Since the proposed mitigation measures will primarily benefit shorebirds, the proposed mitigation is out-of-kind. Consistent with the Water Board's policies directing that mitigation preferably be in-kind and on-site, and where it is not, that a greater amount of mitigation be provided, if the mitigation measures are used to offset the impacts associated with new marina work, it necessarily will have to be provided at a greater than 1 to 1 ratio.

Mitigation features are required to be placed under some form of perpetual restrictive covenant (e.g., conservation easement, deed restriction) to ensure their permanence. During the Order's development, it was determined that the site's shoreline consisted of public lands that are subject to the jurisdiction of the State Lands Commission. The State Lands Commission was not able to allow proposed mitigation sites along the shoreline to be placed under a restrictive covenant that met the requirements of the U.S. Army Corps of Engineers or the Water Board. Because of this, proposed shoreline habitat enhancements could not be included in the mitigation measures required by the Order. The proposed mitigation measures in the DSEIR appear to be identical to the mitigation measures that were found to be infeasible in the development of the Order. Please confirm that any proposed shoreline mitigation projects can be placed under appropriate restrictive covenants.

If the proposed mitigation measures along the shoreline of the Expansion Project cannot be placed under an appropriate restrictive covenant, alternate mitigation must be developed to compensate for the deferred removal of the Clinton Basin marina and for the proposed new marina facilities at the Expansion Project.

Conclusion. We encourage the City and the Project Applicant to coordinate with the Water Board to address outstanding mitigation required by the Order, potential delayed implementation of Order requirements, and to discuss the feasibility of amending the existing Order to allow construction of the proposed marina. Any amendment of the Order will require mitigation sufficient to compensate for the deferred removal of the Clinton Basin marina and for implementation of the proposed new marina.

If you have any questions, please contact me at (510) 622-5680 or via e-mail to brian.wines@waterboards.ca.gov.

Sincerely,



Brian Wines
Water Resource Control Engineer
South and East Bay Watershed Section

Attachment: Order No. R2-2015-0005

cc: State Clearinghouse (state.clearinghouse@opr.ca.gov)
Corps, Katerina Galactos (katerina.galactos@usace.army.mil)

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

ORDER No. R2-2015-0005

**WASTE DISCHARGE REQUIREMENTS and WATER QUALITY CERTIFICATION for:
ZARSION-OHP 1, LLC
OAK TO NINTH AVENUE PROJECT
OAKLAND, ALAMEDA COUNTY**

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter the Regional Water Board), finds that:

1. Zarsion-OHP 1, LLC, (Discharger) has applied to the Regional Water Board for authorization to construct a mixed-use project consisting of a multi-family, urban residential neighborhood with a retail component (Project) on the 64-acre Oak to Ninth Avenue Project Site (Project Site), located along the Oakland Estuary and the Embarcadero, east of Jack London Square and south of Interstate 880 (Approximate Latitude and Longitude: N 27°47' 15" E 122°12'30"; See Figure 1. *Regional Location Map*, and Figure 2. *Project Location Map*, in Attachment 1 to this Order) in the City of Oakland. About 33 acres of the Project Site will be developed with park and open space, including the existing Estuary Park and Aquatic Center west of the Lake Merritt Channel, and about 24 acres of the Project Site will be developed with about 3,100 residential dwelling units and 200,000 square feet of ground floor retail/commercial space. New public streets, with a total surface area of about 9 acres, will be constructed to provide access to the Project Site.
2. The Project Site consists of 64 acres of waterfront property that are currently owned by the Port of Oakland. The irregularly shaped site is bordered by the Embarcadero and Interstate 880 on the north, the Lake Merritt Channel on the west, and the Oakland Inner Harbor and the Brooklyn Basin on the south and east, as shown in Figure 4. *Existing Conditions*, in Attachment 1 to this Order. The site is currently occupied by a variety of commercial and maritime buildings. Existing land uses include a concrete plant, bulk container storage, and commercial businesses. Recent land uses have included fabricated steel storage, trucking, and a compressed gas distribution facility. A former power plant building has been demolished, and only the foundations and subsurface cooling water tunnels remain. The Ninth Avenue Terminal Shed, a large, one-story, pile-supported warehouse, is located on the east side of the site and occupies the majority of the southeast property line.
3. The Discharger plans to redevelop the Project Site into a mixed-use, waterfront, multi-family, urban residential neighborhood with a retail component surrounded by interconnecting open space (See Figure 5. *Proposed Conditions*, in Attachment 1 to this Order). The proposed open space plan includes a continuous system of pedestrian and bike trails along the site's waterfront and adds a connection for the Bay Trail system. Zarsion OHP I, LLC, and its successors will own the development parcels, and the City of Oakland (City) will own the open space and major streets. (Note: The cross-hatched area between the proposed Channel Park and the proposed South Park in Figure 5. *Proposed Conditions*, in Attachment 1 to this Order, which is labeled "NOT A PART OF PROPOSED PROJECT", is not part of the Project Site. This area is referred to in Project documents as the "Out Parcel.")

4. The Project Site is underlain by fill, and most of the fill surface is developed or landscaped in some fashion. Habitat types present at the Project Site include developed areas, landscaped areas, non-native grassland, ruderal vegetation, and barren areas. Shoreline habitats are mostly artificial in nature. The most common shoreline types are rip-rap, concrete bank, eroding fill, and wharf. Smaller segments of the shoreline are characterized by cordgrass stands or a sandy substrate (See Figure 3. *Existing Habitats and Jurisdictional Features*, in Attachment 1 to this Order).
5. Historic Bay maps indicate that a large portion of the Project Site was once occupied by a large, natural marsh that was bordered on the west by the natural drainage of the Lake Merritt Channel, on the south by San Antonio Creek (now Oakland Inner Harbor), and on the east and north by tidal waters and/or bays associated with the San Antonio Creek watershed. During the late 1800s and early 1900s, most of the Project Site was filled, and the filled areas were subsequently developed for commercial, industrial, and marine-related uses. Additional fill activities occurred in 1944 and between 1953 and 1998. Between the initial filling of the Project Site and into the 1970s, the primary land uses were lumberyards, break-bulk cargo handling, chemical mixing and storage, petroleum product storage in aboveground bulk tank farms, ship repair, compressed gas manufacturing, sand and gravel operations, food warehouses, and trucking operations.
6. The Discharger has been evaluating soil and groundwater contamination at the site since 2002 and, in 2010, executed a California Land Reuse and Redevelopment Act agreement, covering about 34 acres of the Project Site that will be commercially developed, and a Voluntary Cleanup Agreement, covering 30 acres of the site that will be owned by the City and used as parks, with the California Department of Toxic Substances Control (DTSC). A summary of the findings of the soil, soil gas, and groundwater investigations, remedial action objectives and remedial alternatives evaluated to address contamination, site-specific remediation goals, and proposed response actions for the Project Site are presented in the *Final Response Plan/Remedial Action Plan (RP/RAP)* (June 30, 2010, prepared by EKI). The RP/RAP was approved by DTSC in a letter to Oakland Harbor Partners, LLC, dated July 20, 2010 (DTSC Envirostor I.D. No. 70000109). The Discharger will implement the RP/RAP for the development parcels and the open space areas.
7. The measures described in the RP/RAP that will be implemented by the Discharger to protect human health and the environment include: excavation of soils and removal of groundwater in identified source areas of contamination; covering the entire Project Site with at least 2 feet of clean fill overlain by buildings, roads, landscaping, or other facilities, with a marker layer installed to identify the boundary between clean fill and in-place soils; vapor control systems on all buildings and facilities to control potential impacts to indoor air quality; and groundwater monitoring to ensure that the upland remedial measures have been effective at protecting surface water quality.
8. Under current conditions, the water quality of receiving waters adjacent to the Project Site may be impacted by the following exposure routes: the entrainment of contaminated soil particles or other materials in surface water runoff; or the discharge of contaminated groundwater to waters of the State via the existing stormwater infrastructure, including the existing stormwater outfalls at the Project Site (See the red "X"s in Figure 4. *Existing*

Conditions, in Attachment 1 to this Order). See the tables in Attachment 4 to this Order for a summary of chemicals found in groundwater and soils at the Project Site.

9. The Project will control the two potential sources of water quality impairment presented in Finding 8 by placing all residual soil contamination under a minimum of two feet of clean fill material and by replacing the existing stormwater infrastructure with new stormwater infrastructure. The new stormwater infrastructure will protect receiving water quality by isolating stormwater runoff from the Project from residual contamination in site soils and by providing water quality treatment for post-construction stormwater runoff from impervious surfaces on the Project Site. Post-construction stormwater treatment for all phases of the Project shall be consistent with the requirements of the Regional Water Board's Municipal Regional Stormwater NPDES Permit (Order No. R2-2009-0074; NPDES Permit No. CAS612008). The current post-construction stormwater treatment proposal for the Project is included in Attachment 3 to this Order; the Regional Water Board has reviewed this treatment proposal and considers it to be consistent with the requirements of Order No. R2-2009-0074. Construction of each Project phase shall not start until the Executive Officer of the Regional Water Board has approved the final designs for the post-construction stormwater treatment measures to be constructed for that phase.
10. The shoreline of the Project Site will be armored to prevent clean soil layers from being eroded by wave action. Rock riprap bank armoring will be installed along about 1,800 linear feet of shoreline at the South Park Clinton Basin. New rock riprap armoring will range from 10 to 20 inches in diameter and will be placed directly over existing rock armoring or subgrade. Where possible, rock will be placed in tidal areas at low tide when the surface is exposed. Where rock must be placed at deeper contours, it will be placed either from a barge with a skip bucket or from land with a long-reach excavator. Each bucket load will contain about 2 to 3 cubic yards of rock and will be placed slowly, rather than dumped. About 1,200 linear feet of shoreline at Channel Park and 700 linear feet of shoreline at South Park West will be armored with the placement of revetment or similar protection.
11. The Project Site is comprised of 12 parcels, identified as Parcels A, B, C, D, E, F, G, H, J, L, and M in Project documents, and the existing Estuary Park. The Project will be developed in four separate phases, as illustrated in Figure 1. *Phasing Plan, Brooklyn Basin – Oak to 9th Development Plan* in Attachment 2 to this Order, which also identifies the locations of the 12 parcels. Implementation of the four phases will occur over about 14 years, with construction planned to start in 2014 and conclude in about 2022. (Note: work at the existing Estuary Park, which is described as Phase IA in Project documentation, consists of remediation work to be performed at the Existing Estuary Park, east of the Embarcadero and north of the Lake Merritt Channel. Work in Phase IA does not include any impacts requiring approval from the Regional Water Board and is not addressed in this Order.) The Project will impact about 5,350 linear feet of shoreline, as shown in Figure 2. *Shoreline Phasing, Shoreline Improvement Plan*, in Attachment 2 to this Order). The names that the Project has assigned to each of the shoreline segments that will be modified, as well as the project phase in which modification will be implemented are presented in Figure 2. *Shoreline Phasing, from Oak to Ninth Avenue Development, Proposed Shoreline Improvements*, in Attachment 2 to this Order. The impacts to the shoreline in each of the four Project phases are summarized below:

- Phase I (Parcels A, B, C, F, and G) will impact 1,350 linear feet of shoreline (Station 42+50 to Station 56+00 along the Project shoreline) (See Figure 8. *Oak to Ninth Avenue Development, Proposed Shoreline Improvements, Ninth Avenue Wharf* (Moffat & Nichol; September 2010), in Attachment 2 to this Order).
- Phase II (Parcels D, E, H, and J) will impact 2,150 linear feet of shoreline (Station 21+00 to Station 42+50 along the Project shoreline) (See Figure 6. *Oak to Ninth Avenue Development, Proposed Shoreline Improvements, South Park – Clinton Basin*, and Figure 5, *Oak to Ninth Avenue Development, Proposed Shoreline Improvements, Shoreline Park – West*, (Moffat & Nichol; September 2010), in Attachment 2 to this Order).
- Phase III (Parcels K and L) will impact 650 linear feet of shoreline (Station 14+50 to Station 21+00 along the Project shoreline) (See Figure 5. *Oak to Ninth Avenue Development, Proposed Shoreline Improvements, South Park – West* (Moffat & Nichol; September 2010), in Attachment 2 to this Order).
- Phase IV (Parcel M) will impact 1,200 linear feet of shoreline (Station 0+00 to Station 12+00 along the Project shoreline) (See Figure 4. *Oak to Ninth Avenue Development, Proposed Shoreline Improvements, Channel Park* (Moffat & Nichol; September 2010), in Attachment 2 to this Order).

12. **Phase I (Parcels A, B, C, F, G).** This phase will include the following activities:

- a. Demolition of an 88,000 square foot manufacturing and storage building, a 78,400 square foot warehouse building, about 160,000 square feet of the Ninth Avenue Terminal Shed Building, and about 134,000 square feet of pile-supported pier structure and trestle at the existing timber wharf at the future location of Shoreline Park West, while the remaining wharf will be retrofitted to resist seismic loads;
- b. Implementation of the RP/RAP under the regulatory oversight of DTSC, per Finding 6, above;
- c. Construction of a portion of Shoreline Park to the south of parcels A, B, C and D, including all landscaping, pier renovation, construction of bike paths, construction of pedestrian walk ways, and construction of Bay Trail connections. At the Ninth Avenue Wharf component of Shoreline Park, the retained portion of the wharf will be seismically retrofitted. Eighty 60-inch diameter steel piles will be driven through openings cut through the existing deck along the landward edge of the wharf. The piles will be driven in groups of four, and a single concrete cap will provide the structural connection between each group of four piles. All but 14 of the steel piles will be installed above mean high high water (MHHW). The remaining 14 piles will be installed above the mean tide line (MTL) and work on these piles will be scheduled when tides are below the MTL. Pile driving equipment will work from land, and piles will be installed using both vibratory and impact hammers. A new 42-inch diameter stormwater outfall will also be constructed, and repairs will be made to the rock riprap bank armoring (See Figure 8. *Oak to Ninth Avenue Development, Proposed Shoreline Improvements, Ninth Avenue Wharf*, and Figure 13. *Shoreline Park – West, Typical Cross Sections*, (Moffat & Nichol; September 2010), and Figure 20. *Shoreline Park – Outfall # 5*, in Attachment 2 to this Order);

- d. Construction of site improvements, including grading, underground wet and dry utility installation, and construction of streets, bike paths, pedestrian trails, sidewalks, and landscaping;
- e. Renovation of a minimum of 20,000 square feet of the existing 9th Avenue Terminal Shed Building as a mixed-use, commercial/cultural resource building;
- f. Installation of a temporary eight-foot wide asphalt Bay Trail for Phase II and Phase III of the Project.

13. **Phase II (Parcels D, E, H, J, and Shoreline of Parcel M).** This phase will include the following activities:

- a. Implementation of the RP/RAP under the regulatory oversight of DTSC, per Finding 6, above;
- b. Construction of site improvements, including grading, underground wet and dry utility installation, and construction of streets, bike paths, pedestrian trails, Bay Trail connections, sidewalks, and landscaping;
- c. Construction of the remainder of Shoreline Park, including landscaping, construction of bike paths, construction of pedestrian walk ways, construction of Bay Trail connections, and the reconstruction of rock riprap bank armoring in front of the existing bulkhead at the Timber Wharf (See Figure 7. *Oak to Ninth Avenue Development, Proposed Shoreline Improvements, Shoreline Park – West*, and Figure 13. *Shoreline Park – West, Typical Cross Sections*, (Moffat & Nichol; September 2010), in Attachment 2 of this Order);
- d. Construction of portions of Clinton Basin, including the following actions: demolition of existing docks, piles and gangways; driving of concrete piles along the west and east sides of the basin; construction of cast-in-place concrete pile caps; driving of sheet piles along the north side of the basin; excavation and backfill operations to the subgrade for new bank armoring; installation of rock riprap armoring, installation of storm drain outfalls; installation of precast concrete planks, cutoff wall, and fascia; and the construction of a cast-in-place concrete slab (See Figure 6. *Oak to Ninth Avenue Development, Proposed Shoreline Improvements, South Park – Clinton Basin*, Figure 12. *Alternative 1 – Vertical Sheet Pile Bulkhead (Sheet Pile Option Shown – North Segment Only)*, (Moffat & Nichol; September 2010), Figure 14. *Impacts (At Bay Bottom), South Park - Clinton Basin, Surface Area Affected (At Bay Bottom)*, Figure 15. *Mitigation (At Bay Bottom), South Park - Clinton Basin, Surface Area Affected (At Bay Bottom)*, Figure 16. *Section A-A, South Park – Clinton Basin*, Figure 17. *Section B-B, South Park – Clinton Basin*, and Figures 18. *Outfall Profiles, Outfall # 2: Clinton Basin West*, and Figure 19. *Outfall Profiles, Outfall # 3: Clinton Basin North and Outfall # 4: Clinton Basin East*, in Attachment 2 to this Order);
- e. Along a portion of the shoreline at the South Park Clinton Basin open public space area, the Project will construct a new 30-foot wide concrete boardwalk. The concrete boardwalk will be a pile-supported structure using precast concrete and cast-in-place concrete elements. About 150 concrete piles will be required to support the boardwalk, oriented in three rows parallel to the shoreline. Each pile will be 18-inch square or 18-inch octagonal in cross-section and about 65 feet long. A land-based or barge-mounted impact hammer will be used to install the concrete piles. Of the estimated 150 piles, 88 will be located below MHHW. Most of the piles located

below MHHW can be driven when the shoreline is exposed at low tide. However, some piles will be installed in shoreline areas below mean lower low water (MLLW). Cast-in-place elements of the boardwalk will consist of pile caps (transverse), cutoff walls, and slabs (finished surface). The boardwalk deck will be constructed of concrete with a surface area of about 41,750 square feet;

- f. Construction of bank armoring at Channel Park, including the following actions: excavation of bank to stable sub-grade (including construction of an earth berm along the Bay edge where feasible, to keep the work area dry), installation of a geomembrane over the stable slope; placement of imported soil fill over the geomembrane; installation of geotextile fabric over the imported fill soil; placement of shoreline revetment; and the removal of the temporary soil berm along the shoreline (See Figure 4. *Oak to Ninth Avenue Development, Shoreline Improvements, Channel Park*, Figure 9. *Oak to Ninth Avenue Development, Shoreline Improvements, Channel Park – Typical Cross Sections* (Moffat & Nichol; September 2010), and Figure 10. *Oak to Ninth Avenue Development Project, Shoreline Improvements, South Park (West) – Typical Cross Section* (Moffat & Nichol; September 2010), in Attachment 2 of this Order);
- g. Construction of new 36-inch diameter stormwater outfalls in the new bank armoring along the basin (See Figure 18. *Outfall Profiles, Outfall # 2: Clinton Basin West*, and Figure 19. *Outfall Profiles, Outfall #4, Clinton Basin East*, in Attachment 2 to this Order). A new outfall will also be constructed through the vertical sheet pile at the northern shoreline of Clinton Basin; the end of this outfall pipe will be cut approximately flush with the wall, with a backflow prevention gate installed at the pipe end (See Figure 19. *Outfall Profiles, Outfall #3, Clinton Basin North*, in Attachment 2 to this Order).

14. **Phase III (Parcels K and L).** This phase will include the following activities:

- a. Demolition of about 46,000 square feet of marine, storage, service, manufacturing, and industrial uses;
- b. Implementation of the RP/RAP under the regulatory oversight of DTSC, per Finding 6, above;
- c. Construction of site improvements at South Park (West), including: landscaping; construction of bike paths; construction of pedestrian walk ways, and construction of Bay Trail connections;
- d. Construction of site improvements, including grading, underground wet and dry utility installation, and construction of streets, bike paths, pedestrian trails, sidewalks, and landscaping;
- e. Construction of bank armoring at South Park (West) including the following actions: excavation of bank to stable sub-grade (including construction of an earth berm along the Bay edge where feasible, to keep the work area dry), installation of a geomembrane over the stable slope; placement of imported soil fill over the geomembrane; installation of geotextile fabric over the imported fill soil; placement of shoreline revetment; and the removal of the temporary soil berm along the shoreline (See Figure 5. *Oak to Ninth Avenue Development, Proposed Shoreline Improvements, South Park - West*, Figure 10. *Oak to Ninth Avenue Development Project, Shoreline Improvements, South Park (West) – Typical Cross Section*, and Figure 13. *Shoreline Park - West, Typical Cross Sections* (Moffat & Nichol; September 2010), in Attachment 2 of this Order);

- f. Construction of a new 24-inch diameter stormwater outfall in the bank armoring at Channel Park (See Figure 18. *Outfall Profiles, Outfall #1, Channel Park*, in Attachment 2 of this Order).

15. **Phase IV (Parcel M Uplands).** This phase will include the following activities:

- a. Demolition of onsite structures;
 - b. Implementation of the RP/RAP under the regulatory oversight of DTSC, per Finding 6, above;
 - c. Construction of Channel Park, including landscaping, construction of bike paths, construction of pedestrian walk ways and construction of Bay Trail connections;
 - d. Site improvements including grading, underground wet and dry utility installation, and construction of streets, bike paths, pedestrian trails, sidewalks, and landscaping;
 - e. Installation of a temporary Bay Trail upon termination/expiration of the Berkeley Ready Mix lease, but no earlier than June 1, 2016.
16. Habitat types at the Project Site include developed areas, landscaped areas, non-native grassland, ruderal vegetation, and barren areas. Shoreline habitats are mostly artificial in nature, consisting of rock rip-rap, concrete bank, eroding fill, and wharf. Stands of cordgrass are present in a few locations, mostly located along the western shoreline of Clinton Basin (See the Figure 3. *Existing Habitats and Jurisdictional Features*, in Attachment 1 to this Order). These cordgrass stands are too small to support populations of tidal marsh wildlife species (e.g., salt marsh common yellowthroat, marsh wren), but they provide foraging habitat for some species of waterbirds and cover for common wildlife species that occur in the adjacent uplands.
17. Project impacts to jurisdictional waters total 1.86 acres. These impacts include the following fill: Bay waters (1.84 acres) during Phase II, a seasonal wetland (0.014 acre) during Phase III, and a drainage ditch (0.003 acre) during Phase II. Project impacts to Bay waters are presented in Table 3: *Impact Construction Schedule*, in Attachment 2 to this Order (in the column “Decrease in Bay Surface Area at mean high water (MHW) [net]”). The 1.84 acres of Bay water fill will consist of placing fill in 0.92 acre of open waters to create new uplands and placing 0.92 acres of fill in open waters to create new shoreline revetments, associated with reconfiguration of Clinton Basin in Phase II of the Project (See Figure 6. *Oak to Ninth Avenue Development, Proposed Shoreline Improvements, South Park – Clinton Basin*, Figure 12. *Alternative 1 – Vertical Sheet Pile Bulkhead (Sheet Pile Option Shown – North Segment Only)*, (Moffat & Nichol; September 2010), Figure 14. *Impacts (At Bay Bottom), South Park - Clinton Basin, Surface Area Affected (At Bay Bottom)*, Figure 15. *Mitigation (At Bay Bottom), South Park - Clinton Basin, Surface Area Affected (At Bay Bottom)*, Figure 16. *Section A-A, South Park – Clinton Basin*, and Figure 17. *Section B-B, South Park – Clinton Basin*, in Attachment 2 to this Order). As is described in Finding 19, 0.50 acres of Bay fill will be removed when existing revetments are removed. Therefore, offsite mitigation is being required for net fill of 1.36 acres of fill, consisting of 1.34 acres of Bay fill and 0.017 acres of wetland and drainage ditch.
18. The Project will create 0.69 acres of open waters by removing upland soils, resulting in a net decrease of Bay Surface Area (at MHW) of 0.65 acre (solid fill) when compared with the net amount of 1.34-acres of Bay water impacts. Upland soil will be removed in the following increments: 0.04 acre at South Park (Clinton Basin) in Phase II of the Project; 0.64 acre at Channel Park in Phase II of the Project; and 0.01 acre at South Park (West) in Phase III of the

Project (see the far right column in Table 3: *Impact Construction Schedule*, in Attachment 2 to this Order, as well as Figures 4, 5, 6, 9, and 10 from *Oak to Ninth Avenue Development, Proposed Shoreline Improvements* (Moffat & Nichol; September 2010), Figure 14. *Impacts (At Bay Bottom)*, Figure 15. *Mitigation (At Bay Bottom)*, and the Figure 2. *Shoreline Phasing*, in Attachment 2 to this Order). Table 3: *Impact Construction Schedule*, in Attachment 2 to this Order, summarizes Bay excavation and fill quantities associated with each Project phase.

19. Armoring of currently un-armored sections of shoreline and rehabilitation of existing bank armoring will result in an increase of 0.42 acre of new shoreline revetment at the following locations: 0.35 acre (1,020 LF) at South Park (Clinton Basin) in Phase II of the Project; 0.02 acre (170 LF) at Channel Park in Phase II of the Project; and 0.05 acre (250 LF) along South Park (West) in Phase III of the Project. The rehabilitation of 1.13 acres of existing, deteriorating bank revetments will occur at the following locations: 0.01 acre (50 LF) at Shoreline Park (Ninth Avenue Wharf) in Phase I of the Project; 0.35 acre (560 LF) at Shoreline Park (West) in Phase II of the Project; 0.39 acres (1,340 LF) at South Park (Clinton Basin) in Phase II of the Project; 0.29 acre (1,200 LF) at Channel Park in Phase II of the Project; and 0.09 acre (700 LF) at South Park (West) in Phase III of the Project. Summaries of dredge and fill quantities for shoreline stabilization are presented in Table 1: *Construction Quantities*, and Table 3: *Impact Construction Schedule*, in Attachment 2 to this Order.
20. Fill of Bay waters in the Oakland Inner Harbor is an unavoidable impact of the Project. Along the Project's shoreline, the amount of new fill is the minimum necessary to provide bank stabilization. The majority of the Project's permanent impacts to open water will be associated with construction of the new shoreline promenade and the new Gateway Park at Clinton Basin. Bay fill will be used to stabilize and straighten the shoreline in order to create a uniform promenade edge around the marina. The existing eastern end of Clinton Basin will be filled to increase the size of the new Gateway Park, which will provide necessary space for public access between the end of Clinton Basin and the Embarcadero roadway. At present, the available space between Clinton Basin and the Embarcadero roadway limits movement between Project components constructed in Phase II and Phase III of the Project (See Figure 6. *Oak to Ninth Avenue Development, Proposed Shoreline Improvements, South Park – Clinton Basin*, Figure 12. *Alternative 1 – Vertical Sheet Pile Bulkhead (Sheet Pile Option Shown – North Segment Only)*, Figure 14. *Impacts (At Bay Bottom), South Park - Clinton Basin, Surface Area Affected (At Bay Bottom)*, Figure 15. *Mitigation (At Bay Bottom), South Park - Clinton Basin, Surface Area Affected (At Bay Bottom)*, Figure 16. *Section A-A, South Park – Clinton Basin*, Figure 17. *Section B-B, South Park – Clinton Basin*, in Attachment 2 to this Order). In July 2010, the Project design was modified to reduce Bay fill in Clinton Basin by 1.17 acres, from 1.71 acres to 0.54 acre, as shown in Table 2: *Permit Related Quantities*, in Attachment 2 to this Order. This reduction was accomplished by moving the proposed riprap shoreline on the western and eastern edges of Clinton Basin landward by 26.5 feet and the southern edge of Gateway Park landward by 63.75 feet.
21. The Discharger filed an application for Clean Water Act section 401 Water Quality Certification and Waste Discharge Requirements (WDRs) with the Regional Water Board on December 8, 2009. The application was subsequently completed by additional information submitted on September 30, 2010, November 29, 2010, October 15, 2013, and August 5, 2014.

22. The Discharger has applied to the U.S. Army Corps of Engineers (Corps) (Corps File No. 297020S) for an individual permit under section 404 of the Clean Water Act (33 U.S.C. § 1344), as amended, and section 10 of the Rivers and Harbors Act of 1899 (33 USC § 403), as amended. The Corps issued a Public Notice for the Project on September 5, 2012, (Corps File No. 29702S) but has not issued a permit for the Project at this time.
23. On July 16, 2012, the United States Fish & Wildlife Service (USFWS) provided informal consultation for the Project's potential impacts to the California least tern, under the authority of Section 7 of the Endangered Species Act (ESA) (Reference No. 81420-2011-I-0652). USFWS determined that the Project may affect, but is not likely to adversely affect California least tern. This determination was based on: (1) the three-mile distance of the Project Site from the closest known California least tern breeding colony; (2) scheduling dredging activities outside of the California least tern breeding season; (3) the lack of California least tern breeding habitat within the Project Site; and (4) the historic and current disturbed conditions of the sites.
24. The National Marine Fisheries Service (NMFS) provided consultation for the Project's impacts to listed species under the authority of Section 7 of the ESA, as amended (16 U.S.C. 1531 *et seq.*), and the Essential Fish Habitat (EFH) provisions of the Magnuson Stevens Fishery Conservation and Management Act, in the January 13, 2013, consultation on the Project (Reference No. 2011102282). The NMFS consultation evaluated the Project for potential adverse effects to threatened central California coast (CCC) steelhead, threatened green sturgeon, and designated critical habitat. The NMFS consultation concluded that, because of man-made changes to the Oakland Estuary, it no longer provides rearing habitat for CCC steelhead and, therefore, steelhead juveniles and adults are unlikely to occur in the vicinity of the Project during their seasonal migration through San Francisco Bay. For green sturgeon, the NMFS consultation concluded that there is a potential for fish to be impacted by demolition or construction impacts on water quality. The Project's demolition activities, construction of shoreline stabilization measures, placement of in-water fill, and pile driving activities will disturb the substrate and are likely to result in temporary increases in turbidity and re-suspension of contaminated sediments in the adjacent water column. Based on sediment data collected near the Project Site (See the tables in Attachment 4 to this Order), several contaminants of concern (e.g., PCBs PAHs, and copper) in sediment at the Project Site are present at concentrations above bio-accumulation triggers for Dredged Material Testing Thresholds for San Francisco Bay Area Sediments (Regional Water Board, May 2000 staff report, *Beneficial Reuse of Dredged Materials: Sediment Screening and Testing Guidelines*, or most current revised version). Any toxic metals and organics absorbed or adsorbed to fine-grained particulates in sediment may become biologically available to organisms either in the water column or through food chain processes. Although construction activities may be confined to a localized area, tides and currents can have a significant influence on the dispersal of suspended sediments and contaminants into adjacent areas. Increased levels of turbidity and contaminated sediments can affect listed fish species by disrupting normal feeding behavior, reducing growth rates, increasing stress levels, reducing respiratory functions, and other physiological impacts. To minimize impacts associated with turbidity and contaminants, the Discharger shall use silt curtains and/or sediment berms during excavation activities, cut piles at the mudline if they break off during extraction and only

schedule excavation and backfill activities during periods of low tide. With the implementation of these measures, NMFS anticipates that green sturgeon will not be exposed to suspended contaminated sediments and turbidity at levels that would result in significant behavioral and physical impacts. With implementation of the measures in provisions 7, 8, 9, and 10, NMFS has determined that the proposed project is not likely to adversely affect CCC steelhead, green sturgeon, or designated critical habitat.

25. Clinton Basin is known to contain sediments with high concentrations of contaminants of concern (e.g., PCBs PAHs, copper), and this significantly reduces the value of the area for foraging fish. Post-construction, the amount of area with contaminated sediments in the Clinton Basin will be reduced from pre-project levels, although an area of about 0.4 acres in the Clinton Basin containing contaminated sediment will be exposed during construction and remain exposed after construction is completed (*i.e.*, no revetment will be placed on top of these areas). The Project's creation of 0.64 acres of open water and mudflat habitat along 1,200 linear feet of Channel Park and the creation of 0.55 acres of tidal and open water habitat along the shoreline at Channel Park and South Park West are expected to provide uncontaminated areas with high habitat complexity and increased prey abundance for listed fish. The NMFS consultation concluded that, although forage resources for fish that feed on the benthos are expected to be temporarily reduced within different portions of the Project area during the various phases of multi-year construction activities, the forage area that will be lost comprises a small proportion of the total forage available to green sturgeon in the action area. In the long term, the restoration of open water and mudflat habitat is anticipated to increase the amount of natural cover and prey available to CCC steelhead and green sturgeon in the action area.
26. The Project's placement of 88 18-inch square or 18-inch octagonal concrete piles below MHHW at the new concrete boardwalk along Clinton Basin may affect green sturgeon through exposure to high underwater sound levels. The Project's placement of 14 steel piles for the Ninth Avenue Terminal Wharf at the mean tide line has the potential to injure or kill fish that may be exposed to high levels of elevated underwater sound pressure waves generated from the use of impact hammers to drive steel piles. However, the Project's NMFS consultation (see prior finding) states that hydroacoustic data collected from similar projects in the San Francisco Bay Area indicate that the use of an impact hammer to install the project's 18-inch concrete piles at the boardwalk will not result in sound levels that injure or kill fish. Disturbance and noise associated with preparations for pile driving will likely startle green sturgeon in the project vicinity and result in temporary dispersion from the action area. Because green sturgeon are benthically oriented, and are likely to detect vibrations in the substrate associated with construction, initial piling placement, pile driver set-up, and pile driving, they are not expected to remain within the area or enter into the area during pile driving. For green sturgeon that react behaviorally to the sound produced by pile driving, adequate water depths and carrying capacity in the open water area of the adjacent Oakland Estuary and Central San Francisco Bay provide fish sufficient area to disperse. For the seismic retrofit of the Ninth Avenue Terminal Wharf, all piles will be installed above the water line. Because the characteristic impedance of air is much lower than that of water, a sound source located above the water surface has less effect than under the water. High sound associated with the installation of steel piles at the wharf is expected to be attenuated by surrounding air

and avoid the creation of high underwater sound levels. Thus, for green sturgeon, the NMFS consultation concluded that the potential effects of high underwater sound levels associated with pile driving are expected to be insignificant.

27. Shallow nearshore and intertidal shoreline habitat will be permanently impacted by shading from the 0.84 acres of new boardwalk around Clinton Basin, with the greatest impacts anticipated along the southeast shoreline, due to its orientation relative to sun light. Shading by overwater structures has the potential to reduce the growth of submerged aquatic vegetation, decrease primary productivity, alter predator-prey interactions, change invertebrate assemblages, and reduce the density of benthic invertebrates. Removal of overwater structures at the Ninth Avenue Wharf and Shoreline Park West will reduce shading to EFH by 3.08 acres, and 0.59 acres of floating fill in Clinton Basin will also be removed. The NMFS consultation concluded that, overall, the Project will result in a significant net decrease in shading of EFH.
28. Habitat in the Project area will benefit from the removal of creosote-treated timber piles. Creosote, a distillate of coal tar, is a complex chemical mixture, up to 80 percent of which is comprised of polycyclic aromatic hydrocarbons, a class of chemical compounds that are acutely toxic to aquatic life. About 1,200 timber piles will be removed at Shoreline Park West, many of them treated with creosote. Piles shall be removed entirely or cut at the mudline.
29. The NMFS consultation determined that eelgrass and other submerged aquatic vegetation were not known to occur at the site. However, other ecologically important habitat-forming species were identified at the site, including native oysters (*Ostrea lurida*), which have been observed on creosote pilings, and the native brown rockweed (*Fucus distichus*), which has been documented in abundance along the rip-rap shorelines proposed for realignment, excavation, fill, and re-armoring. *Fucus* is a structuring algae that supports high productivity and biodiversity in the intertidal zone.
30. Development of the Project will reduce the amount of impervious surfaces at the Project Site, but impervious surfaces associated with proposed structures, parking lots, and streets will indirectly impact beneficial uses of the Lake Merritt Channel and the Oakland Inner Harbor through the discharge of urban runoff pollutants (e.g., oil and grease, heavy metals, pathogens, nutrients, pesticides). The Project will mitigate the impacts of stormwater runoff through implementation of the post-construction stormwater control measures described in provisions 21 through 26 and in Attachment 3 to this Order.
31. Impacts to the beneficial uses of the Lake Merritt Channel or Oakland Inner Harbor could also result from the discharge of sediments, construction wastes, or contaminated groundwater during construction. The Project will mitigate these potential impacts through the implementation of the best management practices (BMPs) described in provisions 7, 8, and 10 and by managing groundwater as described in provisions 31 and 32 and in Attachment 4 to this Order.
32. The Project will remove a net amount of 2.24 acres of shadow fill from the Project Site; this net amount results from the removal of 3.08 acres of shadow fill and the creation of 0.84 acres of shadow fill as part of the Project design. Removal of shadow fill will create more open water habitat for shorebirds, waterfowl, marine mammals, and other species that do not use

Bay waters under large piers. The 3.08 acres of shadow fill associated with the Ninth Avenue Wharf will be removed in Phase I of the Project: 1.48 acres of this shadow fill will be removed by dismantling the existing pier at the southwest corner of Shoreline Park (See Figure 8. *Oak to Ninth Avenue Development, Proposed Shoreline Improvements, Ninth Avenue Wharf*, and Figure 1. *Shoreline Phasing*), and 1.60 acres of this shadow fill will be removed at the western portion of the future Shoreline Park (See Figure 7. *Oak to Ninth Avenue Development, Proposed Shoreline Improvements, Shoreline Park – West*, and Figure 2. *Shoreline Phasing* in Attachment 2 of this Order). The Project will create 0.84 acres of new shadow fill under the new boardwalks at Clinton Basin in Phase II of the Project (See Figure 16. *Section A-A, South Park – Clinton Basin*, and Figure 17. *Section B-B, South Park – Clinton Basin*, in Attachment 2 to this Order).

33. The Project will remove 0.59 acres of floating fill in Clinton Basin when the existing marina is removed in Phase II of the Project.

Mitigation Plan

34. As part of mitigation for the Project's impacts to open waters and wetlands, the Discharger will provide offsite mitigation through the purchase of 1.4 acres of credits at the San Francisco Bay Wetland Mitigation Bank (Bank) (Corps File No. 2008 00046S). Mitigation credits through the Bank will offset a cumulative impact total of 1.36 acres to existing open waters (1.34 acres), a seasonal wetland (0.003 acres), and a drainage ditch (0.014 acres) as described in Finding 17.
35. As described in findings 32 and 33, the Project will remove a net amount of 2.24 acres of shadow fill from the Project Site; this net amount is resultant from the removal of 3.08 acres of shadow fill and the creation of 0.84 acres of shadow fill as part of the project design. Removal of shadow fill will create more open water habitat for shorebirds, waterfowl, marine mammals, and other species that do not use Bay waters under large piers. The Project will also remove 0.59 acres of floating fill from the Project Site.
36. As described in Finding 28, the Project will remove about 1,200 timber piles at Shoreline Park West, many of them treated with creosote.
37. As described in Finding 18, the Project will create 0.69 acres of new open Bay waters and/or mudflats in Phase I (0.64 acres along the shoreline of Channel Park), Phase II (0.04 acres at South Park), and Phase III (0.01 acres at South Park) of the Project.

Post-Construction Stormwater Management

38. Stormwater at the Project Site currently flows untreated directly to the Lake Merritt Channel and the Oakland Inner Harbor over land and via localized existing storm drain systems. The portion of the site to the east of Clinton Basin currently discharges untreated runoff through a piped storm drain system that outfalls at multiple locations along the shoreline (See the red "X"s in Figure 4. *Existing Condition*, in Attachment 1 to this Order). The area of the site between Clinton Basin and the Lake Merritt Channel does not have a significant amount of piped drainage and appears to primarily drain overland to the Lake Merritt Channel and the Oakland Inner Harbor; a concrete batch plant, a marina and automotive parts and service centers currently occupy this area. The Estuary Park area is served by a combination of piped

stormwater and overland runoff that discharges directly to the Lake Merritt Channel and the Oakland Inner Harbor.

The Project will reduce the amount of impervious surface area at the site by increasing open space areas, which will include several new parks, in addition to the existing Estuary Park that will remain as open space. The project will remove 14 of 21 outfalls (See Figure 4. *Existing Condition*, in Attachment 1 to this Order) and all of the open drain outfalls through the piers. The outfalls serving the Estuary Park area (Phase IA of the Project) are the only existing outfalls that will remain in use. The Project will construct 5 new outfalls to the Oakland Inner Harbor at the locations identified in Figure 5. *Proposed Conditions*, in Attachment 1 to this Order and Figure 4. *Stormwater Quality Control Plan*, in Attachment 3 to this Order. These outfalls are identified as follows: Outfall 1 – Channel Park; Outfall 2 – Clinton Basin West; Outfall 3 – Clinton Basin North; Outfall 4 – Clinton Basin East; and Outfall 5 – Shoreline Park. Outfalls 1 to 4 are located in areas with proposed shoreline improvements. Outfall 5 is located in an area where no shoreline improvements are proposed and therefore will require construction of a concrete outfall structure within existing bank armoring. Refer to figures 18, 19, and 20 in Attachment 2 to this Order for designs of the five new outfalls.

39. The Discharger submitted a report titled, *Oak to Ninth Avenue Project Stormwater Quality Management Plan*, (BKF Engineers, revised September 24, 2010), which describes the stormwater treatment BMPs for post-construction stormwater runoff from the Project's impervious surfaces. Stormwater treatment controls will be constructed concurrently with each phase of the Project, so that treatment is provided for each completed phase. The stormwater treatment BMPs will be constructed as described in Appendix A in Attachment 3 to this Order. Any changes to the BMPs in Attachment 3 to this Order must be submitted to the Executive Officer of the Regional Water Board for review and approval at least 90 days before construction starts on the phase of the Project that will be treated by the altered BMP proposal. Construction of that phase of the Project shall not commence until the Executive Officer has approved the altered BMP proposal (Construction consists of any disturbance of the site surface that is not directly related to the implementation of the RP/RAP described in Finding 6 of this Order).
40. Post-construction stormwater treatment controls will be implemented according to the following phases and as shown on the attached Stormwater Quality Control Plan (See Figure 1. *Stormwater Quality Control Plan* in Appendix A of Attachment 3 to this Order). Stormwater runoff from Phase I (Parcels A, B, C, F, G), identified as Impervious Area D, will be treated with a combined extended detention/bioretention area (identified as Treatment Area D in the summary of post-construction stormwater treatment in Attachment 3 to this Order and illustrated in Figure 5). Stormwater runoff from Phase II (Parcels D, E, H, and J), identified as Impervious Area C, will be treated using a bioretention area (Treatment Area C and illustrated in Figure 4 in Attachment 3 to this Order). Stormwater runoff from Phase III (Parcels K and L), identified as Impervious Area B, will be treated using a bioretention area (Treatment Area B and illustrated in Figure 3 in Attachment 3 to this Order). Stormwater runoff from Phase IV (Parcel M), identified as Impervious Area A, will be treated using a bioretention area (Treatment Area A and illustrated in Figure 2 in Attachment 3 to this Order). The locations of the four treatment areas for each of the four phases are illustrated in Figure 4. *Stormwater Quality Control Plan* in Appendix A in Attachment 3 to this Order.

Details of the treatment measures are illustrated in Figure 6 and Figure 7 in Attachment 3 to this Order.

Regional Water Board Jurisdiction

41. The Regional Water Board has determined to regulate the proposed discharge of fill materials into waters of the State by issuance of WDRs pursuant to section 13263 of the California Water Code (Water Code) and section 3857 of title 23 of the California Code of Regulations (23 CCR), in addition to issuing certification pursuant to 23 CCR §3859. The Regional Water Board considers WDRs necessary to adequately address impacts and mitigation to beneficial uses of waters of the State from the Project, to meet the objectives of the California Wetlands Conservation Policy (Executive Order W-59-93), and to accommodate and require appropriate changes to the Project.
42. The Regional Water Board provided public notice of the application and this Order on November 21, 2014.
43. This Order is effective only if the Discharger pays all of the required fees conditioned under 23 CCR and in accordance with Provision 27.

Ownership of Project Property

44. On April 9, 2013, the Discharger and Oakland Harbor Partners, LLC, signed the *Assignment and Assumption of Project Materials (Oak to Ninth-Brooklyn Basin)*. By signing this document and making the payments stipulated in the document, the Discharger acquired all of Oakland Harbor Partners, LLC's right, title, and interest in the Oak to Ninth/Brooklyn Basin project (the Project), including all rights under the following agreements, entitlements, and work products: the Purchase and Sale Agreement with the Port of Oakland; the Tideland Trust Exchange Agreement with the Port and the California State Lands Commission; all local land use entitlements related to the Project, including the Development Agreement with the City of Oakland; and all Project work products, including plans, contracts and permit applications. Subsequent to this initial transfer, the Discharger closed escrow on the Project property under the terms of the Purchase and Sale Agreement and the Exchange Agreement on June 10, 2013.

Regulatory Framework

45. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes implementation plans to achieve water quality objectives. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Resources Control Board, Office of Administrative Law, and U.S. EPA, where required.
46. The following water bodies are adjacent to the Project Site: Lake Merritt Channel; Oakland Estuary; Brooklyn Basin; and Clinton Basin. With the exception of the Lake Merritt Channel, these water bodies are part of the Oakland Inner Harbor. Figure 2. *Phasing Plan, Brooklyn Basin – Oak to 9th Development Plan* in Attachment 2 to this Order shows the locations of these water bodies with respect to the Project Site. The Basin Plan identifies the beneficial uses of the Oakland Inner Harbor as estuarine habitat (EST), wildlife habitat (WILD), water

contact recreation (REC1), non-contact water recreation (REC2), and navigation (NAV). The Basin Plan identifies the beneficial uses of the Lake Merritt Channel as ocean, commercial, and sport fishing (COMM), estuarine habitat (EST), wildlife habitat (WILD), water contact recreation (REC1), and non-contact water recreation (REC2). Potential project-related impacts to each of these six beneficial uses are discussed below.

47. Potential impacts to ocean, commercial, and sport fishing (COMM) are not likely to be significant. Although some areas of the shoreline will be inaccessible to fishing during Project construction activities along the shoreline, the Project will not have locally significant impacts on the amount of water accessible to fishing. The Project may also have long-term benefits on fishing by reducing the amount of contamination reaching the Lake Merritt Channel from historic contamination and urban runoff.
48. The Project is likely to have temporary impacts to estuarine habitat (EST) and wildlife habitat (WILD). Construction activities (e.g., excavation, soil stockpiling, boring, pile-driving, grading, dredging) would generate loose, erodible soils that, if not properly managed, could be washed into the Lake Merritt Channel or the Oakland Inner Harbor, increasing turbidity and potentially interfering with fish navigation and feeding behavior, as well as introducing any pollutants entrained with the sediment particles into waters of the State. Increased sound pressure levels from pile-driving could also injure, stun, or kill fish in the Oakland Inner Harbor. These potential, temporary impacts shall be minimized and/or avoided through the implementation of applicable BMPs, in accordance with provisions 6, 7, 8, 9, 10, 21, 22, 31, and 32.

Without appropriate mitigation measures, the project could potentially result in impacts to the California least tern. USFWS' informal consultation for the Project (Reference No. 81420-2011-I-0652; July 16, 2012) determined that the Project may affect, but is not likely to adversely affect, California least tern. This determination was based on: (1) the three-mile distance of the Project Site from the closest known California least tern breeding colony; (2) scheduling dredging activities during the August 1 to February 28 work window, which is outside of the California least tern breeding season; (3) the lack of California least tern breeding habitat within the Project Site; and (4) the historic and current disturbed conditions of the sites.

Without appropriate mitigation measures, the Project could result in impacts to threatened green sturgeon and designated critical habitat. The NMFS consultation for the Project concluded that there is a potential for fish to be impacted by demolition or construction impacts on water quality. About 1 acre of aquatic habitat (below MHW) along the Project Site shorelines will be subject to major construction activities, resulting in disturbance and permanent alteration of habitat. Algal and benthic invertebrate communities will be impacted. Soft estuarine mud, which will be disturbed through excavation, fill, and sediment disturbance during piling removal, provides habitat for important prey resources for fish. Rates of benthic recovery range from several months to several years for estuarine muds. Therefore, forage resources for fish that feed on the benthos are expected to be temporarily reduced within different portions of the Project area during the various phases of multi-year construction activities.

To minimize impacts associated with demolition and construction activities, the Discharger shall use silt curtains and/or sediment berms during excavation activities, cut piles at the

mudline if they break off during extraction and only schedule excavation and backfill activities during periods of low tide. With the implementation of these measures, the NMFS consultation concluded that green sturgeon will not be exposed to suspended contaminated sediments and turbidity at levels that would result in significant behavioral and physical impacts (See provisions 7, 8, and 10). Permanent impacts of the Project may benefit estuarine habitat and wildlife habitat by isolating residual contamination at the site from contact with waters of the State, removing 2.24 net acres of over-water shading, removing 0.59 acres of floating fill, removing treated wood pilings, and providing water quality treatment for stormwater runoff from the developed site. The potential creation of up to 0.69 acres of new open water and mudflat habitat along the shoreline of Channel Park and South Park is also likely to improve estuarine habitat and wildlife habitat.

49. The Project will reduce opportunities for water contact recreation (REC1), because the Project will remove the Clinton Basin marina.
50. The Project will benefit non-contact water recreation (REC2), because the Project will increase opportunities for public access to the shoreline at the site, including completion of a portion of the Bay Trail.
51. The Project will have no impacts to Navigation (NAV).
52. The Basin Plan Wetland Fill Policy (policy) establishes that there is to be no net loss of wetland acreage and no net loss of wetland value when the project and any proposed mitigation are evaluated together and that mitigation for wetland fill projects is to be located in the same area of the Region, whenever possible, as the project. The policy further establishes that wetland disturbance should be avoided whenever possible, and, if not possible, should be minimized, and only after avoidance and minimization of impacts should mitigation for lost wetlands be considered.
53. The goals of the California Wetlands Conservation Policy (Executive Order W-59-93, signed August 23, 1993) include ensuring “no overall loss” and achieving a “...long-term net gain in the quantity, quality, and permanence of wetland acreage and values...” Senate Concurrent Resolution No. 28 states that “[i]t is the intent of the legislature to preserve, protect, restore, and enhance California’s wetlands and the multiple resources which depend on them for benefit of the people of the State.” Section 13142.5 of the Water Code requires that the “highest priority shall be given to improving or eliminating discharges that adversely affect wetlands, estuaries, and other biologically sensitive areas.”
54. This Order applies to the permanent fill and indirect impacts to waters of the State associated with the Project, which is comprised of the components listed in findings 11 through 15. Construction of the Project will result in the net permanent placement of fill in 1.34 acres of jurisdictional open waters, consisting of open water in the Oakland Inner Harbor, and in 0.017 acres of seasonal wetlands in uplands.
55. The Discharger has submitted a Clean Water Act section 404 Alternatives Analysis and supplemental information to show that appropriate effort was made to avoid and then to minimize wetland and stream disturbance, as required by the Basin Plan. The Corps approved the Alternatives Analysis on December 10, 2013.
56. The California Environmental Quality Act (CEQA) requires all discretionary projects approved by public agencies to be in full compliance with CEQA, and requires a lead agency

(in this case, the City) to prepare an appropriate environmental document for such projects. The City prepared and certified the *Environmental Impact Report for the Oak to Ninth Mixed Use Development* (EIR) on June 20, 2006, State Clearinghouse No. 2004062013, and filed a Notice of Determination (NOD) with the Alameda County Clerk on June 23, 2006. The EIR found that significant impacts related to the filling of a small wetland and open waters of San Francisco Bay would be mitigated to less than significant levels by the creation of new open water or mudflats and the removal of shadow fill over Bay waters. Subsequent to the certification of the EIR, it was determined that created tidal marshes on public trust lands could not be preserved in perpetuity through a deed restriction or conservation easement. Therefore, Project impacts will be offset through the purchase of 1.4 acres of mitigation credits from the San Francisco Bay Wetland Mitigation Bank. The EIR also identified potentially significant impacts related to water quality from the Project but concluded that these impacts could be mitigated to less than significant levels through the mitigation measures identified in the EIR, such as compliance with the requirements of construction stormwater permits and municipal stormwater permits, issued by the State Water Resources Control Board and the Regional Water Board as National Pollutant Discharge Elimination System (NPDES) permits.

57. The Alameda County Superior Court Order in Case No. RG06-280345 and Case No. RG06-280471 found that the EIR, consisting of the Draft EIR, the Final EIR, and the Addendum to the EIR, prepared and certified by the City and the Oakland Redevelopment Agency in 2006 for the Oak to Ninth Avenue Project failed to comply with CEQA for the following reasons: it did not include a sufficient cumulative impact analysis for the land use section and for the population and housing section; the cumulative impact analyses for geology and seismicity, noise from traffic, hazardous materials, biological resources, visual quality, public services and recreation facilities, and utilities did not sufficiently consider the impact of the project when added to other closely related past and present projects; the traffic analysis relied on an improper ratio theory to evaluate cumulative impacts; and the seismic risk mitigation measures and findings were not supported by sufficient analysis or substantial evidence in the record. Of the subject areas subject to evaluation in the revised analysis for the EIR, only impacts to biological resources are within the jurisdictional purview of the Regional Water Board.
58. The assessment of impacts to biological resources in the revised EIR concluded that the cumulative impacts of past, present, and reasonably foreseeable future projects are not likely to have significant unmitigable impacts to biological resources. In part, this conclusion was based on the requirement for present and reasonably foreseeable future projects to implement mitigation measures consistent with the following regulations, laws, and policies to avoid adverse effects to existing biological resources: the federal and State Endangered Species Acts; the federal Clean Water Act; the City of Oakland Creek Protection Ordinance; and the City of Oakland Oak Tree Protection and Tree Preservation Removal Ordinance. Mitigation measures identified for the Project are typical of the types of mitigation measures required for all development projects located adjacent to wetlands or other jurisdictional waters and that involve construction activities near or in such waters. The mitigation measures that are most relevant to the Project include: avoidance; best management practices; and compensatory mitigation. Avoidance includes the avoidance of resources such as wetlands, special status species habitat, or trees with nesting birds during project design, construction, and operation;

and periods when those activities shall not occur to avoid direct and indirect impacts to certain species, based on behaviors of such species (e.g., breeding periods of certain bird species). Best management practices include standard measures to minimize impacts to waters of the State during construction and operation of the Project (See provisions 6 through 10 of this Order). Compensatory mitigation is provided to address temporary and permanent impacts to waters of the State; this mitigation provides for the replacement of impacted aquatic resources, as is described in greater detail in findings 34, 35, 36, and 37 and provisions 11 and 20 of this Order.

59. The City certified the revised EIR on January 20, 2009, and filed an NOD for the revised EIR with the Alameda County Clerk on January 22, 2009.
60. The Regional Water Board, as a responsible agency under CEQA, has considered the revised EIR, together with the record before the Regional Water Board, including public comments, and finds that the significant environmental impacts of the proposed activities, which are within the Regional Water Board's purview and jurisdiction, have been identified and mitigated to less than significant levels. Specifically, significant impacts from fill of open water and a small wetland and significant impacts to water quality will be mitigated through the mitigation requirements set forth in the EIR and this Order. Further, since certification of the EIR, changes have been incorporated into the Project such that the Project now results in 1.17 acres less of open water fill than was previously proposed by the Discharger and evaluated in the EIR; this reduction lessens the impacts from the fill of open water.
61. Pursuant to 23 CCR sections 3857 and 3859, the Regional Water Board is issuing WDRs and Water Quality Certification for the proposed Project.
62. The Regional Water Board has notified the Discharger and interested parties of its intent to issue WDRs and Water Quality Certification for the Project.
63. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to this Order.

IT IS HEREBY ORDERED that Zarsion-OHP I, LLC., in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with the following, pursuant to authority under Water Code sections 13263 and 13267:

A. Discharge Prohibitions

1. The direct discharge of wastes, including rubbish, refuse, bark, sawdust, or other solid wastes into surface waters or at any place where they would contact or where they would be eventually transported to surface waters, including flood plains, is prohibited.
2. The discharge of floating oil or other floating materials from any Project activity in quantities sufficient to cause deleterious bottom deposits, turbidity, or discoloration in surface waters is prohibited.
3. The discharge of silt, sand, clay, or other earthen materials from any Project activity in quantities sufficient to cause deleterious bottom deposits, turbidity, or discoloration in surface waters is prohibited.
4. The open water and wetland fill activities subject to these requirements shall not cause a nuisance as defined in Water Code §13050(m).
5. The discharge of decant water from the Project's fill sites and stockpile or storage areas to surface waters or surface water drainage courses is prohibited, except as conditionally allowed following the submittal of a discharge plan or plans as described in the Provisions.
6. The groundwater in the vicinity of the Project shall not be degraded as a result of the placement of fill for the Project.
7. The discharge of materials other than stormwater, which are not otherwise regulated by a separate NPDES permit or allowed by this Order, to waters of the State is prohibited.
8. The discharge of drilling muds to waters of the State, or to where such muds could be discharged to waters of the State, is prohibited.
9. The discharge of earthen fill, construction material, concrete, aggregate, rock rip-rap, and/or other fill materials to waters of the State is prohibited, except as expressly allowed herein.

B. Receiving Waters Limitations

1. The discharge shall not cause the following conditions to exist in waters of the State at any place:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam in concentrations that cause nuisance or adversely affect beneficial uses;
 - b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin; and
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or

which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge shall not cause nuisance, or adversely affect the beneficial uses of the receiving water.
3. The discharge shall not cause the following limits to be exceeded in waters of the State at any one place within one foot of the water surface:
 - a. Dissolved Oxygen: 5.0 mg/L, minimum
The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then the discharges shall not cause further reduction in ambient dissolved oxygen concentrations.
 - b. Dissolved Sulfide: 0.1 mg/L, maximum
 - c. pH: The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH by more than 0.5 pH units.
 - d. Un-ionized Ammonia: 0.025 mg/L as N, annual median; and 0.16 mg/L as N, maximum
 - e. Nutrients: Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
4. There shall be no violation of any water quality standard for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board.

C. Provisions

1. The Discharger shall comply with all Prohibitions, Receiving Water Limitations, and Provisions of this Order immediately upon adoption of this Order or as provided below.
2. The Discharger shall submit copies to the Regional Water Board of all necessary approvals and/or permits for the Project, including its associated mitigation, from applicable government agencies, including, but not limited to the City, the Corps, the Bay Conservation and Development Commission (BCDC), and the East Bay Municipal Utilities District (EBMUD). Copies shall be submitted to the Regional Water Board within 60 days after issuance of any permit or other approval.
3. In addition to the requirements of this Order, the Discharger shall comply with any other more stringent requirements imposed by the Corps, BCDC, and the City.
4. Construction shall not commence on any phase of the Project until all required documents, reports, plans, and studies required in the Provisions associated with that phase of the Project have been submitted to the Executive Officer or the Regional Water Board and found acceptable by the Executive Officer or the Regional Water Board.

5. Prior to placing any imported fill material along the shoreline of the Project Site, including all placement of fill in areas below the top of bank, the Discharger shall submit written documentation that the chemical concentrations in the imported fill soil are in compliance with the protocols specified in:
- The Dredged Material Management Office (DMMO) guidance document, *Guidelines for Implementing the Inland Testing Manual in the San Francisco Bay Region* (Corps Public Notice 01-01, or most current version) with the exception that the water column bioassay simulating in-bay unconfined aquatic disposal shall be replaced with the modified effluent elutriate test, as described in Appendix B of the Inland Testing Manual, for both water column toxicity and chemistry (DMMO suite of metals only); and,
 - Regional Water Board May 2000 staff report, *Beneficial Reuse of Dredged Materials: Sediment Screening and Testing Guidelines*, or most current revised version.

Regional Water Board staff shall review and approve data characterizing the quality of all material proposed for use as fill prior to placement of fill at any of the shoreline improvement areas at the Project Site. Modifications to these procedures may be approved on a case-by-case basis, pending the Discharger's ability to demonstrate that the imported fill material is unlikely to adversely impact beneficial uses.

Construction Best Management Practices (BMPs)

6. To be protective of the California least tern colony on the former Alameda Naval Air Station, located about three miles west of the Project Site, and to be consistent with the USFWS informal consultation for the Project, dredging activities may only occur during the August 1 to February 28 work window, which is outside of the California least tern breeding season.
7. To place fill over a 0.90 acre section of Clinton Basin at the site of the Gateway Park, steel sheet piles will be installed across the channel using a vibratory pile driver to enclose the fill site. Fill materials shall be carefully placed behind the sheet pile and shall not be dumped or dropped directly into open waters. To prevent fish from being trapped behind the bulkhead, a 15-foot-wide gap shall be left in the sheetpile while the gravel and rock filling is taking place. A turbidity curtain shall be used to minimize the discharge of suspended sediment. The curtain shall be deployed with sufficient space at the bottom to enable fish to move out of the area and discourage fish from entering the area. Prior to the full closure of the bulkhead, a seine shall be used by a biological monitor to guide any remaining fish out of the work site to open water in the Oakland Estuary. The gap in the bulkhead shall be sealed with more sheet piles immediately after seining, and filling will then be completed.
8. The Discharger shall implement the following measures to avoid negative impacts to aquatic organisms and habitat during construction:
- a. All in-water construction work will be limited to the period between June 1 and December 1.
 - b. To the maximum extent possible, work in tidal areas will be completed at low tide so as to minimize in-water work. To isolate earthwork activities from the tidal

waters of the Oakland Estuary, a temporary berm of existing fill materials will be left on the outboard edge of the shore, or work will occur during low tide periods. If a temporary berm is used, it will be removed upon completion of the work by excavating from the top of slope down to the existing mean tide line. Berm removal shall be completed at low tide.

- c. During demolition of overwater structures, fixed or floating platforms shall be installed beneath work sites to prevent material and debris from falling into the water.
 - d. Where necessary to conduct in-water grading work involving either excavation or placement of fill in tidal waters, a weighted silt curtain suspended from a floating boom shall be emplaced in the estuary around the perimeter of the work site. The curtain is intended to simultaneously exclude fish from active work areas and reduce turbidity in the estuary. A biological monitor shall be onsite whenever the turbidity curtains are being installed or moved, and inspect the curtained work areas prior to work commencing.
 - e. A biological monitor shall be on site during construction activities below the elevation of MHHW at the Gateway Park construction site.
 - f. Pile driving in Clinton Basin for the boardwalk shall occur at low tide when inundation of the near shore area is shallow or when the Bay floor at the pile driving location is fully exposed, whenever possible. Piles driven in waters greater than 1 foot in depth shall be driven using the soft-start procedure; piles shall be driven with the least force necessary; a wood cushion shall be placed between the impact hammer and pile top; and only one impact hammer shall be operated at a time.
 - g. Stormwater control measures, such as the installation of silt fences, shall be used to control or eliminate sediment discharges and other potential pollutants from entering the waterway during construction. These measures will be implemented according to a Storm Water Pollution Prevention Plan (SWPPP) in compliance with the statewide Construction General Permit (see provisions 21 and 22) and City of Oakland Creek Protection Permit.
9. New pilings installed for the Project shall be made of inert material (e.g., concrete) that will not leach contaminants into the waters of the Oakland Inner Harbor.
10. The Discharger shall implement the following Essential Fish Habitat (EFH) Conservation Recommendations, which were presented in the NMFS consultation to avoid, minimize, or otherwise offset anticipated adverse effects to EFH from contaminant exposure, sediment disturbance, shading, disturbance to existing native algae and permanent loss of subtidal habitat associated with Project construction:
- a. The Discharger shall develop a remedial action plan to minimize the exposure of aquatic organisms to contaminants associated with residual chemical concentrations in newly exposed sediment for each phase of Project construction. Remedial action plans shall be submitted to the Executive Officer at least 30 days prior to initiation of excavation activities along the shoreline of the Project Site for review and approval.
 - b. The Discharger shall minimize the disturbance of contaminated sediment during piling removal. If piles break and/or cannot be removed entirely, pilings shall be cut *at* the mudline, rather than *below* the mudline.

- c. To reduce impacts to EFH from shading at the Project Site, the Discharger shall incorporate light transmitting materials or design features into the new boardwalk along the southeast shoreline of Clinton Basin, to achieve a target of between 5 and 40 percent light transmittance.
- d. Where replacement of existing rip-rap and other hard intertidal structures is planned, the Discharger shall take actions to preserve the *Fucus* currently growing along the shoreline edges, as recommended in the Assessment of the Habitat Value of Pier Pilings (Zabin 2011) (See Attachment 5).

Compensatory Mitigation

11. To provide mitigation for the Project's impacts to waters of the State, the Discharger shall provide the following mitigation measures in conformance with the schedule in Table 3, *Impact/Mitigation Construction Schedule*, in Attachment 2 to this Order:
 - a. Purchase 1.4 acres of mitigation credits from the Bank as described in Finding 34;
 - b. Remove a net minimum of 2.24 acres of shadow fill from Bay waters as described in Finding 35;
 - c. Remove a minimum of 0.59 acres of floating fill from Clinton Basin as described in Finding 35;
 - d. Remove about 1,200 timber piles at Shoreline Park West, many of them treated with creosote, as described in Finding 36);
 - e. Create a minimum of 0.69 acres of new open water and/or mudflats, as described in findings 18 and 37; and
 - f. Document attaining at least 5 percent light transmittance in the new boardwalk constructed along the southeast shoreline of Clinton Basin.
12. Not later than 90 days prior to the start of construction for each phase of the Project (defined as site grading that is not solely related to the implementation of the RP/RAP described in Finding 6 of this Order), the Discharger shall submit final plans for the creation of each area of proposed open water and/or mudflat to be created in that phase of the Project to the Executive Officer for review and approval. Construction of each Project phase shall not start until the Executive Officer has approved the final mitigation plan for that phase.
13. As-built plans for each area of open water and/or mud flat created as mitigation for the Project's impacts to waters of the State site shall be prepared and submitted to the Executive Officer within six weeks of the completion of construction of each area of open water and/or mudflat. As-built plans shall be accompanied by an as-built report that describes any changes to the approved plans that were necessary during creation of open water and/or mudflat, as well as a technical justification for any design changes that were necessary in the field.
14. Within six weeks of completing the removal of any portion of shadow fill that is required by this Order as mitigation for Project impacts to waters of the State, the Discharger shall submit a report documenting the removal of the shadow fill to the Executive Officer.
15. Within six weeks of completing the removal of any creosote-treated timber pilings from the Project site that is required by this Order as mitigation for Project impacts to waters of the State, the Discharger shall submit a report documenting the removal of the timber pilings, including an estimate of the number of pilings completely removed and the number of pilings cut off at the mudline, to the Executive Officer.

16. Within six weeks of completing the boardwalk along the shore of Clinton Basin, the Discharger shall submit a report documenting the attainment of a minimum of 5 percent light transmittance in the boardwalk along the shoreline of Clinton Basin to the Executive Officer.

Monitoring and Reporting

17. All technical and monitoring reports required pursuant to this Order (e.g., provisions 5, 10, 11, 12, 13, 14, 15, 16, 18, 20, 22, 23, 24, and 25) are being required pursuant to section 13267 of the Water Code. Failure to submit reports in accordance with schedules established by this Order or failure to submit a report of sufficient technical quality acceptable to the Executive Officer may subject the Discharger to enforcement action pursuant to section 13268 of the Water Code.
18. Annual reports shall be submitted to the Regional Water Board by January 31 following each year of Project construction, until the required mitigation features have been implemented. Reports shall include an assessment of the amount of open water and/or mudflats created in each year of Project implementation, the amount of shadow fill removed and/or created in each year of Project implementation, the amount of creosote treated piles that have been removed in each year of Project implementation, and the amount of boardwalks along the shoreline of Clinton Basin that have been constructed with at least 5 percent light transmittance in each year of Project implementation. Reports shall include a description of the methods used to implement mitigation features and representative photographs of each mitigation feature. Reporting may be discontinued when all of the mitigation measures in findings 34 through 37 and Provision 20 have been implemented.

Electronic Reporting Format

19. In addition to print submittals, all reports submitted pursuant to this Order must be submitted as electronic files in PDF format. The Regional Water Board has implemented a document imaging system, which is ultimately intended to reduce the need for printed report storage space and streamline the public file review process. Documents in the imaging system may be viewed, and print copied made, by the public, during file reviews conducted at the Regional Water Board's office. All electronic files, whether in PDF or spreadsheet format, shall be submitted via email (only if the file size is less than 3 MB) or on CD. CD submittals may be included with the print report.

Notice of Mitigation Completion

20. Mitigation for impacts to open waters will be satisfied through documentation of the completion of the mitigation measures specified in Provision 11, in conformance with the schedule in Table 3, *Impact/Mitigation Construction Schedule*, in Attachment 2 to this Order:
 - a. Purchase of 1.4 acres of mitigation credits from the Bank; proof of such purchase shall be submitted to the Executive Officer no later than March 1, 2015;
 - b. Removal of a net minimum of 2.24 acres of shadow fill from Bay waters;
 - c. Removal of a minimum of 0.59 acres of floating fill from Clinton Basin;
 - d. Creation of a minimum of 0.69 acres of open waters and/or mudflats; and
 - e. Documentation of attaining at least 5 percent light transmittance in the new boardwalk constructed along the shoreline of Clinton Basin.

Project Site Stormwater Management

21. The Discharger shall comply with the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order No. 2012-0006-DWQ; NPDES Permit No. CAS000002).
22. The Discharger shall prepare and implement a site-specific Stormwater Pollution Prevention Plan (SWPPP) for the construction of each phase of the Project, in accordance with the requirements, provisions, limitations, and prohibitions of the General Construction Permit for discharges of stormwater associated with construction activity. Construction of each phase shall not commence until the Executive Officer has approved the SWPPP for that phase.
23. No later than 90 days prior to the start of construction for each of the four phases of the Project, the Discharger shall submit final plans for the post-construction stormwater treatment measures for the impervious surfaces that are to be created in that phase of the Project to the Executive Officer for review and approval. Stormwater treatment measures shall be consistent with the designs and phasing in Attachment 3 to this Order and findings 38, 39, and 40. Construction of each Project phase shall not start until the Executive Officer has approved the final designs for the post-construction stormwater treatment measures to be constructed for that phase (Note: "Construction of a phase" does not include work that is solely necessary to implement the RP/RAP described in Finding 6 of this Order).
24. As-built plans for the post-construction stormwater treatment feature for each phase of the Project shall be prepared and submitted to the Regional Water Board within six weeks of the completion of construction and planting of each post-construction stormwater treatment feature. As-built plans shall be accompanied by an as-built report that describes any changes to the approved plans that were necessary during construction of the stormwater treatment feature, as well as a technical justification for any design changes that were necessary in the field. The technical justification must demonstrate that the constructed treatment measure is consistent with the requirements of Regional Water Board Order No. R2-2009-0074 (see Attachment 3 to this Order).
25. The Discharger, or its successors, is required to ensure that the post-construction stormwater treatment BMPs described in the *Oak to Ninth Avenue Project Stormwater Quality Management Plan*, (BKF Engineers, revised September 24, 2010 (see Attachment 3 to this Order), or any alterations of those BMPs that receive approval from the Executive Officer are monitored, inspected, and maintained in perpetuity. Any transfer of this responsibility from the Discharger to another party must be approved by the Executive Officer before the responsibility may be transferred to another party. The City has conditioned the project (COA #38 of Exhibit C to City Approval Documents) to establish a Community Facilities District (CFD) or other similar funding mechanism for maintenance of parks, open space, and public right-of-way. Source control measures (e.g., marking of storm rain inlets, street sweeping, requirements for pesticide/fertilizer application, isolation of waste storage areas from stormwater runoff) and the maintenance of post-construction stormwater treatment BMPs (e.g., bioretention areas and detention areas) shall be among the Project Site maintenance items included as part of the CFD that is required prior to approval of the final map of the first phase of the Project. Before transferring any of the Discharger's responsibilities that are specified in the Provisions of this Order to a CDF, or similar entity, the Discharger shall submit the terms of such a transfer of responsibility to the Executive Officer for review and

approval. Upon approval of any such transfer of responsibility, the Discharger may apply to have this Order amended to reflect such a transfer of responsibilities for the implementation of source control measures and to ensure the monitoring, inspection, and maintenance of the post- construction stormwater treatment BMPs in perpetuity.

26. The *City of Oakland Source Control Measures to Limit Stormwater Pollution* (See Appendix B in Attachment 3 to this Order) shall be implemented at the Project Site, as appropriate for each Project phase.

Fees

27. This Order combines WDRs and Clean Water Act section 401 Water Quality Certification provisions. The application fee and annual fees shall reflect this, and consist of the following:

The fee amount for the WDRs and Water Quality Certification shall be in accordance with the current fee schedule, per CCR Division 3, Chapter 9, Article 1, section 2200(a)(3), based on the discharge size. The full application fee for the Project's fill of 1.36 acres of waters of the State is \$7,711, which must be paid in full to the Regional Water Board by February 1, 2015. After the initial year, annual fees in accordance with CCR Division 3, Chapter 9, Article 1, section 2200(a)(3) shall be billed annually to the Discharger until Project implementation is completed. The fee payment shall indicate the Order number, WDID number, and the applicable year.

General Provisions

28. The Discharger shall comply with all the Prohibitions, Effluent and Receiving Water Limitations, and Provisions of this Order immediately upon adoption of this Order or as provided in this Order.
29. All reports pursuant to these Provisions shall be prepared by professionals registered in the State of California.
30. The Discharger shall immediately notify the Regional Water Board by telephone and e-mail whenever an adverse condition occurs as a result of this discharge. Such a condition includes, but is not limited to, a violation of the conditions of this Order, a significant spill of petroleum products or toxic chemicals, or damage to control facilities that would cause noncompliance. Pursuant to Water Code §13267(b), a written notification of the adverse condition shall be submitted to the Regional Water Board within two weeks of occurrence. The written notification shall identify the adverse condition, describe the actions necessary to remedy the condition, and specify a timetable, subject to the modifications of the Regional Water Board, for the remedial actions.
31. Should discharges of otherwise uncontaminated groundwater contaminated with suspended sediment be required from the Project Site, where such discharges are not otherwise covered by an applicable NPDES permit, such discharges may be considered covered by the General Permit, following the submittal of a discharge/treatment plan, acceptable to the Executive Officer, at least 30 days prior to such a discharge.
32. Excavation dewatering may be performed in open excavation areas that extend below the water table both during remedial activities and during construction activities. All extracted groundwater will be either hauled offsite to a facility approved by DTSC, discharged to

EBMUD facilities, or discharged to a storm sewer or directly to surface water under an NPDES permit. At the time any specific phase of the Project is undertaken that will involve groundwater extraction, an analysis will be made as to whether it is cost effective and appropriate to discharge to EBMUD or to surface water. The procedures for discharging to EBMUD facilities or for discharging to surface water under an NPDES permit are generally described in Attachment 4 to this Order.

33. The Discharger shall notify the Regional Water Board in writing at least 30 days prior to the actual start date for each phase of the Project (i.e., prior to the start of grading or other construction activity for any Project component that is not solely related to the remediation of existing contamination at the Project Site).
34. The Discharger shall at all times fully implement and comply with the engineering plans, specifications, and technical reports that were submitted with its application for Water Quality Certification and the report of waste discharge, as well as any engineering plans, specifications, and technical reports that are subsequently submitted to the Regional Water Board in order to comply with this Order.
35. The Discharger is considered to have full responsibility for correcting any and all problems that arise in the event of a failure that results in an unauthorized release of waste or wastewater.
36. The discharge of any hazardous, designated, or non-hazardous waste as defined in Title 23, Division 3, Chapter 15 of the California Administrative Code, shall be disposed of in accordance with applicable state and federal regulations.
37. The Discharger shall remove and relocate any wastes that are discharged at any sites in violation of this Order.
38. In accordance with Water Code §13260, the Discharger shall file with the Regional Water Board a report of any proposed change in ownership or any material change in the character, location, or quantity of this waste discharge. Any proposed material change in the discharge requires approval by the Regional Water Board after a hearing under Water Code §13263. Material change includes, but is not be limited to, all significant new soil disturbances, all proposed expansion of development, or any change in drainage characteristics at the Project Site. For the purpose of this Order, this includes any proposed change in the boundaries of the area of wetland/waters of the State to be filled and mitigated.
39. The following standard conditions apply to this Order:
 - a. Every certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code §13330 and 23 CCR §3867.
 - b. Certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR §3855(b) and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

- c. Certification is conditioned upon total payment of any fee required pursuant to 23 CCR §3833 and owed by the Discharger.
40. The Discharger shall maintain a copy of this Order and all relevant plans and BMPs at the Project Site so as to be available at all times to site operating personnel and agencies.
41. The Discharger shall permit the Regional Water Board or its authorized representatives at all times, upon presentation of credentials:
 - a. Entry onto Project premises, including all areas on which water body fill or water body mitigation is located or in which records are kept.
 - b. Access to copy any records required to be kept under the terms and conditions of this Order.
 - c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this Order.
 - d. Sampling of any discharge or surface water covered by this Order.
42. This Order does not authorize commission of any act causing injury to the property of another or of the public; does not convey any property rights; does not remove liability under federal, State, or local laws, regulations or rules of other programs and agencies, nor does this Order authorize the discharge of wastes without appropriate permits from other agencies or organizations.
43. The Regional Water Board will consider rescission of this Order upon Project completion and the Executive Officer's acceptance of notices of completion of mitigation for all mitigation, creation, and enhancement projects required or otherwise permitted now or subsequently under this Order.
44. This WDRs and Water Quality Certification is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330 and 23 CCR §3867.
45. The Regional Water Board may add to or modify the conditions of this Order, as appropriate, to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.
46. This Order is not transferable.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, complete and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on January 21, 2015.

Bruce H. Wolfe
Executive Officer

Site No. 02-01-C1070
CIWQS Place ID Number 748052
CIWQS Regulatory Measure ID Number 394145
Corps File No. 29702S

Attachments:

- 1: Project Site Location, Existing Project Site Conditions, and Proposed Project Site Conditions
- 2: Project Phasing, Project Shoreline Improvement Designs, Construction Quantities Table, and Table of Permitted Fill Quantities
- 3: Post Construction Stormwater Treatment Measures for the Project Site
- 4: Groundwater and Soil Contamination Levels at the Project Site and Protocols for Discharging Contaminated Groundwater During Project Construction
- 5: Assessment of the Habitat Value of Pier Pilings (Zabin, 2011)