

San Francisco Water Transit Authority Expanded Ferry Service EIR

FINDINGS OF FACT AND STATEMENT OF OVERRIDING CONSIDERATIONS

INTRODUCTION

Project and Alternatives:

The San Francisco Water Transit Authority (WTA) is a regional agency established by the state of California for the purpose of evaluating options to improve and expand ferry service in the Bay Area. As required by its enabling legislation, the WTA has prepared an Implementation and Operations Plan (IOP) for presentation to the California Legislature. As also required by its enabling legislation, the WTA has prepared and considered an Environmental Impact Report (EIR) that describes the project, alternatives to the project, the adverse impacts of the project, and mitigation measures that would substantially reduce or avoid those impacts. The EIR is intended to inform decision-makers and the public of the adverse environmental impacts that would result from implementing the IOP (Proposed Project) or one of the project alternatives.

The purpose of the IOP is to increase regional mobility within the Bay Area by providing new and expanded ferry transit services and related ground transportation terminal access. The IOP does not represent a precisely fixed set of routes and terminal sites. Instead, it proposes a general program of development. The Proposed Project is based on the anticipated routes and terminals that would result from implementation of the IOP.

Under the Proposed Project, ferry routes serving the Bay Area would be increased from the existing seven routes to a total of 15 routes. The existing routes – Oakland to San Francisco, Alameda Point to San Francisco, Harbor Bay (Alameda) to San Francisco, Vallejo to San Francisco, Sausalito to San Francisco, Larkspur to San Francisco, and Tiburon to San Francisco – would be joined by new routes from Berkeley to San Francisco (2 routes), Richmond to San Francisco, San Francisco to Treasure Island, Antioch/Pittsburg to Martinez to San Francisco, Hercules/Rodeo to San Francisco, and Redwood City to San Francisco. These routes would be served by clean vessels only (exceeding Environmental Protection Agency 2007 Tier II air quality standards). With the exception of the Hercules/Rodeo terminal, all of the sites proposed for expanded ferry service are within existing marinas or ports and would not require substantial additional dredging. The Hercules/Rodeo terminal would need to be dredged.

The initial draft EIR examined four alternatives. Alternative 1 included most of the routes included in the Proposed Project, plus another 17 routes. These additional routes would extend service to Benicia/Martinez, San Leandro, Oakland Army Base, South San Francisco, Redwood City, Moffett Field, Hunters Point, Coyote Point, Foster City, East Palo Alto, and Port Sonoma. Alternative 2 included most of the routes included in the

Proposed Project, plus another 9 routes. The additional routes would have extended service to Benicia/Martinez, San Leandro, South San Francisco, Redwood City, Moffett Field, and Port Sonoma. Alternative 3 would focus on limited expansion of the existing ferry system by increasing the number of trips along the existing routes. Alternative 4, the No-Project alternative, consists of the continuation of existing ferry service, with minimal improvements. Ferry service would continue on existing routes at the existing rate of frequency.

Based on the responses received on the initial draft EIR, the WTA determined that Alternatives 1 and 2 are not feasible. As result, they are identified as alternatives considered, but rejected, in the revised draft EIR and have been eliminated from further consideration. The WTA developed the Proposed Project from the prior Alternative 2, with mitigations included as part of its design.

The project's EIR has been prepared by the WTA in compliance with the California Environmental Quality Act (CEQA, Public Resources Code Section 21000, et seq). The information and conclusions contained in the EIR reflect the WTA's independent judgement regarding the potential adverse environmental impacts of the Proposed Project and the project alternatives.

Required CEQA Findings of Fact:

CEQA requires the lead agency (i.e., WTA) to make written findings whenever it decides to approve a project for which an EIR was certified (Public Resources Code Section 21081). The findings explain how the lead agency approached the significant impacts identified in the EIR. "Significant impacts" includes those adverse effects of the project that can be reduced to a less-than-significant level as a result of the mitigation measures identified in the EIR. The State CEQA Guidelines (Title 14, California Code of Regulations) further explain the required findings.

Specifically, Section 15091 of the State CEQA Guidelines states that:

“(a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:

“(1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

“(2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

“(3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

“(b) The findings required by subsection (a) shall be supported by substantial evidence in the record.”

The “changes or alterations” referred to in the Guidelines may be mitigation measures, alternatives to the project, or changes to the project by the project proponent. “Substantial evidence” means factual evidence, including expert opinion supported by facts.

With respect to findings (a)(1) stated above, all measures contained in the final EIR that mitigate significant impacts associated with new ferry service (e.g., new ferry terminals, new ferry service routes) are within the authority and jurisdiction of the WTA. With respect to findings (a)(2) stated above, all measures contained in the final EIR that mitigate significant impacts associated with expanded ferry service (e.g. additional ferry service on existing routes and expansion of existing terminals) are within the jurisdiction of existing ferry service operators, such as Alameda/Oakland Ferry Service, Harbor Bay Maritime, Golden Gate Bridge, Highway and Transportation District, and Vallejo Transit.

In addition to describing the disposition of the various significant effects identified in the EIR, the findings must also explain why the project alternatives described in the EIR are not being selected for implementation. In other words, the WTA is required to describe the specific economic, legal, social, technological, or other considerations that make each alternative infeasible.

Required Statement of Overriding Considerations:

CEQA prohibits an agency from approving a project which will have significant, unavoidable environmental impacts unless the agency adopts a statement describing the specific benefits of the project that will outweigh its expected unavoidable impacts. If the project’s specific economic, legal, social, technological, or other benefits outweigh the unavoidable adverse environmental effects, those effects may be considered acceptable, notwithstanding the fact that they cannot be avoided. This “statement of overriding considerations” must be supported by substantial evidence (State CEQA Guidelines Section 15093).

FINDINGS OF FACT

The findings described below are organized by resource issue, in the same order as the project impacts appear in the revised Draft EIR prepared for the project. The findings of infeasibility being made for the project alternatives follow the individual impact findings.

PROPOSED PROJECT IMPACT FINDINGS

Dredging

Impact D-2: Dredging new channels to accommodate expanded ferry service could locally reduce water quality by exposing and suspending contaminated sediment.

Findings: The WTA hereby makes findings (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the findings:

(1) Mitigation measure D-2.1 provides that as part of the Dredge Materials Management Office (DMMO) dredging permit requirements, proposed dredging locations shall be sampled and tested to determine the existence and extent of any contamination.

Whenever contaminated materials are to be dredged, negative impacts on water quality shall be minimized through the use of the most appropriate dredge type and dredging techniques for each site. Engineering included in the plans and permits for dredging projects shall include the use of best management practices (BMPs) to reduce potential impacts to less than significant levels. These BMPs may include:

- Use of silt curtains, which prevent suspended sediment from migrating out of the immediate project area;
- Dredging only on the incoming tide;
- Hydraulic or closed clamshell dredging to reduce the generation of suspended sediments;
- Shunting, which involves pumping of the free water in a sediment holding barge to the bottom of the water body, which reduces turbidity; and
- Employment of an independent, certified, on-board dredging inspector to ensure compliance with permit conditions.
- Monitoring should be conducted during dredging to allow for the following:
 - Measurement of the efficiency of contaminated sediment removal;
 - Determination of dredged volumes;
 - Measurement of sediment re-suspension at the dredge site; and
 - Checking performance of barriers and other controls.

(2) The WTA will consult with the DMMO operated jointly by the San Francisco Bay Conservation and Development Commission (BCDC), Regional Water Quality Control Board (RWQCB), State Lands Commission (SLC), U.S. Environmental Protection

Agency, Region 9 (USEPA), and the U.S. Army Corps of Engineers, San Francisco District (USACE). The purpose of the DMMO is to cooperatively address dredge materials management issues, including sediment quality sampling. WTA will make an application to the DMMO which the member agencies will jointly review before issuing their individual authorizations. The DMMO permit requirements also include a Section 401 Water Quality Certification from the RWQCB, which will require implementation of appropriate BMPs if they are necessary to protect water quality.

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact D-4: Dredging activities could adversely impact threatened, endangered, or protected species.

Findings: The WTA hereby makes findings (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the findings:

(1) Pursuant to Mitigation Measure D-4.1, negative impacts on threatened, endangered, or protected species shall be minimized through use of dredge types and techniques and implementation of BMPs described under Impact D-2. Use of BMPs and appropriate dredging techniques will be part of the DMMO recommendation and incorporated as conditions for regulatory approval of the permit application.

(2) Pursuant to Mitigation Measure D-4.2, individual projects would undergo consultation with the resource agencies. This includes the agencies identified above in Impact D-2. Several mitigation measures have been utilized in previous projects to reduce or avoid impacts to biological resources related to dredging operations. These include the use of physical barriers such as silt curtains to contain the turbidity plume; selection of dredging equipment to reduce suspension of materials; and, if construction sequencing permits, restricting dredging in shallow water to between June 1 and November 30.

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact D-5: Dredging for construction of access channels to new ferry terminals could result in loss or disturbance of jurisdictional wetlands.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the finding:

(1) New channel dredging would only be necessary at the Hercules/Rodeo terminal. This site has not been identified as an area of wetland habitat.

(2) Implementation of Mitigation Measure B.1-1 will require as part of the environmental studies and documentation for specific projects that wetland areas be delineated on a site-specific basis, if present. Specific wetland boundary determinations shall be used to avoid disturbance of these resources when specific dredging plans are defined. In cases where wetland impacts are unavoidable, suitable compensatory mitigation shall be designed within the same subarea and implemented in consultation with the appropriate regulatory agencies.

(3) The Goals Project (1999) has described habitat restoration goals and 115 potential restoration sites around the Bay, representing tens of thousands of acres of potential habitat restoration. While not all of these sites may be within the same subarea, available, or suitable for the types of mitigation necessary for impacts from terminal construction, a substantial amount of area could potentially be used by the project proponent for compensatory mitigation. The total area of wetland impacts, though not calculated for this document, is expected to be minimal compared to the areas potentially available for mitigation.

(4) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Navigation

Impact NAV-1: Existing ferry service results in some navigational incidents, including accidents involving collisions, allisions, and groundings. There is a potential for an increase in these incidents with expansion of water transit service.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding(s):

(1) Mitigation measure NAV-1.1 will require the WTA to implement best practices to meet or exceed United States Coast Guard (USGC) requirements as recommended by the preliminary risk assessment prepared by ABS and cited in the EIR for this project. These practices include, but are not limited to, the following:

- Design and implement a preventive maintenance system that meets or exceeds manufacturer's service requirements.
- Require a licensed master to complete an extended familiarization training program aboard the hull and route before being qualified as master-in-charge. (Note: Program training should meet or exceed the requirements in the USCG National Maritime

Center Policy Letter 06-01 subj.: “Qualification for Issuance of Type Rating Endorsements Authorizing Service on High-Speed Craft.”)

- Design the terminal to facilitate docking under both prevailing and seasonal environmental conditions.
- When conditions make it difficult for the master-in-charge to effectively maintain situational awareness, assign another person to the bridge watch (i.e., another licensed master or a senior deckhand) to share the workload and serve as a safety double check.
- Design and install gangway systems (1) that help steady the ferry and hold it firmly to its dock, (2) that can be adjusted to accommodate changing environmental forces, and (3) that can be manipulated by crew having different physical abilities.
- Install, operate, and maintain technology (e.g., portable pilot units, and/or automatic identification system tracking and display) to facilitate communication of intent and to audit conformance with navigational protocols.
- Install, operate, and maintain a backup radar and separate power supplies for radars.
- Train/certify all bridge watchstanders in radar operation.
- Periodically survey the water depth in the vicinity of a terminal to identify shoaling, and set and maintain private markers to identify shoal water.
- Conduct periodic electrical safety inspections and daily check of ground faults. Install a bridge alarm/indicator that alerts the licensed master of the location of electrical shorts.
- Install and maintain a fixed fire suppression system that has sufficient capacity to flood the engine room twice with CO₂ or equivalent fire suppression agent.
- Eliminate or minimize hazardous materials used in maintenance and repair.
- Use a closed gauging system for checking fuel levels.
- Develop company policy and standard procedures for emergencies and adverse weather and normal operating conditions. Implement and enforce procedures through training and company communications. Audit conformance. Provide job aids for critical procedures. Policy and procedures manual and an operational training program will be developed using the guidance in the USCG Navigation and Vessel Inspection Circular 5-01 subj.: “Guidance for Enhancing the Operational Safety of Domestic High-Speed Vessels.”

(2) Elimination of all risk of navigational incidents is technologically infeasible. Human error, instrumental error, and equipment failure cannot be completely avoided. For example, commercial air travel involves highly trained flight crews, advanced avionics, strict aircraft maintenance regimes enforced by the federal government, advanced air traffic control, and modern weather forecasting, yet serious accidents occasionally occur.

(3) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Impact NAV-2: Increased numbers of ferry transits in the Bay may increase the risk of incidents (such as collision and near misses) between recreational water users (e.g., windsurfers) and ferries. This raises concerns for public safety, especially where windsurfers launch and sail in close proximity to ferry vessels.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) The WTA will implement mitigation measure NAV-2.1 requiring the appropriate training of crew of ferry vessels servicing new terminals located near existing windsurfing launch sites to reduce the risk of incidents involving ferries and windsurfers. Training shall include awareness of windsurfing locations and specific windsurfing events. The San Francisco Boardsailing Association should be encouraged to participate in the development and delivery of such training.

(2) Pursuant to mitigation measure NAV-2.2, specific ferry employees shall be designated to stand watch on the bridge of ferries on select routes to watch for navigational hazards (i.e., during periods of high use by windsurfers within the vicinity of selected terminal locations) to reduce the risk of incidents involving ferries and windsurfers.

(3) Elimination of all risk of navigational incidents is technologically infeasible. Human error, instrumental error, and equipment failure cannot be completely avoided. Inexperience or poor judgement on the part of recreational water users can lead to unexpected or unpredictable incidents.

(4) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Impact NAV-3: Increased numbers of ferry transits in the Bay may lead to an increased risk of collision between recreational boaters and ferries.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3) as stated in State CEQA Guidelines Section 15091, as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) As described under Impact NAV-2, the WTA will implement mitigation measure NAV-2.1 requiring the appropriate training of crew of ferry vessels servicing new terminals located near existing windsurfing launch sites. Such training will also increase crew awareness of and opportunities to avoid conflicts with recreational water craft.

(2) Mitigation measure NAV-3.1 will require additional training, education, and public advisory programs for recreational watercraft users related to navigational safety requirements could reduce the risk of incidents associated with expanded ferry service in the Bay. The project proponent could work with the Harbor Safety Committees (which include recreational boaters) and could fund or sponsor new education and advisory training programs and strengthen existing ones. Potentially affected recreational users, especially those docking at marinas located in the vicinity of proposed new ferry terminals, shall be reached through public notices.

(3) Pursuant to mitigation measure NAV-3.2, specific ferry employees shall be designated on selected ferries/routes to stand watch on the bridge for navigational hazards (i.e., during periods of high recreational use, such as weekends or race events, or when weather hazards exist) to reduce the risk of navigational incidents.

(4) Elimination of all risk of navigational incidents is technologically infeasible. Human error, instrumental error, and equipment failure cannot be completely avoided. Inexperience or poor judgement on the part of recreational water users can lead to unexpected or unpredictable incidents.

(5) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Wake Analysis

Impact WW-1: New routes and increased frequency of ferry trips across the Bay could increase the wave height (energy) at some shorelines, potentially causing increased erosion.

Findings: The WTA hereby makes findings (a)(1) and (a)(2) as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding(s):

(1) Mitigation measure WW-1.1 provides that ferry routes and service may need to be modified such that:

- The route alignments are maintained at more than 1,500 meters from potentially sensitive shorelines (e.g., mudflats, unprotected tidal marshes).

- Operation of the vessels (primarily speeds) are maintained such that predicted wake wave heights at the shoreline would be less than 16 cm.
- Operation of vessels are maintained such that predicted wake waves at the shoreline would be less than 50 percent of the average sustained wind wave height on a monthly basis.

If resulting ferry routes meet one or more of the above criteria, impacts would be less than significant.

(2) Pursuant to mitigation measure WW-1.2, new ferry routes could potentially be modified to redirect energy away from sensitive habitats, to reduce or eliminate increased wake energy. Adjustment to routes can be used to focus wave energy on rocky or armored shorelines or to direct energy away from sensitive areas. Detailed wave refraction, diffraction, and reflection analysis would be required to predict the efficacy of wave energy focussing.

(3) Mitigation measure WW-1.3 will require the use of existing low-wake vessel technology to reduce both the total wake wash energy and heights of individual waves.

(4) Mitigation measure WW-1.4 will require WTA to implement operational adjustments, such as slowing down vessels, to reduce wake energy near sensitive tidal marsh habitat. The change in wave form (and hence wave period) would also be considered because high-speed ferries generate a different wave patterns at high (operating) and low (motoring) speeds.

(5) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact WW-2: Increased frequency of ferry trips across the Bay could increase the wave heights at surrounding marinas, potentially damaging moored vessels and interfering with recreational users.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Individual wave height is the primary factor of concern for impacts at unprotected marinas, due to the potential for damage to moored vessels, docks, etc., or potential safety issues for users of the marina. Mitigation measures WW-1.1, WW-1.2, WW-1.3, or WW-1.4 will be implemented to reduce this impact to a less-than-significant level.

(2) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact WW-3: Wake wash impacts from increased ferry service could have an adverse effect on California clapper rail, a listed species, by inundating nests.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3) as stated in State CEQA Guidelines Section 15091, as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Mitigation measure WW-3.1 provides that where any shoreline areas have potential clapper rail nesting habitat within 50 meters of the edge of a marshland (or within marshland that does not appear healthy and could limit attenuation of wave energy as a result) and are along a proposed ferry route, habitat surveys should be conducted to determine whether nesting sites exist. If nesting sites or suitable nesting habitat do exist within 50 meters of the edge of the marshland, site-specific measurements of wake attenuation should be performed at the potential site to determine whether wash will be an issue. An analysis such as that provided as part of the documentation for the Wave Height Analysis for Flood Insurance Studies (WHAFIS) model could be used to predict wave propagation and decay at high water (FEMA 1988). If the measurements/calculations indicate that nest inundation could potentially occur, one of the mitigation measures WW-3.2, WW-3.3, or WW-3.4 may be necessary. For nesting sites more than 50 meters inland from the edge of the marshland, no significant impacts would occur.

(2) Pursuant to mitigation measure WW-3.2, the use of existing low-wake vessel technology could reduce both the total wake wash energy and height of individual waves. Use of this mitigation in areas where clapper rail nests are within 50 meters of the shoreline could reduce impacts to less than significant levels.

(3) Pursuant to mitigation measure WW-3.3, new ferry routes could be adjusted to redirect energy away from sensitive habitat or to reduce or eliminate increased wake energy. Use of this mitigation in areas where clapper rail nests are within 50 meters of the shoreline could reduce impacts to less than significant levels.

(4) Mitigation measure WW-3.4 will require that operational adjustments, such as slowing the vessel down near sensitive areas, be performed during ferry operation to reduce wake energy. Use of this mitigation in areas where clapper rail nests are within 50 meters of the shoreline could reduce impacts to less-than-significant levels.

(5) Mitigation measures WW-3.1, WW-3.2, WW-3.3, and WW-3.4 could involve compromises in service and cost, which would need to be evaluated on a route-by-route basis. Reducing this impact to a less-than-significant level may be infeasible for practical reasons if avoiding significance was only possible through elimination of the route or if avoidance would substantially increase travel times making the route noncompetitive when compared to other travel modes. The WTA is legally obligated by its enabling

legislation (Government Code Section 66540.20) to “provide new or expanded water transit services,” so its ability to drop routes is limited.

(6) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Impact WW-4: Wake wash impacts from increased ferry service could have an adverse effect on Pacific harbor seals at haul-out sites. This includes routes that pass near seal haul-out sites, in particular Yerba Buena Island and Castro Rocks. The Proposed Project also includes new routes across the Bay, with the potential to impact areas not currently served by water transit.

Finding: The WTA hereby makes finding (a)(1) and (a)(2) as stated in State CEQA Guidelines Section 15091, as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Mitigation measure WW-4.1 will require that ferry routes should be at least 300 meters from the Castro Rocks and Yerba Buena Island haul-out sites to reduce disturbance to the animals at these locations.

(2) The National Marine Fisheries Service (NMFS) currently has guidelines for avoidance of marine mammals to reduce disturbance. For seals and sea lions, the minimum avoidance distance for haul-out sites is 30 meters. Distances discussed from the literature show that, in general, seals tend to flush at greater distances than those in the NMFS guidelines. Accordingly, the mitigation measure will employ a more conservative distance in order to reduce this impact to a less-than-significant level.

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Water Resources

Impact W-1: Construction and operation of terminal facilities, including parking lots, access roads, and buildings, would increase the amount of impervious surface at terminal sites, causing an increase in stormwater discharge. If the stormwater came in contact with pollutants or disturbed soil, discharge of the runoff could impact the quality of the receiving water.

Findings: The WTA hereby makes findings (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Adoption of BMPs during construction to prevent, minimize, and clean up spills and leaks from construction equipment, as required under mitigation measure W-1.1, would reduce the potential for impacts to water quality. Examples of BMPs include:

- refueling and maintenance of equipment only in designated lined and/or bermed areas;
- isolating hazardous materials from stormwater exposure; and
- preparing and implementing spill contingency plans in specified areas.

Storage and parking of any equipment with a fuel tank or other oil tank, such as heavy excavation machinery, shall take into account oil spill prevention regulations to ensure that the area is free of drains or other avenues through which spills may escape containment.

(2) Pursuant to mitigation measure W-1.2, new terminal facilities shall be designed such that stormwater runoff would be controlled and discharged in an appropriate manner. Construction and industrial stormwater National Pollution Discharge Elimination System (NPDES) permits would be required, and BMPs shall be adopted to reduce the chance of pollutants entering surface and groundwater, thereby reducing the potential for impacts to water quality. Typical pollution control measures include BMPs designed to reduce the quantities used of materials that may produce pollutants, changing the way various products and materials are handled or stored, employing various structural devices to catch and restrict the release of pollutants, and establishing appropriate responses to spills and leaks. Examples of BMPs include:

- temporary silt fencing;
- protection devices such as rock aprons at pipe outlets;
- stabilized pads of aggregate at points where construction traffic would be leaving an unimproved construction site to enter a public street;
- temporary drain inlet protection devices such as filter fabric and sand bags;
- concrete washouts for cement mixers;

- preservation of existing vegetation; and
- vehicle and equipment cleaning.

(3) Consideration and issuance of NPDES permits is the responsibility of the RWQCB. The RWQCB is authorized to place conditions on the NPDES permits, as discussed above.

(4) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact W-3: Increased ferry transits could increase the potential for fuel spills and water quality degradation in the Bay.

Findings: The WTA hereby makes findings (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Pursuant to mitigation measure WW-3.1, the WTA will incorporate safety issues identified by the Harbor Safety Committee into the annual review of the Harbor Safety Plan reviewed and approved by the state Oil Spill Prevention and Response Administrator.

(2) Pursuant to mitigation measure WW-3.2, ferry operators shall update their contingency plans and continue to use emergency response services for pollution incidents. As part of the ferry expansion program, the contingency plans, drill exercises, and emergency response service agreements will be reviewed and modified, if necessary, to reduce potential impacts to water resources resulting from spills. Such modifications would include ensuring that all of the spill response equipment required at new terminals is available. The work of updating and expanding the spill response plans should be based on NOAA's Environmental Sensitivity Index (ESI).

(3) Pursuant to mitigation measure W-3.3, a regular program shall be developed and maintained to train fueling operators on correct fueling methods to minimize spills due to human error or improper use of equipment that would decrease the potential for spills.

(4) Mitigation measure W-3.4 will require that new vessels to be adopted in a ferry expansion program and the equipment to service any new fleets shall include technological designs to avoid fuel spills.

(5) Mitigation measure W-3.5 provides that applicable measures recommended by the Ferry Safety Plan (ABS Consulting 2002) shall be adopted to minimize safety risks and prevent navigational incidents with the potential for spills. Ferry operators must take those new measures into account in their updates to contingency plans and OSRO service agreements.

(6) The California Oil Spill Prevention and Response Administrator would be responsible for reviewing and approving the plan revision required under mitigation measure WW-3.1. Several Oil Spill Response Organizations (OSROs) operate in the Bay and collaborate with the USCG, California Office of Spill Prevention and Response (OSPR), and other organizations in the Unified Command System during drills and spill responses. Ferry operators have retained OSRO services and maintain response equipment on board vessels and at ferry terminals. Review of updates and modifications to plans will be done under the USCG's regular oversight of oil spill contingency plans.

(7) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Biology

Impact B-1: Loss of jurisdictional wetland habitat could occur as a result of dredging and the construction of terminal facilities.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Mitigation measure B-1.1 provides that as part of the environmental studies and documentation prepared for specific projects, wetland areas should be delineated on a site-specific basis. Specific wetland boundary determinations shall be used to avoid disturbance of these resources when specific terminal layout plans are defined. In cases where wetland impacts are unavoidable, suitable compensatory mitigation shall be designed within the same subarea and implemented in consultation with the appropriate regulatory agencies.

The Goals Project (1999) has described habitat restoration goals and 115 potential restoration sites around the Bay, representing tens of thousands of acres of potential habitat restoration. While not all of these sites may be within the same subarea, available, or suitable for the types of mitigation necessary for impacts from terminal construction, a substantial amount of area could potentially be used by the project proponent for compensatory mitigation. The total area of wetland impacts, though not calculated for this SEIR, is expected to be minimal compared to the areas potentially available for mitigation.

(2) The need for dredging of channels has been minimized, with only the Hercules/Rodeo site predicted to potentially require new dredging of an access channel. There is an unknown potential for minor incidental dredging for installation or upgrading of facilities. The Hercules/Rodeo site has not been regionally identified as an area of

wetland habitat, and therefore impacts to wetlands are not expected from any needed dredging activity at that site.

(3) At the regional level of evaluation, mapped wetland areas potentially occur at the Pittsburg/Antioch and Martinez terminal sites. Also, areas of tidal marsh are located in the vicinity of the existing Larkspur terminal. The Proposed Project does not include site-specific plans. Accordingly, the precise locations of future improvements (i.e., dredging, terminals, parking, etc.) are not known at this time. Given this level of detail, the WTA cannot be certain that improvements will not adversely affect this resource. While mitigation measure B-1.1 will require site-specific mitigation measures to be developed and compensatory mitigation to be undertaken, avoidance of all impacts to existing wetlands may be technologically infeasible where there are no siting or design options to building or dredging wetlands in order to accommodate new facilities.

(4) The WTA is legally obligated by its enabling legislation (Government Code Section 66540.20) to “provide new or expanded water transit services,” so its ability to drop routes is limited.

(5) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Impact B-2: Construction of terminals could result in increased potential for the spread of invasive nonnative plant species in disturbed habitats.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Pursuant to mitigation measure B-2.1, preconstruction surveys by a qualified biologist/botanist shall be conducted to identify and map areas of smooth cordgrass within potential terminal locations where this species could potentially occur. Identified areas of nonnative cordgrass, if falling within areas of disturbance, shall be removed to the extent feasible prior to construction activities. The methods of removal shall be developed in coordination with the USACE. Eradication of this species at a site shall be done well in advance of construction. However, depending upon the extent, complete removal may be infeasible. In this case, funding of an area-wide cordgrass eradication program would be used as mitigation.

(2) Dredging in areas of nonnative cordgrass infestations could increase the spread of this species by creating root fragments and rhizomes that could disperse with the tides. However, as discussed for Impact B-1, dredging is limited within the Proposed Project to the Hercules/Rodeo site, and regional-level information does not identify this as a site of concern for nonnative cordgrass. Erosion from ferry operations, which could disperse

root fragments and rhizomes, is not expected to be significant when using the prescribed measure discussed under Impact WW-1 (i.e., mitigation measures WW-1.1 through WW-1.4).

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact B-3: Project construction could result in the disturbance of “Special Aquatic Sites,” including eelgrass beds, mudflats, and wetlands.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Pursuant to mitigation measure B-3.1, disturbance of eelgrass beds and mudflats shall be avoided in the design of project features and the routing of ferries.

(2) Mitigation measure B-3.2 requires that as part of the environmental studies and documentation for specific projects, specific areas of eelgrass beds and mudflats that could be impacted shall be specifically determined.

The general locations of eelgrass beds in the Bay were mapped in the late 1980s. If any project construction were to occur in the vicinity of any of these known beds, updated mapping of the extent of the beds should be conducted. Methods include use of side-scan sonar techniques, possibly in conjunction with other techniques such as visual surveys. In addition, areas that are less than 3 meters deep may have a reasonable potential to support eelgrass while areas less than 1.5 meters deep have a moderate potential to support eelgrass. Areas such as these should be surveyed to determine the current status of eelgrass prior to design and construction, and this information shall be used to avoid or substantially minimize impacts.

(3) Pursuant to mitigation measure B-3.2, in cases where impacts to eelgrass beds or mudflats are unavoidable, suitable compensatory mitigation shall be designed in consultation with the appropriate state and federal agencies such as the USACE, US EPA, DFG, RWQCB, and BCDC. These agencies will exert regulatory control in cases where project implementation triggers the need for permits or certifications.

If impacts to eelgrass are unavoidable or impacts cannot be reduced to an acceptable level, compensation or offsetting mitigation shall be further investigated. Mitigation shall provide enhanced functions and values relative to the impacted special aquatic sites. A mitigation plan shall be prepared that identifies the specific habitat restoration methods, the criteria to be used for monitoring and evaluating the success of the mitigation effort, and a contingency plan if the mitigation fails.

(3) Pursuant to mitigation measure B-3.3, indirect impacts to eelgrass beds from sedimentation shall be avoided or reduced through the use of silt curtains to protect the beds from sedimentation or other methods that would otherwise protect the eelgrass from turbidity plumes generated during dredging. Mitigation for indirect effects would need to be evaluated on a case-by-case basis as the techniques used may differ from site to site. For example, at a given location, the specific dredging requirements and the potential for sediment plume generation and specific areas that may be impacted by the sediment plume should be evaluated. If it appears eelgrass could be affected by sedimentation, then site-specific conditions (depth, etc.) and local tidal currents shall be assessed to determine the best way to deploy mitigation, such as silt curtains.

(4) Wetlands impacts will be at least partially avoided pursuant to mitigation measure B-1.1. Wetland impacts cannot be fully avoided, as discussed in the findings for Impact 3.1, above.

(5) Very little eelgrass mitigation has been done in San Francisco Bay and mitigation of eelgrass impacts may not be feasible or successful in all cases. Reducing the impact on eelgrass may be infeasible due to current technological limitations on restoration techniques.

(6) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Impact B-7: Dredging could adversely affect fish species near the construction activities.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) As discussed under Dredging, mitigation measures D-4.1 and D-4.2 will limit the types of dredges and techniques of use and apply BMPs to avoid significant impacts.

(2) Construction dredging would only be potentially necessary at the Hercules/Rodeo terminal site. Implementation of site-specific mitigation measures at the project level, as required under mitigation measures D-4.1 and D-4.2, would further reduce Impact B-7 to less than significant levels.

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact B-9: Underwater noise from pile driving and other construction activities could affect nearby fish.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Mitigation measure B-9.1 provides that mitigation for this potential impact shall be evaluated on a site-specific basis. Once specific designs and construction specifications for a particular site are known, sound pressure levels shall be estimated to the extent possible. During initial pile driving efforts, the area around the in-water pile driving activities shall be monitored for signs that fish are being injured (e.g., floating on the surface, birds moving in to prey on dead or injured fish). Measures to reduce sound pressure levels in surrounding waters, such as placing bubble jackets surrounding the piles, shall be deployed if sound pressure levels exceed those that could harm fish.

(2) Fish could be temporarily displaced by noise from construction activities (barges, workboats, etc.), but would return once the construction activities ceased. Recent experience in San Francisco Bay during a pile installation test for the Bay Bridge East Span indicated that the use of large pile drivers can result in the mortality of fish that have swim bladders (Caltrans 2001). Pile driving for the Bay Bridge East Span test resulted in fish deaths. The Bay Bridge project, however, is using large (8-foot diameter, approximately 300-foot) steel piles and some of the largest pile driving hammers available. Fish mortality has also occurred at the construction site of the new Benicia-Martinez Bridge on the Carquinez Strait, again using relatively large-diameter steel piles. Widening of the San Mateo Bridge required the driving of 900-1,200 concrete piles with 2- to 3-foot diameters. No fish kills were reported during this pile driving operation (Morrow 2003). Pile driving for terminal facilities would likely include small diameter concrete piles, such as those used for the San Mateo Bridge and therefore would be unlikely to have the same sorts of impacts as bridge projects using much larger piles.

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact B-10: Construction could result in the loss of habitat for shorebirds and wetland species.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Mitigation measures B-1.1, B-3.1, B-3.2, and B-3.3, discussed above, would be implemented to reduce the impact below the level of significance. These require the preparation of site-specific mitigation measures including design, avoidance, and habitat replacement or compensation.

(2) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact B-11: Ferry traffic (primarily in South Bay) could disturb roosting and foraging waterfowl in shallow areas of the Bay.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Mitigation measure B-11.1 provides that ferry routes shall be consolidated within common corridors, travel down deeper channel areas as much as possible, and choose the shortest routes across shallow areas to leave as much undisturbed shallow open-water habitat as possible.

(2) Most routes for the Proposed Project would be in deeper channel areas and areas where ship traffic already routinely travels. The largest number of transects would occur in the Central Bay, where large rafts of birds do not generally occur due to the deeper waters found there. Most of the Proposed Project routes are located in areas where existing ferry and other ship traffic occurs. Only the Hercules/Rodeo terminal location would cross a shallow area not routinely used by vessel traffic. Routes to Oyster Point and Redwood City would also cross shallow areas used by waterfowl. These areas currently experience relatively light vessel traffic, and under the Proposed Project would experience more routine disturbance. This disturbance would not result in a permanent loss of habitat, but rather the area of habitat where disturbance may take place. Waterfowl may use these areas when ferries are not present.

(3) As discussed in the EIR for the Proposed Project (Impact B-11), there is evidence that waterfowl habituate to repeated disturbances and avoid areas that experience routine disturbance. For example, studies in Denmark showed that waterfowl annually redistributed themselves to areas of lesser routine disturbance, depending on which areas of a lake were set up as refuges (Madsen 1994). This suggests that waterfowl may become accustomed to the ferry traffic and avoid the direct path of the vessel routes. If birds avoided the vessel corridors, this would potentially reduce the frequency of disturbance to the birds and lessen the likelihood that birds would be struck by the vessels.

(4) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact B-13: Underwater pile driving noise could disturb marine mammals.

Findings: The WTA hereby makes findings (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

- (1) Mitigation measure B-13.1 provides that an Incidental Harassment Authorization may be needed from NMFS for pile driving activities, particularly if activities are to occur near sensitive areas such as haul-out sites. Redwood City is near a haul-out site. Pre-construction surveys shall be conducted to determine use of the area by marine mammals before pile driving begins. Marine mammal monitoring shall be conducted during construction in conjunction with underwater noise monitoring. A “safety zone” shall be established based on the initial monitoring. Pile driving activities shall not commence until marine mammals are not sighted within the safety zone for approximately 15 to 30 minutes.
- (2) NMFS will be responsible for reviewing and approving the Incidental Harassment Authorization request. In granting the request, NMFS is authorized to impose conditions that would reduce the potential for harassment.
- (3) The potential for adverse underwater sound pressure levels during construction would depend largely on whether in-water piles are necessary for terminal or docking facilities, the types and sizes of piles necessary, the substrate and depth of the area where piles are needed, and the proximity of pile driving activities to sensitive areas such as haul-out and feeding locations. NMFS considers, as a guideline, underwater sound pressure levels at or above 160 dB re 1 μ Pa as constituting harassment to marine mammals. As discussed in the EIR (discussion of Impact B-13), Caltrans measured sound pressure levels exceeding this guideline in areas near the installation of a test pile for the Bay Bridge East Span Project. Any work that could result in sound pressure levels exceeding NMFS guidelines would be considered significant. However, as discussed in the EIR (discussion of Impact B-9), pile driving for terminal facilities would involve much smaller (24- to 36-inch-diameter) piles than the piles used for the Bay Bridge project, and sound pressure levels are unlikely to be above the NMFS guideline values. Furthermore, most potential new construction, with the exception of Redwood City, would not occur near major haul-out sites.
- (4) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact B-14: Transiting ferries could disturb marine mammals resting at haul-out sites.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Mitigation measures B-14.1 and WW-4.1 provide that ferry routes shall be at least 300 meters from the Castro Rocks and Yerba Buena Island haul-out sites to reduce disturbance to the animals at these locations.

(2) The National Marine Fisheries Service (NMFS) currently has guidelines for avoidance of marine mammals to reduce disturbance. For seals and sea lions, the minimum avoidance distance for haul-out sites is 30 meters. Distances discussed from the literature show that, in general, seals tend to flush at greater distances than those in the NMFS guidelines. Accordingly, the mitigation measure will employ a more conservative distance in order to reduce this impact to a less-than-significant level.

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact B-15: High speed ferries could potentially strike gray whales.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Pursuant to mitigation measure B-15.1, ferry operators shall be aware of the potential for whales entering the Bay and should know how to spot whales at the surface. The USCG reports whale sightings and distance to vessels when they receive a report of a whale sighting. Ferry captains shall be made aware of these reports and exercise diligence when a whale sighting has been reported.

The ferry system shall implement a program of informing ferry operators of whale sightings and locations. For example, if one captain sights a whale, it should be reported through a network to all other captains. Operators should be informed or reminded during seasonal periods of heightened whale activities or presence. If whale sightings continue to increase in the Bay, having dedicated lookouts on board or other detection equipment could be warranted. Devices (such as sound-generating equipment) used to scare whales from the area may be considered intentional harassment by NMFS and would not likely be allowed.

(2) Mitigation measure B-15.2 provides that ferries shall be equipped with a whale detection system, such as forward-looking sonar.

(3) Whales are known to visit the San Francisco Bay. Although there have been no recorded collisions between gray whales and any type of vessel, the risk of an accidental encounter between a ferry and a wild animal acting of its own free will cannot be completely avoided. Full mitigation is biologically infeasible.

(4) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Impact B-16: Project construction and/or operation could result in the “take” of state or federally listed species or loss or degradation of critical habitat.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Mitigation measure B-16.1 provides that construction sites shall be reviewed for potential occurrence of listed species and critical habitat using the literature and tools such as the California Natural Diversity Database (CNDDDB). Field surveys by qualified biologists shall be conducted in areas of potential occurrence or with suitable habitat for listed species. Areas with listed species should be avoided.

(2) Mitigation measure B-16.2 requires that prior to development in areas where construction is likely to result in a take of a listed species, consultation shall be initiated with the USFWS, NMFS, and DFG as required by the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA). Site-specific mitigation measures will be required as a result of that consultation and must be incorporated into the specific project design or mitigation plan under authority of those agencies. Measures may include redesign of project features to avoid impacts to listed species or critical habitat or include restoration or creation of replacement habitat.

(3) Federal and state agencies (e.g., NMFS, USFWS, and DFG) are authorized to allow construction under regulated circumstances, even where an “incidental take” may occur as a result. The regulatory scheme recognizes that the possibility of “take” cannot be completely avoided. Full avoidance of this impact is infeasible from a regulatory standpoint.

(4) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Impact B-17: Construction and operation of terminal facilities could increase stormwater pollutant discharges and affect receiving water quality, which could, in turn, affect local biological resources.

Findings: The WTA hereby makes findings (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

- (1) As discussed previously under Water Resources, mitigation measures W-1.1 and W-1.2 relating to preventing spills and controlling stormwater runoff will be applied to the Proposed Project to reduce its impact below a level of significance.
- (2) Consideration and issuance of NPDES permits is the responsibility of the RWQCB. The RWQCB is authorized to place conditions on the NPDES permits, as discussed above.
- (3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact B-18: Contaminated sediments could potentially become re-suspended during construction and dredging operations and could cause toxicity to Bay organisms.

Findings: The WTA hereby makes findings (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

- (1) Mitigation measure D-2.1 relating to preventing the release of sediments during construction and dredging will be applied to the Proposed Project to reduce its impact below a level of significance.
- (2) Construction and dredging will be subject to permitting authority of federal and state agencies, as described under Impact D-2.
- (3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact B-19: Increased numbers of ferry transits could bring an increased potential for fuel spills and water quality degradation in the Bay.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Pursuant to mitigation measures W-3.1 through W-3.5, the Harbor Safety Plan, contingency plans, training methods, new ship design features, and adoption of Ferry Safety Plan measures will be implemented to reduce this impact below a level of significance.

(2) As described under Impact W-3, the California Oil Spill Prevention and Response Administrator would be responsible for reviewing and approving plans.

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact B-20: Vessel wakes could potentially cause erosion and loss of wetland habitats, impact special-status species such as the clapper rail and salt marsh harvest mouse, and impact marine mammals through disturbance at or erosion of haul-out sites.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) The facts supporting the findings under Impact WW-3 are incorporated for this impact as well.

(2) Implementation of the measures identified under Impact WW-3 will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Impact B-21: Wildlife behavior and susceptibility to predation may be adversely influenced by an increase in lighting from terminal facilities and associated vehicle parking areas.

Findings: The WTA hereby makes findings (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Pursuant to mitigation measure B-21.1, new lighting sources will be directed on project areas and away from surrounding wildlife habitat.

(2) Pursuant to mitigation measure V-1.2, the WTA's established "Intermodal and Architectural Design Guidelines" shall be considered in the planning and design of new and enhanced ferry terminals. The design objectives may include, but are not limited to, making the ferry system more attractive, integrating terminals with the local urban context, and taking advantage of waterfront views. The specific design of each terminal facility would include site-specific studies on the potential impacts of light and glare on wildlife, as may be necessary to determine appropriate mitigations. This would be most relevant for the Hercules/Rodeo site, which is the only proposed new terminal site that would not be in an area having existing maritime uses..

(3) Terminal and parking lot design and construction may fall to other transit agencies that provide ferry service. Approval of land use entitlements for terminals and parking areas would be the responsibility of affected cities, counties, and regulatory agencies such as the San Francisco Bay Conservation and Development Commission. Those agencies will be responsible for applying measures B-21.1 and V-1.2.

(4) Implementation of the measures identified under Impact WW-3 will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Air Quality

Cumulative Impact A-1: Regional cumulative emissions of SO₂ and ROG could increase as a result of the implementation of the Proposed Project.

Finding: The WTA hereby makes finding (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Regional cumulative emissions of NO_x, PM₁₀, and CO from passenger cars, buses, and ferries would decrease with the Proposed Project below those for the No Project Alternative. Emissions of SO₂ and ROG would increase with the Proposed Project, by 0.3 percent and 0.02 percent respectively.

Mitigation of this impact is technologically infeasible at this time. Future engine fuel and/or pollution control technologies that are not at currently used could have an effect on future emission levels. One such engine technology is the use of fuel cells instead of combustion of fossil fuels. While the 2025 emissions are based on current or 2007

technology, it is expected that by 2025, other technologies will be available and cost effective and will further reduce emissions. Emissions could be reduced or eliminated through use of these engine technologies. However, as the cost and effectiveness of future technology cannot be predicted, this impact remains potentially significant.

(2) The WTA is legally obligated by its enabling legislation (Government Code Section 66540.20) to “provide new or expanded water transit services,” so its ability to drop routes or otherwise substantially reduce the project scope is limited.

(3) This impact will be significant, as defined by CEQA.

Impact A-2: Motor vehicles leaving ferry terminals during the evening commute period would produce cold-start emissions that could lead to localized violations of the short-term CO standard.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Mitigation measure A-2.1 provides that cold-start emissions shall be reduced by encouraging non-drive access at the ferry terminals. Techniques for encouraging non-drive access could include fees for parking, provision of preferential parking for carpools and vanpools, comprehensive shuttle access, land use scenarios that encourage non-drive access, and encouraging bicycle and pedestrian access.

(2) Mitigation of this impact is technologically infeasible at this time. Future engine fuel and/or pollution control technologies that are not currently used could have an effect on future emission levels. One such engine technology is the use of fuel cells instead of combustion of fossil fuels. While the 2025 emissions are based on current or 2007 technology, it is expected that by 2025, other technologies will be available and cost effective and will further reduce emissions. Emissions could be reduced or eliminated through use of these engine technologies. However, as the cost and effectiveness of future technology cannot be predicted, this impact remains potentially significant.

(3) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Cumulative Impact A-4: Air pollutants would be deposited in the Bay, which could increase the levels of nitrates and sulfates in the water.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

- (1) As discussed in the EIR under Impact A-4, deposition of nitrates on the Bay from ferry emissions would decrease with the Proposed Project, resulting in a less than significant impact.
- (2) Mitigation measure A-4.1 provides that use of a fuel technology that lowers SO₂ emissions would reduce sulfate emissions and subsequent deposition.
- (3) Mitigation of this impact is technologically infeasible at this time. The effectiveness of such mitigation that is expected to be available in the future cannot be reasonably quantified, due to the variability of the factors affecting deposition levels. As a result, this is a significant, unavoidable impact.
- (4) The WTA is legally obligated by its enabling legislation (Government Code Section 66540.20) to “provide new or expanded water transit services,” so its ability to drop routes or otherwise substantially reduce the project scope is limited.
- (5) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Impact A-5: Construction of ferry terminals would create emissions of fugitive dust from excavation and grading, and emissions of NO_x, PM₁₀, CO, SO₂, and ROG from construction equipment exhaust.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

- (1) Mitigation measure A-5.1 provides that the project proponent(s) shall implement the mitigation measures contained in the BAAQMD CEQA Guidelines (BAAQMD 1999) to control fugitive dust emissions from construction activities. These measures include activities such as watering and covering exposed soil surfaces to minimize dust emissions.
- (2) Mitigation measure A-5.2 provides that measures to reduce emissions from vehicles and heavy equipment shall include:
 - Using alternative fueled construction equipment when possible;
 - Minimizing idling time, for example, 5-minute maximum;
 - Properly maintaining equipment; and

- Limiting the hours of operation of heavy-duty equipment and/or the amount of equipment in use.

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact A-6: Local concentrations of nitrogen dioxide and particulate matter could exceed state and federal standards at the Ferry Building.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Mitigation measure A-6.1 provides that engine exhaust pipes shall be located sufficiently high to reduce localized impacts. Exhaust points shall be located at least 20 feet above the waterline (the height current modeling indicates is necessary to avoid the impact) unless future modeling indicates that lower heights would reduce concentrations of pollutants to acceptable levels.

(2) Mitigation measure A-6.2 provides that project proponents shall minimize dockside idling time at the Ferry Building in order to reduce the opportunity for local concentrations to build.

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact A-7: The Proposed Project could result in increases of pollutants from ferry exhaust deposited directly in the Bay.

Findings: The WTA hereby makes findings (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Mitigation measure A-7.1 provides that engine exhaust pipes shall be located sufficiently high to reduce localized impacts, as required under measure A-6.1. Exhaust points shall be located at least 20 feet above the waterline (the height current modeling indicates is necessary to avoid the impact) unless future modeling indicates that lower heights would reduce concentrations of pollutants to acceptable levels.

(2) The ferry operators whose ferries dock at the Ferry Building will be responsible for compliance with this measure.

(3) Implementation of the measure identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact A-8: Dredging for the Proposed Project would emit criteria air pollutants. These emissions could exceed the significance thresholds of 80 pounds per day for NOx, ROG, and PM10 contained in the BAAQMD CEQA Guidelines. The exceedences would occur for approximately 12 days every 3 to 6 years.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Mitigation measure A-8.1 provides that dredging is to be minimized during both construction and maintenance of terminals. This will minimize the length of time during which mechanized equipment will be in operation and emitting criteria pollutants.

(2) Mitigation measure A-8.2 provides that dredging contractors will be required to utilize the best available emissions controls on their equipment. This will minimize the level of emissions to the extent feasible.

(3) The ferry operators who will require dredging for construction or maintenance will be responsible for compliance with these measures.

(4) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Land Use and Community Issues

Impact LU-1: The Proposed Project includes ferry terminal locations in developed urban areas that primarily have port or maritime land uses, but do not currently have ferry terminal facilities. The development of new ferry terminals in urban locations could result in the displacement of existing land uses.

Findings: The WTA hereby makes findings (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Mitigation measure LU-1.1 provides that site-specific projects shall consider project alternatives that avoid displacement of homes or businesses. Displacement impacts to homes and businesses shall be addressed as part of the terminal site selection process, and be avoided through design measures. Proposals for terminals with potentially significant

impacts due to the displacement of homes and/or businesses will likely not be approved without appropriate mitigation. In the unusual circumstance that displacement is unavoidable, project proponents shall prepare and execute mitigation in the form of a relocation assistance plan or equivalent.

(2) Under mitigation measure LU-1.1, if federal transportation funds will be used for a ferry terminal project, compliance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended, shall be required by the applicable federal transportation agency. Relocation plans typically consider:

- Criteria for replacement housing;
- Reimbursement criteria for moving costs and/or differential housing costs (including rents); and
- Reimbursement criteria for businesses, including costs associated with searching for a new space, and business (i.e., patronage) lost due to the relocation.

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact LU-2: Construction of new ferry terminals and associated landside facilities could disrupt or divide established neighborhoods. This impact has the potential to be significantly adverse or beneficial, depending on how much the community supports or opposes the location of the terminal.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Pursuant to mitigation measure LU-2.1, local agencies desiring ferry service should identify parcels along their waterfronts that would facilitate a ferry terminal through a waterfront planning process or other type of terminal location study. Any potential terminal site must be analyzed with consideration to the surrounding land uses in order to ensure the terminal will be a compatible use and will minimize land use impacts. Projects should include project design elements that improve terminal accessibility while maintaining community cohesion.

(2) Cities and counties would be responsible for this planning under the authority granted them by the California Planning and Zoning Law (Government Code Section 65100 et seq.).

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact LU-3: Implementation of the Proposed Project could result in disproportionate adverse impacts to low-income and minority communities. These impacts would occur primarily as a result of the displacement of homes or businesses in low-income and minority communities, or substantial disruption of those neighborhoods.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Mitigation measure LU-3.1 provides that the terminal site selection process shall consider project alternatives to avoid adverse physical impacts to the low-income and minority neighborhoods. This would include site and terminal access design that minimizes residential acquisition. Terminal planning shall also involve local community input to help identify opportunities to avoid adverse impacts and enhance local planning efforts. Depending on the specific site and local land use planning, the project proponent may work with the local, city, or county to develop specific plans that address appropriate land use designations in the vicinity of the terminals.

If federal money will be used for the construction of a ferry terminal, compliance with the National Environmental Policy Act (NEPA) will be required, and the federal lead agency's guidelines for addressing Environmental Justice shall be adhered to. If required, the federal Environmental Justice process will supersede the requirement to comply with adopted WTA criteria.

(2) Pursuant to mitigation measure LU-3.2, mitigation measures LU-1.1 and LU-2.1 relating displacement impacts and land use compatibility to planning processes and relocation services will be implemented.

(3) The Proposed Project would operate from existing terminals and marinas, a number of which are not currently supporting ferry service. The extensive permitting process applicable to the creation of terminals and marinas in new locations where none exist today, makes mitigation of this impact below the level of significance infeasible. Based on the number of agencies that would be involved in permitting new locations (e.g., USACE, US EPA, NMFS, USFWS, RWQCB, DFG, State Lands Commission, BCDC, etc.), the number of permits likely necessary (Section 404 wetlands, Section 401 water quality certification, incidental take, streambed alteration, state lands lease, BCDC permit, etc.), the requirement for completion of CEQA and NEPA analyses, there is a high level of uncertainty involved in permitting projects that would result in dredge and fill of the Bay. Accordingly, these cannot be assured of being successfully completed in a reasonable period of time.

(4) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Impact LU-4: New or modified ferry terminals would be located along the shoreline, and could affect and/or enhance existing public use and access to and along the Bay Shoreline.

Findings: The WTA hereby makes findings (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Mitigation measure LU-4.1 provides that planning for terminal locations or expansion will incorporate public access to and/or along the Bay shoreline. This could include trails, parking for shoreline users, viewpoints, and disabled access.

(2) Pursuant to mitigation measure LU-4.2, the WTA's established "Intermodal and Architectural Design Guidelines" shall be considered in the planning and design of new and enhanced ferry terminals. The design objectives include providing Shoreline Access for pedestrians and bicyclists and scenic viewpoints.

(3) Mitigation measure V-1.1 provides that, when feasible, the following shall be included in ferry terminal design:

- Locate terminal facilities so as not to obstruct or detract from views of the Bay from nearby public thoroughfares;
- Design terminal facilities to provide new or enhanced point access areas or view areas such as piers, platforms and walkways; and
- Design and site terminals so as to maintain and enhance the visual quality of the shoreline and visual public access to the Bay.

(4) The design and construction of terminals will be the responsibility of the ferry operators and could be subject to land use entitlements from the affected cities, counties, and regulatory agencies such as BCDC.

(5) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Aesthetics

Impact V-1: The construction and operation of new and enhanced ferry terminals along the Bay shoreline could potentially impact land and water views of San Francisco Bay or degrade the visual character of the Bay.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Mitigation measure V-1.1 provides that, when feasible, the following shall be included in ferry terminal design:

- Locate terminal facilities so as not to obstruct or detract from views of the Bay from nearby public thoroughfares;
- Design terminal facilities to provide new or enhanced point access areas or view areas such as piers, platforms and walkways; and
- Design and site terminals so as to maintain and enhance the visual quality of the shoreline and visual public access to the Bay.

(2) Pursuant to mitigation measure V-1.2, the WTA's established "Intermodal and Architectural Design Guidelines" shall be considered in the planning and design of new and enhanced ferry terminals. The design objectives may include, but are not limited to, making the ferry system more attractive, integrating terminals with the local urban context, and taking advantage of waterfront views. The specific design of each terminal facility should be developed at a local level to ensure compatibility with the surrounding visual environment. In addition, site-specific studies on the potential impacts of light and glare on wildlife may be necessary to determine appropriate mitigations. This would be most relevant for the Hercules/Rodeo site, which is the only proposed new terminal site that would not be in an area having existing maritime uses.

(3) Environmental factors make the full mitigation of this impact infeasible. New and enhanced ferry terminals will, by their nature as transportation hubs requiring prominent structures, docking facilities, and parking facilities, change the visual environment of the area in which they are located. Although careful design of the terminal structures and associated facilities will reduce this impact, it cannot be completely avoided. The WTA is legally obligated by its enabling legislation (Government Code Section 66540.20) to "provide new or expanded water transit services," so its ability to eliminate terminals is limited.

(4) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Impact V-5: Expanded and enhanced ferry terminals and services throughout San Francisco Bay could result in light and glare impacts.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Pursuant to mitigation measure V-5.1, ferry terminal designs will be required to develop site-specific lighting plans. Outdoor lighting shall be focused and directed to the specific location (e.g., roads, walkways), be shielded to avoid the production of glare, and minimize up-light and light spill. Fixtures shall be located, aimed or shielded to minimize stray light to or across property boundaries. Light design shall use down-cast, low glare, shields, or equivalent designs to minimize light and glare on surrounding land uses.

(2) Environmental factors make the full mitigation of this impact infeasible. New and enhanced ferry terminals will, by their nature as transportation hubs requiring lighting of passenger areas, docking facilities, and parking, change the visual environment of the area in which they are located. Although careful design of the structures and limits on new sources of light and glare will reduce this impact, it cannot be completely avoided. The WTA is legally obligated by its enabling legislation (Government Code Section 66540.20) to “provide new or expanded water transit services,” so its ability to eliminate terminals is limited.

(3) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Cultural

Impact CUL-1: Dredging of new channels or for pier retrofit or installation could impact submerged and sub-bottom cultural resources in San Francisco Bay.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Mitigation measure CUL-1.1 requires that in order to avoid or mitigate impacts to cultural resources, the resources must be evaluated against the adopted federal and state significance criteria. Prior to project construction, a focused literature search shall be conducted to identify any known resources. For sites that cannot be adequately characterized by existing literature or available site history information, marine archaeological surveys may be necessary to detect any previously unknown submerged or sub-bottom resources. Depending on the proposed project undertaking and the geographic or bathymetric setting, appropriate remote sensing field surveys could include deployment of a side-scan sonar, sub-bottom profiler, and magnetometer to help detect these resources. Follow-up diver survey, high-resolution side-scan sonar, sub-bottom

profiler, magnetometer survey, or Remote Operated Vehicle (ROV) investigations might be required to positively identify the targets.

If resources are detected, they shall be identified and evaluated against the NRHP/CRHR significance criteria, and as a “unique archaeological resource” under CEQA. If the resources are not eligible for—or already on—the National Register of Historic Places/California Register of Historic Resources (NRHP/CRHR) and do not qualify as a “unique archaeological resource” under CEQA, then no further consideration of these resources is required. If the resources are eligible for, or currently on, the NRHP/CRHR or qualify as a “unique archaeological resource” under CEQA, then impacts could occur to those resources. If a resource is found to be significant, then the resource shall be avoided through alterations in project design, when feasible.

Preservation in place for archaeological resources may be accomplished by, but not necessarily limited to, a suite of approaches such as:

- Planning construction activities to avoid archaeological sites;
- Incorporation of sites within parks or other open spaces;
- Covering the archaeological site with a layer of chemically stable soil before building facilities on top of the site; and/or
- Deeding the site into a permanent conservation easement.

In the event that avoidance of cultural resources is not possible via project design modifications, appropriate mitigation shall be required. This could include further recordation or data recovery, in accordance with Section 106 of the National Historic Preservation Act. This could include a record of the resource, such as a wharf, pier, building or structure in a Historic American Building Survey/Historic American Engineering Record (HABS/HAER) at a level compatible with National Park Service standards. Adequate recordation of a built-environment resource shall include the following:

- The development of site specific history and appropriate contextual information regarding the particular resource, in addition to archival research and comparative studies;
- Accurate mapping of the noted resources, scaled to indicated size and proportion of the structures;
- Architectural descriptions of the structures;
- Photographic documentation of designated resources; and
- Recordation using measured architectural drawings.

Mitigation of impacts to a built-environment resource may also take place in the form of preservation or reuse of a wharf, pier, building, or structure. The preservation or reuse of an eligible structure would include abiding by the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation. If the building is considered a historic resource under CEQA, the local building inspector must grant code alternatives under the State Historic Building Code.

In some cases, HABS/HAER documentation might not provide an adequate mitigation to reduce impacts to a less than significant level, and might not be a sufficient mitigation measure for some resources. Mitigation should capture the history of a resource and share it with the public so that the public can continue to feel a connection with common heritage. If the pier/building/structure cannot physically be retained, then it is incumbent on the lead agency to pursue ways that the memory of the resource is retained and made easily available. To this end, educational resources such as web media, static displays, interpretive signs, use of on-site volunteer docents, or informational brochures can supplement HABS/HAER. Often, it might be possible to incorporate the resource into the project as one means of resource mitigation.

The CEQA lead agency will be responsible for coordinating all necessary mitigation measures. This might include coordination with a federal lead agency, where federal permitting, land ownership, or other federal-level issues affect a specific project action.

(2) Responsibility for compliance with mitigation measure CUL-1.1 will be shared by the WTA and the local cities and counties and other agencies that would permit terminal construction.

(3) An adverse effect on a cultural resource is the equivalent of a significant effect under CEQA. Although the above mitigation measure will limit impacts on cultural resources, it cannot completely avoid potential losses that would be considered a significant effect. Complete avoidance would only be possible through elimination of portions of the Proposed Project. Complete mitigation of this impact is infeasible because it would conflict with the objective of providing an expanded water transit system, including a terminal at Hercules/Rodeo.

(4) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Impact CUL-2: Deposition of dredge spoils for upland reuse or wetland restoration could impact submerged or terrestrial cultural resources.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Mitigation measure CUL-2.1 would reduce this impact to a less-than-significant level.

(2) Disposal at sites that have not previously been evaluated for cultural resources could pose a potentially significant impact to resources, should they exist. Under mitigation

measure CUL-2.2, impacts could be mitigated by avoidance of the particular disposal site.

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact CUL-3: Project actions such as retrofitting, expansion, or improvement of existing facilities, or construction of new facilities, could impact terrestrial historic and prehistoric cultural resources and historic built environment resources.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Implementation of mitigation measure CUL-2.1, described above, would reduce this impact to a less-than-significant level.

(2) Implementation of the measure identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact CUL-4: Project actions such as construction and related activities could impact previously unknown resources.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Implementation of mitigation measure CUL-2.1, as described above, would reduce this impact, but not below the level of significance.

(2) The full mitigation of this impact is economically and practically infeasible. Full cultural resource evaluations of the existing and proposed terminal sites would be expensive; involving detailed site surveys, records searches, cultural research resulting in a site record report, and test excavations. The practical success of such research would be limited by the fact that final locations and designs of terminal facilities are unknown – meaning that their level of impact on any resources encountered could not be fully evaluated. Until final locations and designs are known, the impact on unknown cultural resources cannot be determined.

(3) The WTA is legally obligated by its enabling legislation (Government Code Section 66540.20) to “provide new or expanded water transit services,” so its ability to eliminate terminals is limited.

(4) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Geology

Impact G-2: Potential new terminals and other facilities could be exposed to strong ground shaking. There is a potential for substantial damage to facilities and risk of injury or loss of life at incorrectly designed or constructed facilities.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Mitigation measure G-2.1 requires that terminal facilities shall be designed and constructed at a minimum to the seismic design requirements for ground shaking specified in the Uniform Building Code for Seismic Zone 4. Additionally, to satisfy the provisions of the 1998 California Building Code, these facilities shall be designed to withstand ground motions equating to approximately a 500-year return period (10 percent probability of exceedence in 50 years). For design purposes, site-specific ground motions shall be calculated for all project sites.

(2) Implementation of the measure identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact G-3: Potential new terminals are in areas of potentially liquefiable soils. There is a potential risk for destruction of structures.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Pursuant to mitigation measure G-3.1, a program of site-specific exploratory borings and accompanying laboratory testing will be required to delineate any potentially liquefiable materials underneath potential terminal sites. These geotechnical investigations will also be required for consideration prior to foundation design. Potentially liquefiable deposits will either have to be removed or engineered (dewatered or densified) to reduce their liquefaction potential.

(2) This mitigation approach has been performed with success within areas of liquefaction risk in the Bay Area. For example, densified fill material in areas of Foster City and Redwood Shores survived the 1989 M_w 6.9 Loma Prieta earthquake without liquefying. The commercial and residential developments situated on these areas of engineered fill suffered no major structural damage during the earthquake.

(3) Implementation of the measure identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact G-7: Erosion due to wind and water action could lead to the deterioration of terminal structures.

Finding: The WTA hereby makes finding (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Finding:

(1) Pursuant to mitigation measure G-7.1, the erosion potential of each site will have to be determined on a site-specific basis. Once this has been determined, appropriate mitigation measures, if necessary, could be adopted.

If erosion is determined to be a significant threat at a terminal location, the specific location of the terminal could be changed and/or terminal design could be changed to minimize the potential for impacts from erosion. As a last resort, the shoreline could be armored with rip-rap or concrete seawalls. Defensive measures such as groins that modify or deflect flow and circulation patterns are not desirable as they can merely transfer erosion problems elsewhere.

(2) Implementation of the measure identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Noise

Impact NOI-3: Noise-sensitive human receptors could be exposed to significant increases in ambient noise from proposed ferry terminal operations.

Findings: The WTA hereby makes findings (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Mitigation measure NOI-3.1 provides that siting and planning of new ferry terminals shall include planning to locate terminal areas away from noise-sensitive land uses.

Compliance with existing zoning ordinances should be sufficient to mitigate any potential impacts of ferry terminal operations.

(2) Determining and enforcing compliance with zoning and other local ordinances will be the responsibility of the cities and counties within whose jurisdiction the existing and proposed terminals are located.

(3) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

Impact NOI-4: Wildlife could be exposed to noise from proposed ferry operations.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Mitigation measure NOI-4.1 provides that the exact route from San Francisco to Treasure Island shall be determined in consultation with federal and state resource agencies. These agencies may require site-specific studies to determine whether impacts to the seals at the nearby haul-out or to other wildlife (birds and fish), could be significant.

(2) Mitigation measure B-14.1 will require transiting ferries to maintain setbacks greater than those recommended by NMFS from seal haul-out areas. These setbacks will help reduce the sound of the ferries through distance-related attenuation.

(3) Reduction of this impact on the Treasure Island seal haul out to below the level of significance may be physically infeasible. The proximity of the haul out to the anticipated terminal location may not allow sufficient distance to attenuate the elevated noise levels from ferry operations.

(4) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Transportation

Impact T-1: At the regional level, expansion of the ferry service would result in a decrease of the total automobile VMT. However, at the local level, expansion of the ferry service could facilitate changes in traffic patterns at new and existing ferry terminals. This could potentially result in localized increases in traffic in the vicinity of the terminals.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Pursuant to mitigation measure T-1.1, once terminal locations are selected, site-specific traffic analyses shall be conducted to compare predicted traffic with applicable local level of service (LOS) standards. Traffic mitigation measures would depend on site-specific conditions, including design of vehicular access to terminals, major access routes, parking availability, and traffic patterns. For example, impacts that were predicted to occur at intersections could be mitigated by addition of turning lanes. For some cases, where access is problematic or presents serious community concerns, the viability of the terminal location would need to be further evaluated.

(2) Reduction of this effect below the level of significance is physically infeasible because a majority of ferry users will rely upon automobiles to access the terminals. The Metropolitan Transportation Commission's 2001 Regional Transportation Plan estimates that by the year 2025 approximately 82.2 percent of the daily trips (both work and non-work related) will be by automobile, 10.3 percent will be by walking, and 6.2 percent will be by transit. This dependence upon automobiles to access the Proposed Project's new terminals and expanded service will necessarily result in an increase in traffic on adjoining roads. Widening roads in urbanized areas brings its own set of impacts, including relocation of businesses and residences and noise, that make impractical the level of improvements necessary to accommodate new traffic.

(3) The WTA is legally obligated by its enabling legislation (Government Code Section 66540.20) to "provide new or expanded water transit services and related ground transportation terminal access services," so its ability to eliminate terminals or parking areas is limited.

(4) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Impact T-2: Additional automobiles accessing existing and new ferry terminals would require parking. This could result in potential localized parking problems and conflicts in the vicinity of the terminals.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Mitigation measure T-2.1 provides that the project proponent(s) and ferry terminal authorities, in conjunction with local and regional transit agencies, shall study and develop terminal-specific plans to ensure that potential driving ferry patrons can be adequately served by transit in locations with limited parking and currently insufficient transit access.

(2) Cities and counties will apply their land use planning and zoning authority to designate areas for terminals and for parking.

(3) Reduction of this effect below the level of significance is physically infeasible because a majority of ferry users will rely upon automobiles to access the terminals. The Metropolitan Transportation Commission's 2001 Regional Transportation Plan estimates that by the year 2025 approximately 82.2 percent of the daily trips (both work and non-work related) will be by automobile, 10.3 percent will be by walking, and 6.2 percent will be by transit. This dependence upon automobiles to access the Proposed Project's terminals will necessarily require the provision of new parking spaces either at the terminals or in their vicinity. Creating additional parking in urbanized areas brings its own set of impacts, including relocation of businesses and residences, loss of aesthetic quality, and light/glare.

(4) The WTA is legally obligated by its enabling legislation (Government Code Section 66540.20) to "provide new or expanded water transit services and related ground transportation terminal access services," so its ability to eliminate terminals or parking areas is limited.

(5) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Energy

Impact E-2: The Proposed Project could result in higher energy-per-passenger-miles-traveled value than other transit modes.

Findings: The WTA hereby makes findings (a)(1), (a)(2), and (a)(3), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Mitigation measure E-2.1 will require WTA to continue investigating the feasibility and applicability of using energy sources other than fossil fuels and using different engine technologies. One promising technology is the use of fuel cells. The WTA has investigated the use of alternative fuels for ferries in: *New Technologies and Alternative Fuels Working Document* (JJMA 2002). Alternative energy sources and engine

technologies will become available and will be incorporated as they become feasible and cost-effective.

(2) Reduction of this impact below a level of significance is technologically infeasible. The limitations of existing technology, including ship and engine design, keep the energy cost of ferry transportation per passenger-miles-traveled close to that of automobiles. Ferries do not enjoy the level of energy efficiency per passenger-miles-traveled offered by rail and bus transit. While future technologies are expected to improve ferry energy efficiency, the same engine technologies will be used to increase the efficiency of other transit modes as well.

(3) The WTA is legally obligated by its enabling legislation (Government Code Section 66540.20) to “provide new or expanded water transit services,” so it has no ability or authority to operate a different mode of transit that would use less energy per passenger miles traveled.

(4) Implementation of the measures identified above will reduce this potentially significant impact, however, it will nonetheless result in a significant effect as defined by CEQA.

Growth Inducement

Impact GRO-1: The Proposed Project proposes to expand ferry service at existing terminals and add new ferry terminals primarily at developed waterfront areas. This could be growth-inducing for areas near the terminals.

Findings: The WTA hereby makes findings (a)(1) and (a)(2), as stated in State CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to the above-identified effect.

Facts supporting the Findings:

(1) Pursuant to mitigation measure LU-1.1, site specific projects shall consider alternatives that avoid the displacement of homes or businesses. Displacement impacts shall be addressed in the site selection process and avoided through design measures. If displacement is unavoidable, project proponents must execute a relocation assistance plan or its equivalent.

(2) Mitigation measure LU-2.1 provides that local agencies desiring ferry service should identify parcels along their waterfronts that would facilitate a ferry terminal through a waterfront planning process or other type of terminal location study. Any potential terminal site must be analyzed with consideration to the surrounding land uses in order to ensure the terminal will be a compatible use and will minimize land use impacts. Projects should include project design elements that improve terminal accessibility while maintaining community cohesion

(3) Cities and counties are responsible for planning and regulating land use under the authority granted them by the California Planning and Zoning Law (Government Code Section 65100 et seq.). Control of future growth in areas surrounding new or expanded terminals would be the responsibility of the city or county in which the terminals are located or adjoin.

(4) While the Proposed Project may result in growth near terminals in order to take advantages of clustering development near transit opportunities, that growth will be localized. Because the Proposed Project is intended to augment existing travel modes within the Bay Area through the provision of an expanded ferry system, and will not substantially affect travel times to and from terminals, it would not remove obstacles to regional growth and is not expected to be growth-inducing at the regional level.

(5) Implementation of the measures identified above will reduce this potentially significant impact to a less-than-significant level as defined by CEQA.

FINDINGS FOR THE PROJECT ALTERNATIVES

In the initial draft EIR, Alternatives 1 (Augmented Blue Ribbon System), 2 (Expanded System), and 3 (Enhanced Existing Service) were all considered to be feasible ferry service alternatives. Since that time, the WTA has determined that Alternatives 1 and 2 do not meet the CEQA requirement that alternatives substantially reduce or avoid project impacts. Both of these alternatives describe larger systems and would have more severe impacts than the Proposed Project.

In the revised Draft EIR and the Final EIR for the Proposed Project, WTA disclosed that Alternatives 1 and 2 are not considered feasible and have been eliminated from further consideration. Additional discussion of these rejected alternatives is contained in Section 2 of the Final EIR. The following findings address Alternatives 3 and 4 (No Project). No findings are necessary under CEQA Guidelines Section 15091 for alternatives that were considered, but eliminated from further evaluation in the EIR.

Alternative 3 – Enhanced Existing Service Alternative

Six ferry routes currently serve the San Francisco Bay Area. Alternative 3 would increase and improve service along these routes by adding or substituting new vessels to increase the number of trips and decrease the headways between trips. Improvements may also be made to existing passenger terminal facilities.

Finding: The WTA hereby makes finding (a)(3), as stated in CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to this alternative.

Facts supporting the Finding:

(1) Alternative 3 is legally infeasible. This alternative does not fully meet the requirement of Government Code Section 66540.20(b) which states that: “[t]he plan shall investigate *and plan for* terminal locations *throughout* the San Francisco Bay Area.” (emphasis added) Alternative 3 is based on expanded operations within the existing terminals. It does not plan for new terminal locations in either Suisun Bay or the South Bay. Both of those areas are part of the San Francisco Bay Area.

Alternative 4 – No Project Alternative

Alternative 4 consists of existing ferry service, with minimal improvements. Ferry service would continue to operate on the six existing routes at about the same frequency. Future changes or improvements of service would depend upon the availability of funding allocated through the Metropolitan Transportation Commission.

Finding: The WTA hereby makes finding (a)(3), as stated in CEQA Guidelines Section 15091 and as required by Public Resources Code Section 21081, with respect to this alternative.

Facts supporting the Finding:

(1) Alternative 4 is legally infeasible. This alternative does not meet the requirements of Government Code Section 66540.20(b) which states that: “[T]he plan shall investigate *and plan for* terminal locations throughout the San Francisco Bay Area.” (emphasis added) Alternative 4 is based on continued operations at existing terminals. It does not plan for terminal locations in either Suisun Bay or the South Bay Area.

(2) In addition, Alternative 4 does not meet the requirements of Government Code Section 66540.20(e) which states, in part, that: “[t]he primary focus of the [Water Transportation] authority and the plan shall be to provide *new or expanded* water transit services and related ground transportation terminal access services that were not in operation as of June 30, 1999.” (emphasis added) This alternative is based on continued operations at existing terminals with modernization as time passes. It does not plan for new or expanded services beyond that incidental to modernization of existing facilities.

(3) The WTA is legally obligated by its enabling legislation (Government Code Section 66540 et seq.) to “prepare and adopt a San Francisco Bay Area Water Transit Implementation and Operations Plan.” This plan is the Proposed Project. Selecting the No Project alternative, which does not meet the requirements of Government Code Section 66540.20, as described above, would violate the WTA’s statutory responsibility.

STATEMENT OF OVERRIDING CONSIDERATIONS

As described in the Draft EIR and Revised Draft EIRs prepared for the Proposed Project, the Proposed Project would result in a number of significant environmental impacts that cannot be reduced to a less-than-significant level by feasible mitigation measures. These significant, unavoidable impacts include:

- increased potential for collisions with other water craft;
- inundation of clapper rail nests by inundation from increased wave wash;
- loss of jurisdictional wetland habitat as a result of terminal construction;
- disturbance of “special aquatic sites” by construction;
- increased potential for high-speed ferries to strike gray whales;
- potential “take” of special-status species as a result of construction and operation;
- cumulative contribution to regional cumulative emissions of sulfur dioxide and reactive organic gases (ROG);
- cold-start emissions from motor vehicles leaving terminals during the evening commute could lead to localized violation of the short-term carbon monoxide (CO) standard;
- cumulative contribution to air pollutants that would be deposited in the Bay, increasing sulfate deposition;
- homes or businesses could be displaced in low-income and minority communities;
- construction and operations of new and enhanced ferry terminals could impact land and water views of the Bay;
- expanded ferry service could increase light and glare impacts;
- dredging could impact cultural resources in the Bay;
- construction could impact previously unknown cultural resources at terminal locations;
- wildlife could be exposed to noise from proposed ferry operations;
- expansion of ferry service could result in traffic impacts in the vicinity of terminals;
- expansion of ferry service could result in localized parking problems and conflicts in the vicinity of the terminals; and
- the Proposed Project could result in higher energy-per-passenger-miles-traveled than other transit modes; and

The WTA finds that the significant, unavoidable adverse impacts identified in the EIR for the Proposed Project are outweighed by the following benefits of the Proposed Project:

(1) The Proposed Project offers environmental benefits in the form of regional air quality improvements over the year 2025 air pollutant emissions projected to occur without the Project. The Bay Area is in compliance with State and Federal air quality standards for most criteria pollutants. However, it is not in compliance for ozone and PM₁₀ emissions.

As described in Section 3.6 (Air Quality) of the EIR for the Proposed Project, regional cumulative emissions of NO_x, PM₁₀, and CO from passenger cars, buses, and ferries would decrease under the Proposed Project. Reactive organic gases (ROG) and SO₂ emissions would increase. The Bay Area would remain in compliance for SO₂ emissions even with the increase resulting from the Proposed Project. While the potential increase in ROG is of concern, the sum of ROG and NO_x emissions (ozone precursors) in the year 2025 is projected to be 1,589 pounds/day less with the Proposed Project than without it.

(2) The Proposed Project would provide the social benefit of reducing congestion on other modes of transportation to and from the City of San Francisco. Both the BART heavy rail and the freeway systems are highly congested at this time and expected to remain so into the future.

According to BART's draft "FY03 Short Range Transit Plan and Capital Improvement Plan Update," the Bayfair (San Leandro) to Daly City line is currently the system's most congested. The Transbay link is reaching capacity and has limited ability to accommodate additional commute trips. While the Advanced Automatic Train Control System currently being installed (expected to be on line in 2004) will enable BART to run trains through the Transbay tube at shorter intervals (thereby increasing capacity), the system cannot reach full potential because of the constraints imposed by the four downtown San Francisco stations. The close proximity of the stations to one another requires longer intervals between trains to provide each train with sufficient time to enter, exchange passengers, and exit the station. The Proposed Project would increase ferry transit service from the East Bay (particularly from new terminals in Berkeley and Richmond) to San Francisco. This would relieve demands on the BART system to some extent.

The freeway approaches to the Bay Bridge include three of the 10 most congested points on the Bay Area freeway system, as identified in the 2001 Regional Transportation Plan adopted by the Metropolitan Transportation Commission. Two points on the eastern approach are ranked 1 and 9; a point on the western approach is ranked 4 on the list. Again, the Proposed Project would provide an alternative means to travel to and from San Francisco from the East Bay. This would relieve congestion on the Bay Bridge to some extent.

(3) The Loma Prieta Earthquake of 1989 severely damaged the Bay Bridge, destroyed sections of I-880, and interrupted service along other parts of the Bay Area freeway network. Ferry service to and from San Francisco was expanded on a temporary basis immediately following the earthquake and made a substantial contribution to the ability of other transportation modes to take up the slack created by damage to the freeway system. The diversity of transportation modes, including ferry and rail transit, reduced the earthquake's economic impact on the Bay Area by allowing employees alternative means of getting to work.

The Proposed Project contributes to the economic benefits a diversified transportation system can provide in times of emergency or other situations where one mode of transit becomes inaccessible.

(4) The Proposed Project offers the social benefit of potentially encouraging new development to cluster at ferry terminals. Increasing the density of development at transit nodes, including multi-modal ferry terminals, reduces the need for nearby residents to use their automobiles to make trips to areas served by the ferry and other transit services. It also reduces the need to use automobiles to access commercial or retail development at the transit node. This reduces vehicle miles traveled by residents of transit nodes and their associated contributions to vehicular congestion, encourages pedestrian and bicycle trips which avoid contributing air pollution emissions, and provide opportunities for social interaction not found in less-dense areas.

Encouraging development at transit nodes is a recognized component of “smart growth” that channels investment and population growth to infill locations within urbanized areas for more efficient use of services and reduced cost of providing services. Indirectly, this type of smart growth reduces to some extent the need for new development at the urban fringe where provision of services is more expensive (financially and environmentally) in the long-term.

(5) Approval of the Proposed Project meets the legal mandate established by the Governor and State Legislature through passage of the enabling legislation that created the San Francisco Bay Area Water Transit Authority (Government Code Section 66540 et seq.). Government Code Section 66540.20 requires the WTA to “prepare and adopt” an Implementation and Operations Plan for San Francisco Bay Area water transit that would “provide new or expanded water transit services and related ground transportation terminal access services.” This action allows the WTA to comply with that legal obligation.

(6) Approval of the Proposed Project is one step toward the WTA receiving statutory authority to operate the water transit system. Pursuant to Government Code Section 66540.23, the WTA cannot operate the system until the Implementation and Operations Plan is approved by statutory action of the California Legislature. Receiving this approval would offer the benefits of efficiency in operations of the water transit system, through establishment of a Bay Area-wide authority that can operate a comprehensive regional public system in coordination with other agencies, and eligibility for financing of planned system improvements from regional, state, and federal funding sources through the WTA.

(7) The Proposed Project offers environmental benefits in the form of a very small reduction in the regional vehicle miles traveled (VMT) projected for the Bay Area in the year 2025 without the Project. As described in Section 3.12 (Transportation) of the EIR for the Proposed Project, this would be as much as a 0.4 to 0.5 percent reduction in San Francisco, Marin, and San Mateo Counties. While a small improvement, this would nonetheless contribute to efforts to reduce automobile traffic congestion in the Bay Area.

