Mitigation Monitoring Plan

The California Environmental Quality Act (CEQA) requires that when a public agency approves a project on the basis of an Environmental Impact Report (EIR), the agency must adopt a program of monitoring or reporting on the mitigation measures it has imposed to reduce or avoid significant environmental impacts. The purpose of the Mitigation Monitoring Plan (MMP) is to ensure that the mitigation measures are implemented. This MMP has been prepared for the EIR for Expansion of Ferry Transit Service in the San Francisco Bay Area, pursuant to State CEQA Guidelines Sections 15091(d) and 15097 of CEQA.

The San Francisco Water Transit Authority (WTA) was created by the California Legislature as a regional agency with the directive to evaluate options for improving and expanding ferry service in the Bay Area, and to prepare and adopt a San Francisco Bay Area Water Transit Implementation and Operations Plan (IOP) for consideration by the Legislature. (Government Code Section 66540 et seq.) The primary focus of the WTA is to provide, in cooperation with existing transit service providers, new or expanded water transit services and related ground transportation terminal access services that were not in operation as of June 30, 1999. (Government Code Section 66540.20) The WTA is required to prepare, and has certified, a programmatic EIR analyzing the impacts of the IOP. (Government Code Section 66540.22)

Unlike most public agencies that prepare an EIR for their planned activities, the WTA is not currently authorized to undertake the activities described in the IOP. The Legislature must consider and approve the IOP by statute before the WTA will be empowered to implement it. (Government Code Section 66540.23) The powers of the WTA may be further refined in that future statute.

The IOP prepared by the WTA defines a program to improve and expand ferry service in the greater San Francisco Bay Area but does not address the specific details of future water transit projects (i.e., location new ferry terminals or ferry routes, ground transportation connections). The EIR for the IOP has been prepared as a program EIR pursuant to State CEQA Guidelines Section 15168 since it is anticipated that the individual actions conducted as part of the IOP constitute logical parts in the chain of action necessary to improve and expand Bay Area ferry service. Future projects that are conceptually described in the IOP would require additional compliance with CEQA (and the National Environmental Policy Act [NEPA], if applicable) at such time as they are being considered for approval.

Although the mitigation measures presented in the EIR would be applicable to all actions taken as part of new or expanded ferry service, WTA has determined that its prospective authority to implement these measures will be limited to projects related to new ferry service. The WTA would be the lead agency with responsibility for implementing the IOP and, in accordance with this authority, would be directly responsible for carrying out new water transit projects, or would have approval authority over new water transit projects carried out by local sponsors or authorities (i.e., municipalities, ferry service operators, transit agencies).

Expansion of the existing water transit would be the responsibility of local authorities (i.e., existing ferry service operators) and, unless WTA involvement is initiated by the local authority, such actions would be outside the jurisdiction of WTA. As future projects are approved under the IOP EIR, local authorities will be responsible for adopting their own MMPs for the mitigation measures that fall within their responsibility to implement.

WTA responsibilities for *new water transit projects* would include the following:

- For projects undertaken by WTA, WTA would comply with CEQA (and NEPA, if necessary) in analyzing the site-specific environmental impacts of each project. Site-specific CEQA analyses would tier off the IOP EIR, including adoption of all necessary and appropriate mitigation measures.
- For projects undertaken by local authorities, WTA would require local project authorities to comply with CEQA (and NEPA, if necessary), prior to project approval by WTA. As part of compliance WTA would require local authorities to incorporate the mitigation measures contained in the IOP EIR, as appropriate to the specific action.

WTA responsibilities for projects related *expansion of existing water transit* would include the following:

- WTA would work with local authorities to ensure that projects are implemented consistent with the goals and objectives of the IOP.
- WTA would encourage local authorities to preparing project-specific environmental documents that tier off the IOP EIR;
- WTA would, through comments on environmental compliance documents, recommend that the local authority incorporate mitigation measures from the IOP EIR into the project-specific environmental documents.

Impact	Mitigation Measure
Dredging	
Impact D-2: Dredging of new channels could locally reduce water quality by exposing and suspending contaminated sediment.	**Mitigation D-2.1:** As part of the 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 BMPs described above to reduce potential impacts to less than significant levels. 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. Individual project proponents shall incorporate appropriate BMPs for dredging plans and specifications.
Impact D-4: Dredging could adversely impact threatened, endangered, or protected species.	**Mitigation 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. BMPs could include use of silt curtains and adhering to dredge windows for special status species. 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.
	Mitigation D-4.2: Individual projects would undergo consultation with the resource agencies. 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. During the preparation of the LTMS EIS/EIR, the LTMS agencies consulted with U.S. Fish and Wildlife Service, National Marine

Impact	Mitigation Measure
	Fisheries Service, and the California Department of Fish and Game regarding potential impacts of dredging and dredged material disposal on sensitive biological resources. These resource agencies, in conjunction with LTMS agencies, developed a list of restrictions specific to San Francisco Bay to protect critical habitat for special status and important commercial and recreational species. Figure 3.1.5 shows areas and times of restricted dredging activity related to these species. Dredging shall be conducted in conformance to applicable seasonal restrictions to minimize impacts to biological resources.
Impact D-5: Dredging for construction of access channels to new ferry terminals could result in loss or disturbance of jurisdictional wetlands.	Implement Mitigation Measure B-1.1 and B-1.2
Navigation	
Mitigation NAV-1: With expansion of water transit service there is a potential for an increase in incidents such as collisions, allisions, and groundings.	**Mitigation NAV-1.1:** Implementation of best practices to meet or exceed USCG requirements as recommended by the preliminary risk assessment prepared by ABS (2002) will serve to minimize navigation-related risk. These practices are listed below: 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

Impact	Mitigation Measure
	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 CO_2 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

Impact	Mitigation Measure
	and enforce procedures through training and company communications. Audit conformance. Provide job aids for critical procedures. Note: Policy and procedures manual and an operational training program should 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.” Develop, communicate, and enforce standard operating procedures for ferry startup and shutdown. Develop, communicate, and enforce navigational protocols for routes. Identify areas/conditions in which meeting, crossing, or overtaking may significantly increase the risk of collision and develop/enforce a “no passing” policy for those areas. Develop and exercise vessel mutual assistance plans. Develop and exercise emergency response protocols to facilitate communication and ferry traffic control during emergencies. Determine with emergency care providers (e.g., ambulance services) locations along a route at which the ferry can transfer people in medical distress. Develop, communicate, and enforce a hot work permit program. Develop, communicate, and enforce lock-out/tag-out program. Develop, communicate, and enforce a safe lifting program for deckhands. Develop and enforce standards for emergency training. Establish a frequency for emergency drills that meets or exceeds USCG requirements. Establish criteria for measuring drill performance.

Impact	Mitigation Measure
	Require all shifts and all crew on each shift to participate. Document training.
Mitigation NAV-2: Increased numbers of ferry transits in the Bay may increase the risk of incidents (such as collision and near misses) between windsurfers and ferries.	**Mitigation NAV-2.1:** Appropriate training of crew of ferry vessels servicing new terminals located near existing windsurfing launch sites could 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.
	Mitigation 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.
Mitigation NAV-3: Increased ferry transits may lead to an increased risk of collision between recreational boaters and ferries.	**Mitigation NAV-3.1:** 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.
	Mitigation 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) could reduce the risk of navigational incidents.
Wake Analysis	
Impact WW-1: Increased frequency of ferry trips across the	**Mitigation WW-1.1:** To meet the criteria evaluated for impact WW-1, ferry routes and service may need to be modified such that:

Impact	Mitigation Measure
Bay could increase the wake energy at some shorelines, causing increased erosion. Service to new areas of the Bay could lead to shoreline impacts from increased wave heights.	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). This should maintain wake impacts at a less than significant level. Operation of the vessels (primarily speeds) are maintained such that predicted wake wave heights at the shoreline would be less than 16 cm. This would also reduce this impact to a less than significant level. 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.
	Mitigation 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. This mitigation measure would only be feasible and effective on portions of routes where the operation of the vessel can incorporate these adjustments. For example, the approach routes to terminals near sensitive areas could be designed such that wake wash is directed away from sensitive tidal marsh environments, and turning movements are not permitted at a speed and/or direction that exceeds criteria 2 or 3, listed above. Route bending could, however, involve compromises in service and cost, which would need to be evaluated on a route-by-route basis.
	Mitigation WW-1.3: Use of existing low-wake vessel technology could reduce both the total wake wash energy and heights of individual waves. As shown in Figure Wake-D-2 (in Appendix Wake-D of the Draft Program EIR) existing light-weight high-speed vessels have 25 percent or better wave height and wave energy

Impact	Mitigation Measure
	characteristics than the 350-passenger high-speed vessels presently operating on the Bay. For example, if a vessel with a wave height profile such as the *Bravest* (Appendix Wake-D) were specified (which has an operating design wave height of 22 cm measured at 300 meters) the 16-cm shoreline wave height criterion would be met at a distance of 780 meters, almost half the 1,500 meter distance for vessels with a 27-cm design wave height. Because wave energy is proportional to the square of wave height, slight reductions in design wave heights are equivalent to significant reductions in wave energy, and hence equivalent to significant reductions in wave heights at distance. However, this mitigation could involve compromises in service and cost, which would need to be evaluated on a route-by-route basis
	Mitigation WW-1.4: Operational adjustments, such as slowing down vessels, could be implemented to reduce wake energy near sensitive tidal marsh habitat. Note, as shown in Figure Wake-D-2 (in Appendix Wake-D of the Draft Program EIR), a considerable reduction in vessel speed is required with an efficient high-speed vessel before the wake wash height is less than that at design operational speeds. For example, for the Mare Island class of high-speed catamaran currently operating on the Bay, the normal operating speed of 34 knots (40 mph) would need to be reduced to 10 knots (11 mph) or less in order to achieve a reduction in wave height. The change in wave form (and hence wave period) would also need to be considered as high-speed ferries generate a different wave patterns at high (operating) and low (motoring) speeds. At high speed when the vessel is planning, a divergent wave pattern is generated, while at slow speeds, the transverse stern wave dominates the wave pattern. Since speed reduction could have a substantial impact on high-speed routes, this measure would only be practical in specific areas that cannot be mitigated by any of the other measures. However, these mitigation measures could involve compromises in service and cost, which would need to be evaluated on a route-by-route basis.
Impact WW-2: Wake wash impacts from increased ferry service could	**Mitigation WW-2.1:** The mitigation measures for impacts to marinas are the same as for Mitigations WW-1.1 through WW-1.4.

Impact	Mitigation Measure
impact surrounding marinas, potentially damaging moored vessels and interfering with recreational users.	are the same as for Mitigations WW-1.1 through WW-1.4.
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.	**Mitigation WW-3.1:** For any shoreline areas that 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 following additional mitigation measures may be necessary. For nesting sites more than 50 meters inland from the edge of the marshland, no significant impacts would occur.
	Mitigation WW-3.2: 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.
	Mitigation 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. However, this mitigation could involve compromises in service and cost, which would need to be evaluated on a route-by-route basis.
	Mitigation WW-3.4: Operational adjustments, such as slowing the vessel down near sensitive areas, could be performed during ferry

Impact	Mitigation Measure
	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. However, this mitigation could involve compromises in service and cost, which would need to be evaluated on a route-by-route basis.
Impact WW-4: Wake wash impacts from increased ferry service could have an adverse effect on Pacific harbor seals at haul-out sites.	**Mitigation WW-4.1:** As discussed in Mitigation B-14.1 in the Biology Section of the Draft Program EIR, 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 (this distance, however, does not take vessel speed or wash into account). Distances discussed from the literature show that, in general, seals tend to flush at greater distances than those in the NMFS guidelines. Given the site-specific information available for San Francisco Bay (Castro Rocks), it is recommended 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 (see Biology Mitigation B-14.1).
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 area, causing increased storm water runoff. If runoff contained pollutants or eroded disturbed soil, discharge could impact receiving water quality.	**Mitigation W-1.1:** Adoption of BMPs during construction to prevent, minimize, and clean up spills and leaks from construction equipment 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. Any equipment with a fuel tank or other oil tank, such as heavy excavation machinery, must be considered as a potential source of released oil. Storage and parking of such equipment shall take into account oil spill prevention regulations to ensure that the area is free of drains or other avenues though which spills may escape containment.
	Mitigation W-1.2: New terminal facilities shall be designed such that stormwater runoff would be controlled and discharged in an

Impact	Mitigation Measure
	appropriate manner. Construction and industrial stormwater 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.
Impact W-3: Increased ferry transits could increase the potential for fuel spills and water quality degradation in the Bay. Although the probability of a spill is low, it still has the potential to occur.	**Mitigation W-3.1:** Although this impact is considered to have a low probability of occurring, a spill still has the potential to occur, and safety and avoidance measures are prudent. The Harbor Safety Committee of the San Francisco Bay Region adopted a Harbor Safety Plan in 1992 for San Francisco, San Pablo, and Suisun Bays. The plan, as mandated by the California Oil Spill Prevention and Response Act (OSPRA) of 1990, is aimed at improving the prevention, removal, abatement, response, containment, and cleanup and mitigation of oil spills in the state's waters. OSPRA also requires an annual review of the harbor safety plans to be submitted to the state Oil Spill Prevention and Response Administrator for comment and approval. The Bay Area ferry operators participate in the Harbor Safety Committee. The safety issues raised by expansion of ferries in the San Francisco Estuary and relevant recommendations and modifications will need to be incorporated into the annual plan review. A strengthened Harbor Safety Plan would reduce the potential for impacts to water resources resulting from expansion of ferry operations.
	Mitigation W-3.2: Ferry operators shall update their contingency plans and continue to use emergency response services for pollution incidents. Several Oil Spill Response Organizations (OSROs)

Impact	Mitigation Measure
	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. As part of the ferry expansion program, the contingency plans, drill exercises, and emergency response service agreements would 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. Review of updates and modifications to plans will be done under the USCG's regular oversight of oil spill contingency plans. The work of updating and expanding the spill response plans should be based on NOAA's Environmental Sensitivity Index (ESI). The ESI involves the systematic compilation in a standardized format of information related to coastal shoreline sensitivity, biological resources, and human uses. ESI maps have been prepared for San Francisco Bay and are useful tools for setting protection priorities and cleanup strategies before a spill occurs (www.mapfinder.nos.noaa.gov/m apfinderHTML3/surround/esi/atlas.html).
	Mitigation 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 would decrease the potential for spills.
	Mitigation W-3.4: 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.
	Mitigation W-3.5: 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**.**

Impact	Mitigation Measure
Biology	
Impact B-1: Loss of jurisdictional wetland habitat could occur as a result of dredging and construction of terminal facilities.	**Mitigation B-1.1:** Terminal locations, while having the potential for wetland impacts, have not been specifically surveyed for wetland habitat occurrence with respect to project features because no specific improvements are proposed at this time. Existing mapping of wetlands, discussed in Section 3.5.1 (Environmental Setting), was used to identify areas of known wetlands, but these maps and databases are regional in nature. As part of the environmental studies and documentation 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. For example, parking lot facilities, typically the largest part of a terminal footprint, could be located in areas away from the shore and associated wetlands. 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 document, is expected to be minimal compared to the areas potentially available for mitigation.
Impact B-2: Construction of terminals could result in increased potential for the spread of invasive nonnative plant species in disturbed habitats.	**Mitigation 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

Impact	Mitigation Measure
	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.
Impact B-3: Project construction could result in the disturbance of "Special Aquatic Sites", including eelgrass beds, mudflats, and wetlands.	**Mitigation B-3.1:** Disturbance of eelgrass beds and mudflats shall be avoided in the design of project features and routing of ferries.
	Mitigation B-3.2: 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 (see Figures 3.5.15 through 3.5.17). Recent comprehensive mapping of eelgrass beds in the Bay has not been conducted. 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. 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 U.S. Army Corps of Engineers (USACE), the U.S. Environmental Protection Agency (USEPA), the California Department of Fish and Game (CDFG), the San Francisco Bay Regional Water Quality Control Board (RWQCB), and BCDC. However, it should be noted that very little eelgrass mitigation has been done in San Francisco Bay and that mitigation of eelgrass impacts may not be feasible or

Impact	Mitigation Measure
	successful in all cases. 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.
	Mitigation 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.
Impact B-7: Dredging could adversely affect fish species near the construction activities.	**Mitigation B-7.1:** Mitigation for Impact B-7 is the same as discussed under Impact D-4.
Impact B-9: Underwater noise from pile driving and other construction activities could affect nearby fish.	**Mitigation B-9.1:** 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

Impact	Mitigation Measure
	waters, such as placing bubble jackets surrounding the piles, shall be deployed if sound pressure levels exceed those that could harm fish.
Impact B-10: Construction could result in loss of habitat for waterfowl, shorebirds and other birds.	**Mitigation B-10.1:** Implement Mitigation Measures B-1.1 and B-3.1 through B-3.3.
Impact B-11: Ferry traffic could disturb roosting, rafting, and foraging waterfowl in shallow areas.	**Mitigation B-11.1:** 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.
	Mitigation B-11.2: Response of water fowl to new ferry routes in shallow North and South Bay roosting, rafting and foraging habitats shall be evaluated. Evaluation could include observations of ferry operations and waterfowl responses by an authority such as the Point Reyes Bird Observatory (PRBO).
Impact B-13: Underwater pile driving noise could disturb marine mammals.	**Mitigation B-13.1:** An Incidental Harassment Authorization from NMFS may be needed 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.
Impact B-14: Transiting ferries could disturb marine mammals resting at haul-out sites.	**Mitigation B-14.1:** Although NMFS does not regulate normal watercraft operations or require Incidental Harassment Authorizations for regular shipping and pleasure craft operations (Fahy 2002), NMFS does have guidelines, outlined below, for avoidance of marine mammals to reduce disturbance.

Impact	Mitigation Measure
	Animal or Sensitive Site – Minimum Distance Whales-91 meters (100 yards) Pinnipeds (seals and sea lions) - 46 meters (50 yards) in water ; 91 meters (100 yards) from haul-out sites Dolphins – 46 meters (50 yards) This guidance, however, does not take potential boat speeds and related wake effects into account. Distances discussed in the literature indicate that, in general, seals tend to flush at greater distances than those in the NMFS guidelines. Site-specific information available for San Francisco Bay (Castro Rocks) showed average disturbance from larger vessels occurring at distances of about 250 meters. Therefore, ferry routes shall be at least 100 to 250 meters from the Castro Rocks and Yerba Buena Island haul-out sites to reduce disturbance to the animals at these locations.
Impact B-15: High-speed ferries could potentially strike gray whales.	**Mitigation 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.
	Mitigation B-15.2: Ferries shall be equipped with a whale detection system such as forward-looking sonar. Such a system is currently

Impact	Mitigation Measure
	under development and being tested on a NOAA vessel in Cape Cod Bay.
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.	**Mitigation B-16.1**: 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 (CNDDB). 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. In areas where construction is likely to result in a take of a listed species, consultation shall be initiated with the U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), and CDFG as required by the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA). Specific mitigation measures will likely be required as a result of that consultation and must be incorporated into the specific project design or mitigation plan. Measures may include redesign of project features to avoid impacts to listed species or critical habitat or include restoration or creation of replacement habitat.
	Mitigation B-16.2: Fully protected species that may be affected by this project include salt marsh harvest mouse, California clapper rail and California black rail. Proposed terminals and routes would be designed or located to avoid take of these species.
• Impact B-17: Construction and operation of terminal facilities could increase stormwater pollutant discharges and affect receiving water quality. This, could in turn, affect local biological resources.	**Mitigation B-17.1**: Implement mitigations W-1.1 and W-1.2.

Impact	Mitigation Measure
Impact B-18: Contaminated sediments could become resuspended during construction and dredging operations and could potentially cause toxicity to Bay organisms.	**Mitigation B-18.1:** Implement mitigations D-2.1 through D-2.3.
Impact B-19: Increased numbers of ferry transits could bring an increased potential for fuel spills and water quality degradation in the Bay.	**Mitigation B-19.1:** Implement mitigations W-3.1 through W-3.5.
Impact B-20: Vessel wakes could potentially cause erosion and loss of wetland habitats, potentially impact special status species such as the clapper rail and salt marsh harvest mouse, and potentially impact marine mammals through disturbance at seal haul-out sites.	**Mitigation B-20.1:** Refer to potential impacts and mitigations under Section 3.3, Wake Analysis.
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.	**Mitigation B-21.1:** New lighting shall be directed on intended project areas and avoid surrounding wildlife habitat.

Impact	Mitigation Measure
Air Quality	
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 carbon monoxide standard.	**Mitigation A-2.1:** 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.
Impact A-4: Air pollutants would be deposited in the Bay, which could increase the levels of nitrates and sulfates in the water.	**Mitigation A-4.1:** Use of a fuel technology that lowers SO_2 emissions would reduce sulfate emissions and subsequent deposition.
Impact A-5: Construction of ferry terminals would create emissions of fugitive dust from excavation and grading, and emissions of ROG, NO_x, CO, SO_2, and PM_{10} from construction equipment exhaust.	**Mitigation A-5.1:** 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.
	Mitigation A-5.2: Measures to reduce emissions from vehicles and heavy equipment shall include: 1) Use alternative fueled construction equipment when possible; 2) Minimizing idling time, for example, 5-minute maximum; 3) Properly maintaining equipment; and 4) Limiting the hours of operation of heavy-duty equipment and/or the amount of equipment in use.

Impact	Mitigation Measure
Impact A-6: Local concentrations of nitrogen dioxide and particulate matter could exceed state and federal standards at the Ferry Building.	**Mitigation A-6.1:** Engine exhaust pipes shall be located sufficiently high to reduce localized impacts. During their analysis, BAAQMD staff hypothesized that the location of the exhaust points was an important factor in local concentrations of air pollutants. This was tested with a model scenario wherein all future vessels would have exhaust heights at 20 feet above the waterline. While the BAAQMD's choice of modeling the exhaust location at 20 feet above the waterline was somewhat arbitrary, the results indicate that this height would reduce the potential for unhealthy concentrations of air pollutants1 (Murphy 2003). Therefore, exhaust points shall be located at least 20 feet above the waterline unless future modeling indicates that lower heights would reduce concentrations of pollutants to acceptable levels.
	Mitigation A-6.2: Project proponents shall minimize dockside idling time at the Ferry Building.
Impact A-7: The Proposed Project could result in increases of pollutants from ferry exhaust deposited directly into the Bay.	**Mitigation -7.1:** Implement Mitigation A-6.1 to eliminate the potential for turbulent eddies in the wake from capturing some of the emissions.
Impact A-8: Dredging for the Proposed Project would emit criteria air pollutants. These emissions would exceed the significance thresholds of 80 pounds per day for NO_x, ROG, and PM_{10} listed in the BAAQMD CEQA Guidelines. The exceedences would occur for approximately 12 days every 3 to 6 years.	**Mitigation A-8.1**: Minimize required dredging for construction and maintenance, both in terms of dredge volume and maintenance dredging interval.
	Mitigation A-8.2: Utilize dredging contractors with the best available emission controls on their equipment.

Impact	Mitigation Measure
Land Use	
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.	**Mitigation LU-1.1:** 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. 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. 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.
Impact LU-2: Installation of new ferry terminals could disrupt or divide established neighborhoods. This impact has the potential to be significantly negative or positive, depending on how much the community supports or opposes the location of the terminal.	**Mitigation 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.
Impact LU-3: Implementation of the Proposed Project could result in	**Mitigation LU-3.1:** The terminal site selection process shall consider project alternatives to avoid adverse physical impacts to the low-

Impact	Mitigation Measure
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.	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 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.
	Mitigation LU-3.2: Implement mitigations LU-1.1 and LU-2.1.
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.	**Mitigation LU-4.1:** Incorporate public access to and/or along the Bay shoreline in the planning for terminal locations or expansion. This may include trails, parking set aside for shoreline users, viewpoints, disabled access, etc.
	Mitigation LU-4.2: Incorporate the shoreline access guidelines described in: *Terminal Architecture and Engineering – Terminal Design Guidelines* prepared for the WTA. The guidelines include Shoreline Access for pedestrians and bicycles, and viewpoints to provide views of the shore, bay, and the loading/ unloading of the ferries
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	**Mitigation V-1.1:** 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;

Impact	Mitigation Measure
Francisco Bay or degrade the visual character of the Bay.	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.
	Mitigation V-1.2: The WTA established Intermodal and Architectural Design Guidelines that shall be considered in the planning and design of new and enhanced ferry terminals (Parsons Brinckerhoff 2002). 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 ideal terminal facility will serve as a catalyst to ferry service expansion in the Bay Area. 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.
Impact V-5: Expanded ferry service, including new terminals and additional ferries, could result in light and glare impacts.	**Mitigation V-5.1:** Ferry terminal designs 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.
Cultural	
Impact CUL-1: Dredging of new channels, maintenance dredging, dredging for pier retrofit or installation, or dredging/related	**Mitigation CUL-1.1:** To avoid or mitigate impacts to cultural resources, they must be evaluated against the federal and state significance criteria previously described. Prior to project construction, a focused literature search shall be conducted to

Impact	Mitigation Measure
activities for buoy placement could impact submerged and sub-bottom cultural resources in the Bay.	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 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. Under CEQA, preservation-in-place is the preferred manner of mitigating impacts to archaeological sites. 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

Impact	Mitigation Measure
	project design modifications, appropriate mitigation shall be required. This could include further recordation or data recovery, in accordance with Section 106 of the NHPA. 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.

Impact	Mitigation Measure
	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.
Impact CUL:-2: Deposition of dredge spoils for upland reuse or wetland restoration could impact submerged or terrestrial cultural resources.	**Mitigation CUL-2.1:** Same as CUL-1.1.

Impact	Mitigation Measure
	Mitigation CUL-2.2: Impacts could be mitigated by avoidance of the particular disposal site.
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.	**Mitigation CUL-3.1:** Same as CUL-1.1.
Impact CUL-4: Project actions such as construction and related activities could impact previously unknown resources.	**Mitigation CUL-4.1:** Same as CUL-1.1.
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.	**Mitigation G-2.1:** 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.
Impact G-3: Potential new terminals are in areas of potentially liquefiable soils. There is a potential risk for destruction of structures.	**Mitigation 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. This 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

Impact	Mitigation Measure
	Prieta earthquake without liquefying (Benuska 1990). The commercial and residential developments situated on these areas of engineered fill suffered no major structural damage during the earthquake.
Impact G-7: Erosion due to wind and water action could lead to the deterioration of terminal structures.	**Mitigation 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.
Noise	
Impact NOI-3: Noise-sensitive human receptors could be exposed to significant increases in ambient noise from proposed ferry terminal operations.	**Mitigation NOI-3.1:** 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.
Impact NOI-4: Wildlife could be exposed to noise from proposed ferry operations.	**Mitigation NOI-4.1:** 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.
Transportation	
Impact T-1: At a regional level, expansion of the ferry service would	**Mitigation T-1.1:** Once terminal locations are narrowed down, site-specific traffic analyses shall be conducted to compare predicted

Impact	Mitigation Measure
result in a decrease of the total automobile VMT. 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.	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.
Impact T-2: Additional car access to terminals would require parking. This could result in potential localized parking problems and conflicts in the vicinity of the terminals.	**Mitigation T-2.1:** 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.
	Mitigation T-2.2: Non-drive access could be encouraged through measures such as charging 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.
Energy	
Impact E-2: The Proposed Project could result in higher energy per passenger miles traveled value than other transit modes.	**Mitigation E-2.1:** The WTA is planning to continue investigating the feasibility and applicability of using energy sources other than fossil fuels and 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.