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Redlined Errata Dated December 20th, 2007

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STAFF REPORT AND RECOMMENDATION

ON CONSISTENCY CERTIFICATION

Consistency Certification No. **CC-018-07**
Staff: ST/CT/MD-SF
File Date: 3/26/2007
3 Months: 6/26/2007
6 Months: 9/26/2007
Extended to: 10/26/2007
Commission Meeting: 10/11/2007

APPLICANT: Foothill/Eastern Transportation Corridor Agency

DEVELOPMENT

LOCATION: Between the existing terminus of the State Rte. 241 (at Oso Parkway), Orange County, and I-5 (near Basiline Rd.), Marine Corps Base Camp Pendleton, San Diego County (Exhibit 1)

DEVELOPMENT

DESCRIPTION: Construction of ~~16-2.2~~ mi. long, ~~64~~-lane, Foothill Transportation Corridor-South (FTC-S) toll road (Exhibits 1-9) within the Coastal Zone

SUBSTANTIVE FILE

DOCUMENTS: See page 231.

[**Staff Note:** This project requires that the Commission concur in or approve both a consistency certification as well as a coastal development permit (CDP) for the portion of the project within the coastal zone. The CDP functions as the equivalent of a consistency concurrence for the portion of the project to which it pertains. The staff has encouraged TCA to submit a combined consistency certification/CDP application, as it did for the San Joaquin Hills Transportation Corridor that the Commission reviewed in 1992; however TCA has declined to submit a CDP application at this time. ~~As a result, the consistency certification that is before the Commission pertains to the entire project both within and outside of the coastal zone.~~ In addition to the Commission’s concurrence in the consistency concurrence before it, TCA will also need to apply for and obtain from the Commission a CDP for the portion of this project in the coastal zone before it can proceed.]

EXECUTIVE SUMMARY

The Foothill/Eastern Transportation Corridor Agency (TCA) has submitted a consistency certification for the construction of ~~the the 2.2-mile portion of the extension of the~~ Foothill Transportation Corridor South (FTC-S) toll road ~~within the Coastal Zone in southern Orange and northern San Diego County.~~ In total, FTC-S ~~The proposed project~~ would be approximately 16 miles long through southern Orange and northern San Diego County, with an additional ~~0.8~~1.7 miles of improvements along Interstate 5 (I-5), stretching from the existing SR-241 terminus at Oso Parkway to I-5 on the Marine Corps Base Camp Pendleton. The project for which TCA has submitted a consistency certification includes the southernmost 2.2 miles of the extension, which includes the 1.7 miles of improvements to I-5. TCA states the project is needed to reduce traffic congestion, ~~stating citing~~ The Collaborative adopted Purpose and Need statement:

The purpose of the SOCTIIP [FTC-S] is to provide improvements to the transportation infrastructure system that would help alleviate future traffic congestion and accommodate the need for mobility, access, goods movement, and future traffic demands on I-5 and the arterial network in the action area. The Preferred Alternative meets this purpose because it provides the number of traffic lanes necessary to meet forecasted traffic demand through 2025, which is the design forecast year for the SOCTIIP and the planning horizon year for regional plans and socioeconomic forecasts. The Preferred Alternative also meets the purpose because it accommodates the need for mobility, access, and goods movement by providing increased traffic capacity and because it provides an alternative route to I-5.

One of the project purposes is to improve the projected future level of service (LOS) and reduce the amount of congestion and delay on the freeway system and, as a secondary objective, the arterial network, in southern Orange County. The overall goal is to improve projected levels of congestion and delay as much as is feasible and cost-effective. This may include strategies that lead to a reduction in the length of time LOS F will occur, even if the facility will still operate at LOS F for a short period of time, if the strategy will result in benefits to the traveling public and more efficient movement of goods by reducing total delay. The Preferred Alternative furthers this objective by increasing overall regional capacity and reducing congestion on I-5 and local arterials.

Environmentally Sensitive Habitat Areas (ESHA)

The project is fundamentally inconsistent with the spirit and letter of numerous resource protection policies of the Coastal Act. The project involves development within environmentally sensitive habitat areas (ESHA) and is inconsistent with the ESHA policy (Section 30240), which only allows “uses dependent on the resource” within an ESHA. Moreover, the project is inconsistent with the additional requirements of Section 30240 because it would not protect the ESHAs against any significant disruption of habitat values; not be sited and designed to prevent impacts which would significantly degrade those areas; and not be compatible with the continuance of the ESHAs. The ESHAs include habitat for the Pacific pocket mouse, tidewater goby, arroyo toad, coastal California gnatcatcher, least Bell’s vireo, and southern California coast steelhead. The most significant adverse impacts, impacts which cannot be mitigated, would be to the Pacific pocket mouse. In fact, it is highly likely

that the project would result in the complete loss of one of the three remaining limited populations of Pacific pocket mouse and thereby hasten the extinction of the entire species, which is federally listed as endangered. The project would also likely result in the loss of the only remaining coastal population of the arroyo toad, also federally listed as endangered, because it proposes at least three years of significant construction activities within more than 66 acres of ESHA for this species. The project also proposes to conduct grading, vegetation removal, and substantial landform alteration associated with the placement of the ~~six-four~~ lane toll road within 50 acres of the vitally important coastal sage scrub vegetation community that provides federally designated critical habitat for the coastal California gnatcatcher, a third species listed under the federal Endangered Species Act. Moreover, the project proposes permanent and prolonged use of wetland areas totaling ~~over 29~~ 0.16 acre, areas that have included federally designated critical habitat for two species that are federally listed as endangered, the tidewater goby and arroyo toad, and provide essential ESHA habitat for two others also provided with this listing status, the least Bell's vireo and southern California coast steelhead.

In addition to the disturbance and destruction of untold numbers of these six species and potentially irreparable harm to their local, regional and global populations, populations which have been consistently recognized as both vitally important and gravely threatened, the project would fragment and transform one of the last remaining intact watersheds and coastal canyon ecosystems in all of southern California. Considering the magnitude, extent and duration of activities associated with the project it is highly likely that well over 66 acres of ESHAs would be degraded or permanently lost. As evidenced by the large number of threatened or endangered species and federally designated critical habitats within the relatively small portion of the project area that is proposed to occupy the coastal zone, and the fact that nearly ~~4840%~~ (47.2 acres of CSS plus 8.1 acres of riparian habitat divided by 138.4 acre project) of the 138 acre project footprint within the coastal zone has been found to meet the Coastal Act definition of ESHA, it would be difficult to imagine a *more* environmentally damaging alternative location for the proposed toll road and one which would be more clearly inconsistent with the environmentally sensitive habitat resource protection requirements contained within Coastal Act Section 30240.

Wetlands

The project also involves wetland fill, and is inconsistent with the **allowable use test** of the Wetlands policy (Section 30233(a)) as it is not one of the seven allowable uses for wetland fill. TCA argues that the proposed toll road, as an "incidental public service," is an allowable use "...because it fits within the historically accepted interpretation of the term." The Commission's historic interpretation does not allow new highways to be considered incidental public services. This position is supported in the case of *Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County* (1999) 71 Cal.App.4th 493, 517, where the court found that:

... we accept Commission's interpretation of sections 30233 and 30240... In particular we note that under Commission's interpretation, incidental public services are limited to temporary disruptions and do not usually include permanent roadway expansions. Roadway expansions are permitted only when no other alternative exists and the

expansion is necessary to maintain existing traffic capacity.

The project: (a) is not a temporary disruption; (b) is not a limited expansion of an existing road; and (c) will increase highway capacity. Therefore it cannot be considered an allowable use as an incidental public service under Section 30233(a)(4).

The project is also inconsistent with the **alternatives** test of the Wetlands policy (Section 30233(a)) because it is not the least environmentally damaging feasible alternative. The “build” alternatives most recently considered by ~~TCA~~ [The Collaborative](#) consist of:

- (a) three toll road alternatives that converge to one in the San Mateo Creek watershed (i.e., the three FEC (Far East Corridor) alternatives, one of which (A7C-FEC-M) is the proposed toll road);
- (b) one full toll road in San Clemente (i.e., the CC (Central Corridor));
- (c) one toll road not fully connecting with I-5 (i.e., the CC-ALPV (Central Corridor, Avenida La Pata);
- (d) improvement of existing arterials in San Clemente (i.e., AIO (Arterial Improvements Only); and
- (e) I-5 widening.

Grounds for ~~TCA's~~ [The Collaborative's](#) rejection of alternatives included: (a) it does not meet the project purpose and need; (b) cost of construction (including mitigation) is excessive; (c) there are severe operational or safety problems; (d) there are unacceptable adverse, social, economic, or environmental impacts; (e) there would be serious community disruption; (f) there are unsuitable demographics (for transit alternatives); and (g) there are logistical or technical constraints. ~~TCA~~ [The Collaborative](#) rejected the AIO and I-5 alternatives because they lack funding sources. ~~TCA~~ [The Collaborative](#) rejected the CC, CC-ALPV, and A7C-ALPV alternatives because they would result in “severe community disruption.” TCA states:

Selection of the Preferred Alternative represents a coordinated balanced approach to minimizing harm to both the natural and built environments. The A7C-FEC-M as the Preferred Alternative culminates years of analysis and evaluation, engineering refinement, inter-agency consultation and coordinated consensus.

The Commission agrees with ~~TCA's~~ [The Collaborative's](#) assessment in only one respect, which is that of the three San Mateo Creek alternatives, the two more easterly alternatives rejected would indeed be more damaging than the proposed alignment. However, in all other respects the Commission disagrees with ~~TCA~~ [The Collaborative](#). Each of the three San Mateo Creek alternatives (including the proposed project) would clearly result in significantly more environmentally damaging, and far more irreversible, impacts to environmentally sensitive habitat, wetlands, public access and recreation, and cultural resources than the other impacts which were studied. ~~TCA's~~ [The Collaborative's](#) habitat comparisons of the alternatives have not been taken fully into account: (a) the quality of the habitat, including severe threats (if not extinction) to the Pacific pocket mouse; (b) severely adverse indirect effects, particularly overall habitat fragmentation effects on wildlife

movement; (c) other modifications to a particularly valuable regional habitat mosaic; (d) the regionally significant, higher quality, and uniqueness of the recreational (including surfing) resources; and (e) and important archaeological resources. When the value of these resources is taken into account, the project is the most environmentally damaging rather than the least environmentally damaging feasible alternative (aside from the other two San Mateo Creek alternatives).

Moreover, the toll road's impacts would be permanent, irreversible, and, for the most part, unmitigable. No other alternative alignment poses the threat of unmitigable and irrevocable impacts of such magnitude. The proposed alignment also raises disturbing questions about the integrity and permanence of areas that have been set aside as habitat preserves, state parks, and in the case of the campground, mitigation for impacts of previously-approved development. [The State Park operates on land leased from the Department of the Navy and the lease provides for additional easements and rights-of-way to third parties. The San Onofre State Beach General Plan \(1984\) acknowledged the future roadway, which at that time was on the Master Plan of Arterial Highways.](#)

The Commission does not agree with [TCA's The Collaborative's](#) rejection of the CC, CC-ALPV, I-5 Widening, A7C-ALPV, and AIO Alternatives for "unacceptable adverse, social, economic, and environmental impact" reasons, or for "serious community disruption" reasons. [TCA's The Collaborative's](#) comparison of impacts from these alternatives and the weight given to community disruption do not take into account the quality of the resources being affected, or reflect prioritization of resource values according to the resource protection priorities contained in the Coastal Act. Numerous other alternative alignments are feasible and could be found consistent with the Coastal Act, including: (1) the Central Corridor (CC); (2) Central Corridor-Avenida La Pata (CC-ALPV); (3) Alignment 7 Corridor-Avenida La Pata (A7C-ALPV); (4) Arterial Improvements Only (AIO); (5) the I-5 Widening Alternative (I-5), as described in the FSEIR or (6) the Arterial Improvements Plus-Refined (AIP-R) alternative described in "An Alternative to the Proposed Foothill South Toll Road, The Refined AIP Alternative," prepared by Smart Mobility, Inc. (September 2007). The "Smart Mobility" Reports provide ample technical, economic, and social data to show the I-5 widening would not only be a logistically and technically feasible alternative, but one that would be less costly, less socially damaging, and less environmentally damaging than the proposed toll road or the I-5 widening alternative described by TCA.

Thus, [TCA's The Collaborative's](#) assumption that community disruption and higher economic cost can be accorded higher priority than the exceptionally limited and valuable sensitive habitat, recreation, and archaeological resources is in direct conflict with the resource protection priorities spelled out in the Coastal Act. Southern California highways are regularly implemented using condemnation procedures. Freeway dependent southern California would not exist as we know it if this were not the case. Unlike the more easily quantifiable social and economic mitigation typically associated with condemnation, the type and extent of adverse impacts to coastal resources this toll road would cause cannot be mitigated and would be irreversible. Therefore, based on the priorities established in the Coastal Act, the proposed project does not represent the least environmentally damaging feasible alternative and is, therefore, inconsistent with the alternatives test of Section 30233(a) of the Coastal Act.

TCA proposes wetland mitigation both within the coastal zone (a one-acre area next to its proposed detention basin along I-5), and outside the coastal zone (a larger mitigation area 12-16 miles inland). However, the Commission lacks sufficient information to determine whether the project is consistent with **the mitigation test** of the wetlands policy (Section 30233(a)) because TCA did not follow standard protocols and examine all three wetland indicator criteria. Thus, the Commission does not have an adequate jurisdictional wetland determination either for the wetlands present within the disturbance limits, or for the mitigation areas. TCA also did not perform a functional capacity analysis as required under Section 30233(c) of the Coastal Act.

Public Access and Recreation The project would result in significant adverse effects on public access and recreation, particularly at the campground and related recreational resources in San Onofre State Beach (SOSB). Significant adverse effects would occur both during construction and after completion. Such effects may include the de-facto closure of the coastal access Panhe Trail, the abandonment or severely limited use of the San Mateo Campground, the temporary occupation and permanent alteration of the California Coastal Trail, and the overall interference and degradation of the recreational use of SOSB. The elevated and prolonged sound levels resulting from the proposed project would result in substantial reductions in the availability of public access and the severe degradation of the quality of the coastal recreation and access resources at SOSB. These resources are unique and of incomparable value in southern California. As with the ESHA effects, these adverse effects too would be unmitigable. The project would, therefore, be inconsistent with the Public Access and Recreation policies (Sections 30210, 30211, 30212, 30213, 30214, 30220, and 30240(b)) of the Coastal Act.

Surfing The recreational resources at SOSB are inextricably associated with the surfing at Trestles Beach, located downstream from the toll road at the mouth of the San Mateo Creek. World renowned for its consistent, near perfect waves, Trestles provides some of the best year-round surfing waves in Southern California, an area with one of the greatest concentration of surfers in the world. Surfing at Trestles is an integral component of the coastal recreational experience at SOSB and a quintessential coastal zone resource. The Trestles coastal setting is virtually unparalleled in Southern California both due to high quality waves and aesthetics. The high quality waves, dependent on cobbles and sediment from the watershed, may be adversely affected by alterations to the hydrological regime. Experts disagree over whether these alterations would occur, but the potential for impacts and hydrological modifications is clearly present with a project of this magnitude. If adverse effects occurred they would be unmitigable. Regardless, the proposed toll road would clearly adversely affect the aesthetics and the natural setting of surfing experience. TCA has ~~not adequately~~ demonstrated that the surf break at Trestles would be protected if the toll road were built in this watershed. Based on the aesthetics issue alone the project is inconsistent with the surfing policies (Sections 30220 and 30213) of the Coastal Act.

Public Views

Visual resources are also closely intertwined with recreation at SOSB. The project is inconsistent with the scenic view protection policy (Section 30251) because: (a) it would add to the coastal public viewshed a permanent feature that is not visually compatible with the surrounding area; (b) less damaging alignments are available that would significantly reduce scenic view impacts; (c) the project does not minimize alteration of natural landforms; (d) the project has not been sited and designed to protect views to and along the ocean and scenic coastal areas. The important link between the visual and recreational resources at SOSB and Trestles add to and exacerbate the extent of inconsistencies with the public access, recreation, and surfing policies discussed in the previous paragraphs.

Water Quality

The Commission lacks sufficient information to determine the project's consistency with the Water Quality policy (Section 30231) of the Coastal Act. TCA believes the proposed toll road will improve water quality because it will incorporate Best Management Practices ("BMPs") and treat additional runoff from I-5. On September 17, 2007, TCA submitted its most recent Runoff Management Plan (dated July 26, 2007) to the Commission staff. As of the date of this mailing, the Commission staff has not had time to review this document prior to the mailing for the October Commission meeting. Review of this plan will be discussed in an addendum to this report. However, ~~the Regional Water Quality Control Board (RWQCB) staff has raised a number of questions about the adequacy of this plan, as have~~ hydrological consultants to Surfrider Foundation (Philip Williams & Associates, Ltd.), ~~who~~ have questioned the scale of TCA's hydrological analysis, although it is clear from their comments that they have not reviewed the current RMP document, since the scale of issues they refer to are addressed in the most recent version of the RMP. (Note: The Regional Water Quality Control Board (RWQCB) staff has asked for additional information and clarification to make the 401 Certification application complete, but has never questioned the adequacy of the plan. RWQCB has also not yet issued a staff report on the RMP.)

San Mateo and San Onofre Creeks are healthy, unimpaired and among the healthiest streams in southern California, because their watersheds are far less developed than most southern California watersheds. The proposed detention basins on I-5 TCA proposes to construct may help offset impacts on the watershed from the increased runoff and pollutant loadings from 8-9 miles of highway being constructed along San Mateo Creek and its tributary, Cristianitos Creek, but it is not clear how substantial a benefit this would provide. In addition, while TCA states that it is providing these collection facilities voluntarily, and beyond what would be required for its project, the RWQCB staff discounts this assertion, noting that State Water Board policies require installation of such BMPs when improving existing roads. The RWQCB staff further notes that none of the available data suggest an existing water quality impairment, that the lower portions of San Onofre and San Mateo Creeks have not been proposed to be listed as impaired, and that quantifying benefits from the proposed project is difficult without adequate baseline data. Finally, the RWQCB staff also indicates that TCA's monitoring plan is deficient. Based on the RWQCB staff's concerns (note: no RWQCB staff report has yet been issued), it would appear premature for the Commission to concur with TCA's water quality assessment that the project is consistent with Sections 30230 and 30231 of the Coastal Act, much less that it would provide a net water quality improvement to the watershed.

Archaeology Historically, the Native American tribe Acjachemen (later named the Juaneño) occupied the greater project region, from Long Beach to Oceanside, east to Lake Elsinore, and west to Catalina Island. The project area contains numerous archaeological remains. *Panhe*, the ethnographic village of the Juaneños, lies within the San Mateo Archeological District located in parts of SOSB. Descendants of the Juaneños still use a portion of *Panhe* today for religious and ceremonial activities, including the Ancestor Walk, an important cultural event among Acjachemen, Tongva, Chumash, Tataviam and other Southern California tribal communities. To evaluate the project's impacts, the State Historic Preservation Officer (SHPO) has requested that TCA provide a Traditional Cultural Property evaluation for *Panhe*, as well as for Trestles, which the California Department of Parks and Recreation has submitted for consideration on the California Register of Historic Resources and the National Register of Historic Resources. The Commission lacks sufficient information to determine the project's consistency with the archaeological policy of the Coastal Act (Section 30244) because, based on the advice of the SHPO, TCA has not provided sufficient information to enable the Commission to identify the full range of adverse impacts to cultural resources. The Commission is therefore unable to assess whether the proposed mitigation qualifies as "reasonable mitigation" as required under Section 30244 of the Coastal Act. Traditional Cultural Property evaluations for *Panhe* and Trestles are necessary to provide the Commission with the information needed to adequately assess the project's impacts and mitigation.

Energy and Vehicle Miles Traveled

The project is inconsistent with the energy and vehicle miles traveled policy (Section 30253(4)). The greenhouse gas emissions directly resulting from the amount of cement required and the construction-related emissions over a four-year period would contribute significantly to global warming. TCA maintains operation impacts from emissions would be neutral or beneficial, because the toll road is intended to relieve congestion on I-5, and thus pollution from the higher-speed and thus shorter vehicle trips would be reduced. Ultimately, it is more likely that the proposed toll road would encourage continued growth, low density housing and inefficient transit patterns, and that the traffic system within the region would be equally or more congested than it is currently. Thus the toll road's impact on emissions is likely to add to, rather than reduce, vehicle emissions on I-5. TCA has not provided mitigation for either construction or operation emissions.

Conflict Resolution Contrary to TCA claims, the project does not pose a conflict between Coastal Act policies warranting review of the project under the conflict resolution policy of the Coastal Act (Section 30007.5). TCA asserts that if the Commission does not agree with TCA that the project is consistent with Chapter 3 of the Coastal Act, then the project qualifies for review under the conflict resolution policy (Section 30007.5) because of its benefits to coastal resources from: (a) water quality improvements (i.e., treating additional runoff); (b) decreased traffic congestion allowing more capacity for visitors to use I-5 for recreational purposes, and increased access to the coast for inland residents; and (c) public safety reasons (i.e., improved ability to evacuate the area in the event of a nuclear power plant accident/explosion, or a fire or tsunami).

Many of these issues have been discussed in detail above. Concerning **water quality**, San Mateo and San Onofre Creeks are healthy, unimpaired and among the healthiest streams in southern California, and both the Commission and the RWQCB staff question the value of the proposed detention basins on I-5 proposed by TCA. The RWQCB staff has asserted that the basins would be a normal project requirement, that there is a lack of available data suggesting existing water quality impairment or that the lower portions of San Onofre and San Mateo Creeks are impaired, and that quantifying benefits from the proposed project is difficult without adequate baseline data. In addition, the Commission notes that:

- (a) not authorizing the project would be more protective of water quality in San Mateo Creek;
- (b) the proposed benefits cited by TCA have not been quantified or established;
- (c) the project differs highly from the TCA-cited situation for the City of San Diego's Route 56 project (CDP 6-98-127), which involved minor habitat impacts and benefits to an impaired water body, and is not comparable to any of the other cases TCA cited involving water quality considerations; and
- (d) the project does not pose a conflict between the wetland/ESHA policies on the one hand and water quality policies on the other; and
- (e) the toll road is not what will treat stormwater run-off from I-5; rather, it is the proposed improvements such as detention basins that will treat the run-off. These detention basins are mitigation measures, and they can be constructed to treat the run-off regardless of whether the toll road is constructed.

Concerning **public access and recreation**, again TCA does not quantify its stated benefit of bringing additional visitors to the coast, which would contradict another of its assertions regarding wetlands which characterizes the project as an incidental public service. TCA also has not provided evidence that the project would be used by significant numbers of recreational travelers, who are generally less willing to pay tolls to reduce travel times, as opposed to commuters. In any event, the project's adverse effects on recreation far outweigh this purported benefit.

Concerning its assertions of an **emergency evacuation** benefit, TCA also does not quantify that purported benefit. TCA has not established that existing evacuation plans are inadequate, or that additional highway capacity is needed in this location for this purpose. Operators of the San Onofre Nuclear Generating Station (SONGS), the U.S. Marine Corps, and the Governor's Office of Emergency Services (OES) all maintain that the existing evacuation and emergency response plans are adequate and are tested every year. Southern California Edison could not operate SONGS if adequate emergency response plans did not exist. Moreover, alternatives are available to increase traffic capacity in the region and any could be used to supplement emergency evacuation needs, if such a need did exist.

Finally, assuming for the sake of discussion that the project were to raise a conflict between Coastal Act policies, justification for accepting the project's significant adverse environmental effects discussed above (Environmentally Sensitive Habitat Areas, Wetlands, Public Access and Recreation, Public Views, Surfing, Water Quality, Archaeological Resources, and Energy and Vehicle Miles Traveled) in order to provide unsubstantiated water quality, public access and improved emergency response benefits, would not be supported by any previous Commission actions, and would not be consistent with Section 30007.5 because it is not a resolution which is, given the facts in this case, "on balance, most protective of significant coastal resources."

Finally, the federal consistency regulations provide that, if the Commission's objection is based on a finding that the proposed activity is inconsistent with the California Coastal Management Plan (CCMP), the Commission must identify measures, if they exist, that would bring the project into conformance with the CCMP. No measures exist that would enable the proposed alignment to be found consistent with the Coastal Act. However, numerous alternative alignments are feasible and could be found consistent with the Coastal Act, including: (1) the Central Corridor (CC); (2) Central Corridor-Avenida La Pata (CC-ALPV); (3) Alignment 7 Corridor-Avenida La Pata (A7C-ALPV); (4) Arterial Improvements Only (AIO); (5) the I-5 Widening Alternative (I-5), as described in the FSEIR; or (6) the Arterial Improvements Plus-Refined (AIP-R) alternative described in "An Alternative to the Proposed Foothill South Toll Road, The Refined AIP Alternative," prepared by Smart Mobility, Inc. (September 2007). Implementation of any of these alternatives, if carried forward to a complete level of design with impact avoidance, minimization, and mitigation measures, could be brought into conformity with the CCMP.

TABLE OF CONTENTS

Section	Page No.
Executive Summary	2
I. Staff Summary and Recommendation.....	12
A. Project Description.....	12
B. Project Need	15
C. History/Background	16
D. Non-Competition Agreement with Caltrans	17
E. Applicant’s Consistency Certification.....	18
F. Staff Recommendation, Motion, and Resolution	18
II. Procedures - Applicable Legal Authorities	19
A. Need for Consistency Certification.....	20
B. Need for Coastal Development Permit.....	20
C. Procedures if the Commission finds that the activity is inconsistent with the CCMP.....	21
1. Alternative Measures	21
2. Necessary Information	21
D. Applicant’s Right of Appeal	23
III. Findings and Declarations.....	23
A. Environmentally Sensitive Habitat	23
B. Wetlands.....	85
1. Allowable Use Test.....	86
2. Alternatives	89
3. Mitigation	104
C. Public Access and Recreation, and Public Views	110
D. Surfing	157
E. Water Quality	176
F. Archaeological Resources	185
G. Energy/Vehicle Miles Travel/Greenhouse Gases/Global Warming	208
H. Conflict Resolution	221
IV. Substantive File Documents	231
Exhibits (Attached) (see p. 236 for Exhibits List)	
Appendices –	
Ex parte Communications (attached)	
Correspondence (separate appendix)	

I. STAFF SUMMARY AND RECOMMENDATION:

A. Project Description.

TCA proposes the construction of the Foothill Transportation Corridor-South (FTC-S) toll road¹, a limited access highway (toll road) that would extend the existing SR-241 toll road (FTC-N), south from its existing southern terminus at Oso Parkway in southern Orange County to I-5 on Marine Corps Base Camp Pendleton in northern San Diego County. TCA would build the road, collect the tolls, and operate the toll system until the construction bonds are paid off; Caltrans would maintain the highway in perpetuity and would operate the highway once the bonds are paid off. The project includes construction of toll collection facilities, and at least one mainline toll plaza.

The proposed ~~toll road would be project includes~~ approximately ~~16.2.2~~ miles ~~long of improvements, and would include including~~ approximately ~~0.81.7~~ miles of improvements along I-5, ~~all within the coastal zone. The southernmost approximately 0.25 mile, plus the improvements along I-5, would be within the coastal zone. TCA initially~~ The project proposes to construct four general-purpose travel lanes, two in each direction, ~~for the entire length of the corridor. Two additional lanes (one in each direction) would be added in the future as traffic conditions warrant. The northernmost portion of the toll road (from Oso Parkway to Ortega Hwy.) would include a median and have a total paved width of 128 ft. The median would be convertible for future high occupancy vehicle (HOV) lanes. The southern section, from Ortega Hwy. to I-5 would not include the median and would include an initial construction of 89 ft. of paved width. Any future HOV lanes would be in the center, and if and when they are proposed, the ultimate paved width would also be 128 ft.~~

The project includes approximately ~~41.1.4~~ million cubic yards of grading (~~22 million 550,000~~ cubic yards of cut and ~~19 million 855,000~~ cubic yards of fill), ~~plus an additional 18 million cubic yards of "remedial" grading to stabilize landslides (FSEIR, p. 4.20-14 and Table 4.20-2 Roadway Description and Related Design Features, p. 5).~~ Cross sections for fill slopes depicted in the FSEIR within San Onofre State Beach include a maximum fill slope of 190 ft. high, 620 ft. wide (Cross Section 7, FSEIR Figure 4.18-17A 5). Maximum cut slope (Cross Section 9, FSEIR Figure 4.18-17A 6) would be 175 ft. high, and 600 ft. wide. The total footprint of the ~~FTC-S project~~ would be ~~1,194-138~~ acres. This includes areas for grading, remedial grading, and construction disturbance, areas for paved roads and associated bridges and interchanges, access roads, materials storage areas, areas for utility relocations and areas for the construction of Best Management Practices (BMPs) (such as detention basins, filter strips, and other water quality features). Bridges are proposed at major waterway crossings, including San Juan (~~outside of the coastal zone, and therefore not a part of this project~~), San Mateo, and San Onofre Creeks. The ~~project completion of FTC-S~~ also includes a wildlife movement bridge in Cañada Chiquita, and large diameter culverts to allow wildlife movement underneath the toll road in several locations (~~outside of the coastal zone, and therefore not a part of this project~~).

¹ Also referred to in this report as "SOCTIIP" (the Southern Orange County Transportation Infrastructure Improvement Project), "A7C-FEC-M" (Alignment 7 Corridor, Far East Crossover), "the SR-241 extension," or "the proposed toll road."

TCA estimated ~~the project~~ cost (in November 2005) of \$805 million for construction and \$70 million for land acquisition (for a total of \$875 million) for completion of the toll road. The construction period would be 3-4 years. TCA's current schedule does not anticipate construction prior to 2011.

From north to south, the proposed toll road would begin at the existing terminus of SR-241, follow the east side of Cañada Chiquita, across San Juan Creek to Ortega highway, through the west side of the Donna O'Neill Land Conservancy, then south through the San Onofre State Beach lease area of Camp Pendleton Marine Corps Base, crossing over Cristianitos Road, crossing over San Mateo Creek, then joining I-5. Southbound connections to I-5 and northbound connections from I-5 would be direct. Travelers driving southbound on I-5 going north on the toll road, and southbound travelers on the toll road driving north on I-5, would use Cristianitos road for the connection.

~~The project~~ Completion of the toll road includes construction of toll collection facilities, and at least one mainline toll plaza outside of the coastal zone and therefore not a part of this project. Key components of the toll road outside of the coastal zone include continuous mainline travel lanes and ramps south of Oso Parkway, several wildlife structures/bridges to facilitate wildlife movement, an approximately 2,100 foot bridge structure crossing San Juan Creek, a toll plaza north of Ortega Highway, ramp toll plazas at Cow Camp Road and Avenida Pico, Within the coastal zone and within the project description of this coastal consistency analysis is an approximately 2,859 foot long elevated bridge structure spanning San Mateo Creek and I-5 providing a direct connection to I-5, and reconstruction of the existing I-5 Basilone Road interchange.

Within the coastal zone, the toll road would be on federal land (Marine Corps Base Camp Pendleton) leased to the state for San Onofre State Beach (SOSB), within subunits 1 and 2. The current lease to the state is valid through 2021. TCA describes the construction proposed within the coastal zone as follows:

That portion of FTC-S within the coastal zone includes the proposed SR-241/I-5 connectors, significant water quality treatment improvements, and several national security improvements. The northbound and southbound SR-241/I-5 connectors will consist of two general-purpose lanes in each direction on two bridge structures over San Mateo Creek. See Figure 3, Foothill Transportation Corridor - South. The project elements within the coastal zone include the following:

Highway Improvements

- *I-5 connectors to and from FTC-S (one southbound SR-241 to southbound I-5 connector and one northbound I-5 to northbound SR-241 connector), which bridge over San Mateo Creek*
- *The realignment and reconstruction of the existing I-5/Basilone Road interchange and ramps with no direct connection of SR-241 to Basilone Road*
- *A minor widening of I-5 south of Basilone Road to accommodate the project connector roads*
- *A sound wall south of Basilone Road*
- *The widening of the I-5 bridges over San Onofre Creek*
- *A sound wall on the south side of I-5*

- *A sound wall east of the San Mateo Point housing area on MCB Camp Pendleton west of I-5*
- *Construction of a new public sidewalk along Cristianitos Road*
- *Reconstruction of a public sidewalk at the Basilone Overcrossing*

Water Quality Improvements

- *Water quality improvements to approximately two miles of I-5 that currently has no water quality treatment infrastructure, which will capture for treatment an estimated 5 million gallons of storm water each year that currently flows to San Onofre and San Mateo Creeks untreated*
- *Two on-site extended sand filter, one adjacent and tributary to San Mateo Creek (41 acre area = System 1) and the other adjacent and tributary to San Onofre Creek (62 acre area = System 2)*
- *A bioswale, vegetated with native grasses, for treatment of freeway storm water from SR-241*

Military and National Security Improvements

- *The reconstruction and replacement of the San Onofre Gate to provide entry to MCB Camp Pendleton, which will include new enhanced security facilities per the Anti-Terrorist Force Protection Program (ATFPP)*
- *A widened military access road under the southerly end span of the existing San Mateo Creek/I-5 Bridge, allowing improved Marine amphibious access between Green Beach and northern military training areas*

As the I-5/SR-241 connectors enter the coastal zone from the north, the initial 800 feet will be excavated below the elevation of the existing terrain to establish finished road grade. A section of the northbound connector will be placed on fill behind a retaining wall. The connectors will be on bridge structures over San Mateo Creek.

The southbound bridge structure (southbound FTC-S/SR-241 as it transitions to southbound I-5) will be approximately 3,910 feet long with 14 column supports. At the highest point, where the southbound connector crosses over the I-5, the bottom of the bridge and the road deck will be approximately 28 feet and 11.8 feet above the I-5 grade, respectively. From this high point, the southbound connector decreases in elevation to approximately that of I-5 as it crosses under the reconstructed Basilone Road Overcrossing. The northbound bridge structure (northbound I-5 as it transitions to northbound FTC-S/SR-241) over San Mateo Creek will be approximately 3,860 feet long with 15 column supports. This bridge is not as high as the southbound structure because it stays to the northeast and does not cross over the I-5 travel lanes. The bridge decreases in elevation from a high point of approximately 20 feet above I-5 as it leaves the bluff and crosses over San Mateo Creek. South of San Mateo Creek, the northbound connector is generally at the same elevation of I-5 as it begins to parallel the travel lanes and crosses under the reconstructed Basilone Road Overcrossing.

To accommodate the FTC-S connectors passing underneath the Basilone Overcrossing, the Basilone Road Overcrossing at I-5 will be realigned and reconstructed along with the four Basilone Road ramps to and from I-5, as well as a portion of Basilone Road. Minor cut-and-fill grading and retaining walls will be utilized south of the San Mateo Bridge abutments where the southbound and northbound connector ramps parallel I-5 and pass under Basilone Road to San Onofre Creek.

At San Onofre Creek, the southbound and northbound connectors begin to merge and diverge, respectively, from I-5. The existing I-5 bridges over San Onofre Creek will be widened to accommodate the connectors. Both the merging southbound connector and the diverging northbound connector extend approximately 4,000 feet south of San Onofre Creek.

The construction of the SR-241/I-5 connectors will also include the relocation of existing conflicting utility facilities. All utility relocations will be accomplished within the disturbance limits evaluated in the EIS/SEIR.

B. Purpose and Need. The primary impetus for the Orange County toll roads is reduction of traffic congestion. TCA ~~states-cites to the~~(FSEIR), [which lists the Purpose and Need adopted by The Collaborative and the manner in which the Collaborative preferred alternative/LEDPA meets the purpose and need:](#)

The purpose of the SOCTIIP [FTC-S] is to provide improvements to the transportation infrastructure system that would help alleviate future traffic congestion and accommodate the need for mobility, access, goods movement, and future traffic demands on I-5 and the arterial network in the action area. The Preferred Alternative meets this purpose because it provides the number of traffic lanes necessary to meet forecasted traffic demand through 2025, which is the design forecast year for the SOCTIIP and the planning horizon year for regional plans and socioeconomic forecasts. The Preferred Alternative also meets the purpose because it accommodates the need for mobility, access, and goods movement by providing increased traffic capacity and because it provides an alternative route to I-5.

One of the project purposes is to improve the projected future level of service (LOS) and reduce the amount of congestion and delay on the freeway system and, as a secondary objective, the arterial network, in southern Orange County. The overall goal is to improve projected levels of congestion and delay as much as is feasible and cost-effective. This may include strategies that lead to a reduction in the length of time LOS F will occur, even if the facility will still operate at LOS F for a short period of time, if the strategy will result in benefits to the traveling public and more efficient movement of goods by reducing total delay. The Preferred Alternative furthers this objective by increasing overall regional capacity and reducing congestion on I-5 and local arterials.

C. Background.

The Transportation Corridor Agencies (TCA) consist of the Foothill/Eastern Transportation Corridor Agency and the San Joaquin Hills Transportation Corridor Agency. TCA was established in 1986 by joint powers agreements among the Orange County and 15 cities in the County to plan, design, finance, and build regional transportation facilities. The two agencies are governed by separate governing boards, consisting of elected officials from the County and the agency cities. The two corridor agencies are together responsible for the planning, financing, designing, and construction of the planned 67 mile toll road system. The Foothill/Eastern TCA governing Board is composed of representatives from the Cities of Dana Point, San Clemente, Anaheim, Irvine, Lake Forest, Mission Viejo, Orange, Rancho Santa Margarita, San Juan Capistrano, Santa Ana, Tustin, and Yorba Linda, as well as Orange County supervisors representing the Third, Fourth, and Fifth Districts.

TCA has built 51 miles of the toll road system, which is currently open to traffic, including approximately 20 miles of SR-241. The Commission concurred with TCA's consistency certification for the San Joaquin Hills Transportation Corridor (SR-73) in 1992 (CC-063-92). Fully outside the coastal zone, and not reviewed by the Commission, TCA has built the Foothill/Eastern Transportation Corridor (SR-91), and the FTC-N (SR-241). The FTC-S would complete the currently planned toll road system.

TCA's consistency certification states:

***Project Background.** Planning efforts for FTC-S have been underway for approximately 20 years by local, regional, and state transportation agencies. In 1981, the County of Orange evaluated alternative general alignments and other alternatives to meet project need and certified Final EIR No. 123. The County of Orange then added FTC-S to the Master Plan of Arterial Highways (MP AH). The Southern California Association of Governments (SCAG) and the San Diego Association of Governments (SANDAG) evaluated alternatives to FTC-S as part of their evaluation of SCAG and SANDAG regional transportation plans.*

Between 1989 and 1991, the TCA prepared TCA EIR No.3, which, in 1991, adopted a locally preferred alternative for the project known as the "CP" alignment. In December 1993, the TCA initiated the preparation of a Subsequent EIR (SEIR) to evaluate the CP Alignment against other alternatives and a No Build Alternative. Subsequent to this effort, the project participated in a process consistent with the NEPA/Section 404 Memorandum of Understanding (MOU). The NEPA/Section 404 MOU provides for federal resource agency coordination in identifying the project Statement of Purpose and Need, selecting Alternatives for evaluation, and agreement of the Preferred Alternative leading to identification of the Least Environmentally Damaging Practicable Alternative (LEDPA). The federal agencies that participated in this integration process (U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Federal Highway Administration, Caltrans, and the U.S. Marine Corps) are collectively referred to as the "SOCTIIP

Collaborative" and, together, the Collaborative developed the project Alternatives evaluated in the Draft EIS/SEIR.

During the course of Phase I of the SOCTIIP Collaborative process (August 1999- November 2000), the Collaborative developed a list of alternatives for evaluation in the SOCTIIP NEPA and Section 404 process. The Phase I Collaborative identified several Alternatives for evaluation. It was during this time that the Central Corridor-Complete (CC-Alternative, previously referred to as the BX Alternative) and the Far East Alternative (CP Alternative) were evaluated to determine optimal alignments. The TCA/FHWA defined the Alignment 7 Corridor Alternative (A7C Alternative) as an alternative to the CC Alternative to avoid and/or reduce impacts to the significant biological resources in the upper and middle Chiquita areas. The A7C-Alternative represents a shift to the east to move the alignment out of Canada Chiquita including its primary drainage course and to avoid the wetlands area at the confluence of Canada Chiquita and San Juan Creek, and at the Segunda Deshecha wetlands complex. Additionally, this shift minimized impacts to sensitive habitat including coastal sage scrub. Similarly, other Alternatives to the CC Alternative were created (i.e., Alignment 7 Corridor Swing Variation (A7C-7SV) Alternative, the Alignment 7 Corridor-Far East Crossover Variation (A7C-FECV) Alternative and the Alignment 7 Corridor Ortega Highway Variation (A7C-OHV) Alternative). The A7C Alternatives and its variations were created as Alternatives to the CC Alternative. See Table 1, History of FTC-S Alternatives.

In November 2000, the SOCTIIP Collaborative concurred on the Alternatives to be evaluated in the technical studies supporting the Draft EIS/SEIR. The Collaborative agreed to 24 Alternatives for evaluation in the technical analysis. These include 20 toll road Alternatives, 2 non-toll road Alternatives and 2 no action Alternatives. During Phase II of the SOCTIIP Collaborative (January 2001-Present), the TCA sought to further refine the alternatives to minimize impacts to sensitive environmental resources as described in the Final SEIR. FTC-S is the adopted alignment described in the Final SEIR.

D. Non-Competition Agreement. To maintain toll revenues and assure its ability to market bonds to pay for the proposed toll road, TCA and Caltrans have entered into an agreement discouraging Caltrans from “competing” with the proposed toll road. Accordingly, this agreement (Agreement 12-210, Section 2.1.6) provides that:

Non-Competition

(a) [The STATE (i.e., Caltrans) agrees that it] ... shall use its best efforts to exercise its discretionary power to support [the proposed] PROJECT and, except as specifically authorized in this Section 2.1.6, STATE shall refrain from exercising that discretionary authority relative to initiating, supporting or approving any Capital Project on the State Highway System within the Non-Competition Zone which would have the purpose or

reasonably foreseeable effect of significantly adversely affecting AGENCY's [i.e. TCA's] toll operations.

(b) ... STATE shall not construct, operate, assist or support, directly or indirectly, and shall exercise all discretionary authority available to it under applicable law to persuade other governmental or private entities, directly or indirectly, from constructing any STATE highway Capital Projects or improvements, realignments or enhancement of STATE highway projects within the Non-Competition Zone which would principally run parallel to the PROJECT, which would reasonably be expected to have any adverse effect on PROJECT tolls and which would become operational prior to the year 2020 or the earlier termination of this agreement except for: ... [projects in the 1992 State Transportation Improvement program (STIP), improvements approved by local initiative (Measure M, in 1990), safety and maintenance improvements, adopted 1992 County Congestion Management Plan improvements, high speed rail projects, HOV lanes required by regulatory agencies, and exclusive I-5 HOV lanes between Avenida Pico and State Route 1.

If Caltrans fails to abide by this agreement, Caltrans has agreed it would be required to compensate TCA for any reductions in toll revenues attributable to any such competition, "as determined by a mutually agreed toll revenue consultant." The Non-Competition Zone runs 5 miles on either side of the proposed toll road and is shown in Exhibit 12.

E. Applicant's Consistency Certification.

The Foothill/Eastern Transportation Corridor Agency (TCA) certifies that the proposed activity complies with the federally approved California Coastal Management Program and will be conducted in a manner consistent with such program.

F. Staff Recommendation and Motion.

The staff recommends that the Commission adopt the following motion:

MOTION: I move that the Commission **concur** with the Foothill/Eastern Transportation Corridor Agency's (TCA's) consistency certification CC-018-07 that the project described therein is consistent with the enforceable policies of the California Coastal Management Program (CCMP).

Staff Recommendation:

The staff recommends a **NO** vote on the motion. Passage of this motion will result in a concurrence with the certification and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution to Object to Consistency Certification:

The Commission hereby **objects to** the consistency certification by the Foothill/Eastern Transportation Corridor Agency, on the grounds that the project described therein is inconsistent with the enforceable policies of the CCMP.

II. Procedures

A. Need for Consistency Certification.

Section 307(c)(3) of the Coastal Zone Management Act provides:

(3) (A) After final approval by the Secretary of a state's management program, any applicant for a required Federal license or permit to conduct an activity, in or outside of the coastal zone, affecting any land or water use or natural resource of the coastal zone of that state shall provide in the application to the licensing or permitting agency a certification that the proposed activity complies with the enforceable policies of the state's approved program and that such activity will be conducted in a manner consistent with the program. ... No license or permit shall be granted by the Federal agency until the state or its designated agency has concurred with the applicant's certification or until, by the state's failure to act, the concurrence is conclusively presumed, unless the Secretary, on his own initiative or upon appeal by the applicant, finds, after providing a reasonable opportunity for detailed comments from the Federal agency involved and from the state, that the activity is consistent with the objectives of this title or is otherwise necessary in the interest of national security.

The proposed toll road requires a number of federal agency approvals and authorizations, including (1) a permit from the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act for fill of waters of the U.S., (2) an interchange approval from the Federal Highway Administration pursuant to the U.S. Highways Code 23 U.S.C., Section 111 (Federal Highway Act), and (3) an incidental take permit authorization from the U.S. Fish and Wildlife Service under either Section 7 or pursuant to Section 10 of the Endangered Species Act.

The distance inland to the coastal zone boundary in the affected area on northern Camp Pendleton ranges from approximately 1/7 to 1/3 mile inland from I-5. The portions of the project within the coastal zone on Camp Pendleton are the 0-81.7 miles of improvements parallel and adjacent to I-5, between San Mateo Creek and 4000 ft. south of San Onofre Creek, and the bridge over the San Mateo Creek and the first approximately 2000-2640 ft. (0.38-5 miles) of the toll road once it leaves I-5.

In some circumstances federally-owned land is excluded from the coastal zone for federal law purposes. Section 304(1) of the CZMA (16 U.S.C. § 1453(1)) states: "Excluded from the coastal zone are lands the use of which is by law subject solely to the discretion of or which is

held in trust by the Federal Government, its officers or agents.”² As noted earlier, the federal land underlying the coastal zone portion of the project is leased by the U. S. Department of Defense to the State of California (for San Onofre State Beach and for I-5).

The project would affect coastal zone resources ~~both on and off~~ Camp Pendleton. As discussed elsewhere in this report, coastal zone effects from the project include effects on public access, recreation, surfing, scenic coastal public views, water quality, archaeological resources, wetlands, environmentally sensitive habitat areas (including habitat for a number of coastal wildlife species including the Pacific pocket mouse, tidewater goby, coastal California gnatcatcher, arroyo toad, southern California coast steelhead, least Bell’s vireo, San Diego fairy shrimp). Regardless of the status of federal land relative to the “coastal zone,” the Commission has historically and consistently considered effects to wetlands and listed species located on federal land to constitute coastal zone effects. In addition, while it is located inland of the coastal zone boundary, the campground that would be affected at SOSB was provided as mitigation for impacts from the San Onofre Nuclear Generating Station (SONGS), and because it is intricately linked to coastal oriented recreational opportunities, effects to this campground also constitute coastal zone effects.

B. Need for Coastal Development Permit.

The project triggers federal consistency review because it needs authorizations from ~~a number of federal agencies, including the U.S. Army Corps of Engineers, the U.S. Marine Corps, the Federal Highway Administration, and the U.S. Fish and Wildlife Service.~~ However the Commission also believes it is subject to the permitting requirements of the Coastal Act, as a private (i.e., non-federal) activity on federal land. This position is supported by the U.S. Supreme Court’s “Granite Rock decision” (CCC v. Granite Rock Co.)(1986)(480 U.S. 572).³ TCA has been invited to submit a coastal development permit application along with its consistency certification. TCA has chosen not to submit the coastal development permit application at this time, although it has acknowledged in its responses to Coastal Commission staff comments and in the Final SEIR the need for both a consistency certification and a coastal development permit:

ES.7.1 ANTICIPATED AGENCY ACTIONS FOR THE CORRIDOR ALTERNATIVES

Selection of a corridor alternative is anticipated to require the agency actions described below.

California Coastal Commission (CCC): Approval of a Coastal Development Permit (CDP) for construction activities in the Coastal Zone and consistency certification with the federal Coastal Zone Management Act (CZMA). [FSEIR, Executive Summary, p. ES-41]

² See also 15 CFR § 923.33(a) (“The boundary of a State’s coastal zone must exclude lands owned, leased, held in trust or whose use is otherwise subject solely to the discretion of the Federal Government....”).

³ The Commission has issued 84 coastal development permits for non-federal activities on Camp Pendleton. These permit numbers are listed on page 231.

Therefore, prior to any construction TCA would need to apply for and receive a coastal development permit from the Commission for that portion of the project within the coastal zone.

C. Procedure if the Commission finds that the activity is inconsistent with the CCMP:

1. Alternative Measures.

Section 930.63(b) of the federal consistency regulations (15 CFR Section 930.63(b)) requires that, if the Commission's objection is based on a finding that the proposed activity is inconsistent with the CCMP, the Commission must identify measures, if they exist, that would bring the project into conformance with the CCMP. Section 930.63 provides:

§930.63 State agency objection to a consistency certification.

(b) State agency objections that are based on sufficient information to evaluate the applicant's consistency certification shall describe how the proposed activity is inconsistent with specific enforceable policies of the management program. The objection may describe alternative measures (if they exist) which, if adopted by the applicant, may permit the proposed activity to be conducted in a manner consistent with the enforceable policies of the management program.

As described in the discussed in the ESHA, Wetlands, Public Access and Recreation, Public Views, Surfing, Water Quality and Archaeological, and Energy/Vehicle Miles Traveled Sections below, the proposed project is inconsistent with the CCMP. No measures exist that would enable the proposed alignment to be found consistent with the Coastal Act. However, numerous alternative alignments are feasible and could be found consistent with the Coastal Act, including: (1) the Central Corridor (CC); (2) Central Corridor-Avenida La Pata (CC-ALPV); (3) Alignment 7 Corridor-Avenida La Pata (A7C-ALPV); (4) Arterial Improvements Only (AIO); (5) the I-5 Widening Alternative (I-5), as described in the FSEIR or (6) the Arterial Improvements Plus-Refined (AIP-R) alternative described in "An Alternative to the Proposed Foothill South Toll Road, The Refined AIP Alternative," prepared by Smart Mobility, Inc.(September 2007). Any of these alternatives, if carried forward to a complete level of design, could be designed in a manner to include impact avoidance (where feasible), minimization, mitigation and monitoring measures to a level consistent with the applicable Coastal Act policies.

2. Necessary Information.

Section 930.58(c) of the federal consistency regulations (15 CFR Section 930.58 (c)) requires that, if the Commission's objection is based on a lack of information, the Commission must identify the information necessary for it to assess the project's consistency with the CCMP. That section states:

(c) A State agency objection may be based upon a determination that the applicant has failed, following a written State agency request, to supply the information required

pursuant to § 930.58 or other information necessary for the State agency to determine consistency. If the State agency objects on the grounds of insufficient information, the objection shall describe the nature of the information requested and the necessity of having such information to determine the consistency of the activity with the management program. The objection may describe alternative measures (if they exist) which, if adopted by the applicant, may permit the proposed activity to be conducted in a manner consistent with the enforceable policies of the management program.

As described fully in Wetlands, Water Quality, Archaeology, and Energy and Vehicle Miles Traveled Sections of this report below, the Commission has found this consistency certification to lack the information that the Commission has requested TCA to provide to enable the Commission to determine whether the proposed project is consistent with Sections 302233(a), 30233(c), 30231, 30244, and 30253(4) of the Coastal Act. In order to determine the project's consistency with the CCMP, the Commission has requested that TCA provide it with the following necessary information:

- 1. Wetlands.** TCA needs to submit an adequate wetlands assessment based on standard Commission protocols using Coastal Act wetland definitions, and including a complete assessment of all three wetland indicators, including hydrology and soils and not just vegetation. This analysis needs to be conducted for both areas that will be filled, as well as for the areas proposed for mitigation. TCA also needs to submit a functional capacity analysis as required under Section 30233(c). The need for this information is explained in the wetlands section of this report below.
- 2. Water Quality.** TCA needs to submit adequate baseline data for San Mateo and San Onofre Creeks, as well as the additional information requested in the RWQCB staff letter to TCA dated September 24, 2007. The need for this information is explained in the water quality section of this report below.
- 3. Archaeology.** TCA needs to submit Traditional Cultural Property evaluations for *Panhe* and Trestles. The need for this information is explained in the archaeological resource section of this report below.
- 4. Greenhouse Gas Emissions.** For any alignment selected, TCA needs to submit an evaluation of the project's contribution to global warming and greenhouse gas emissions, including calculation of and mitigation for both construction or operation emissions. The need for this information is explained in the energy and vehicle miles traveled section of this report below.

(The Commission staff transmitted these information requests in a letter to TCA dated September 25, 2007.)

D. Right of Appeal.

Pursuant to 15 CFR Part 930, Subpart H, and within 30 days from receipt of notice of a Commission objection, TCA may request that the Secretary of Commerce override this objection. In order to grant an override request, the Secretary must find that the activity is consistent with the objectives or purposes of the Coastal Zone Management Act, or is necessary in the interest of national security. A copy of the request and supporting information must be sent to the California Coastal Commission and the Federal Highway Administration, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service. The Secretary may collect fees from TCA for administering and processing its request.

III. Findings and Declarations.

The Commission finds and declares as follows:

A. Environmentally Sensitive Habitat.

Coastal Act § 30240 states:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Coastal Act section 30107.5 defines environmentally sensitive area:

“Environmentally sensitive area” means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

The Coastal Act thus establishes a high standard for protection of areas that are identified as environmentally sensitive. Only resource-dependent uses, such as habitat restoration, are allowed within an environmentally sensitive area (ESHA), and all development within or adjacent to an ESHA must be sited and designed to prevent significant disruption of ESHA.

Under the Coastal Act, if an ESHA is identified, it must be avoided unless the proposed development is “a use dependent on the resource.” This fundamental requirement of the Act was confirmed in the *Bolsa Chica* case, wherein the Court found:

Importantly, while the obvious goal of section 30240 is to protect habitat values, the express terms of the statute do not provide that protection by treating those values as intangibles which can be moved from place to place to suit the needs of development. Rather, the terms of the statute protect habitat values by placing strict limits on the uses which may occur in an ESHA....

Defining ESHA

ESHA, as defined in Section 30107.5 of the Coastal Act, is "...any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities." Thus, Section 30107.5 sets up a two part test for determining what constitutes ESHA. The first part is determining whether an area includes plants, animals or their habitats that are either: (a) rare; or (b) especially valuable because of their special nature or role in an ecosystem. If so, then the second part asks whether such plants, animals, or habitats could be easily disturbed or degraded by human activities. If so, then the area where such plants, animals, or habitats are located is deemed ESHA by Section 30107.5.

Defining "rare"

There are several types of rarity, but each of them is fundamentally related to threats to the continued existence of species that naturally occur in larger or more widespread populations. Increasing numbers of species have become absolutely rare, having been reduced to a few hundreds or thousands of individuals. The prognosis for these species is very poor. Another common pattern is for species to be globally rare but locally abundant. Such species only occur at a few places either as a result of natural processes or human perturbations. The remaining populations of tidewater goby and coastal California gnatcatcher, for example, appear to be constrained in their natural distribution as a result of widespread loss of suitable habitat areas. Some species, such as the Pacific pocket mouse, are characterized as "narrow endemics" because they have evolved adaptations to a very limited range of environmental variables (e.g., soil type, temperature, humidity, availability of shelter and forage species etc.), which restrict their spatial distribution. Many other species, such as the least Bell's vireo and San Diego fairy shrimp, have restricted distributions as a result of human activities, especially agricultural and urban development that results in habitat loss. Many natural endemics have also suffered such habitat loss – compounding the risk to them. All these species may be abundant in the few areas where they still occur. However, regardless of the cause of their restricted distribution, the survival of these species is at elevated risk because localized impacts may affect a large proportion of the population with devastating effects. At the other end of the spectrum of rarity are species such as steelhead that are geographically widespread, but are everywhere in low abundance. Some species naturally occur in this pattern and have life-history characteristics that enable them to persist. However, naturally abundant species that have been reduced to low density throughout their range are at heightened risk of extinction, although their wide distribution may increase their opportunities for survival.

Defining “especially valuable”

All native plants and animals and their habitats have ~~significant~~ intrinsic value. However, the “especially valuable” language in the Coastal Act definition of ESHA makes clear that the intent is to protect those species and habitats that are out of the ordinary and special, even though they may not necessarily be rare. As in all ESHA determinations, this requires a case-by-case analysis. Common examples of habitats that are especially valuable due to their role in the ecosystem are those that support rare, threatened, or endangered species, and those that provide important breeding, feeding, resting or migrating grounds for some stage in the life cycle of animal species and that are in short supply (e.g., California sage scrub provides forage and nesting habitat for the coastal California gnatcatcher ~~and vernal pools~~ and coastal lagoons and estuaries provide nursery habitat for steelhead and the tidewater goby). Habitats may also be especially valuable because of their special nature. Examples include those rare instances of communities that have remained relatively pristine, areas with an unusual mix of species, and areas with particularly high biological diversity (vernal pools for example).

Site Specific ESHA Analyses

The reason ESHA analyses are all site-specific is that there is no simple rule that is universally applicable. For example, a plot of a rare habitat type that is small, isolated, fragmented and highly degraded by human activities would generally not meet the definition of ESHA because such highly impacted environments are so altered that they no longer fit the definition of their historical habitat type. Larger, less isolated, more intact areas that are close to or contiguous with other large expanses of natural habitat are more likely to have a special nature or role in an ecosystem and hence meet the ESHA definition, but “large,” “isolated,” “intact,” and “close to” are all terms that are relative to the particular species or habitat under consideration. What is spatially large to a Pacific pocket mouse is small to a mountain lion or bald eagle. What is isolated for a dusky footed woodrat may not be for a coastal California gnatcatcher. Similarly, an area supporting one or a few individuals of a rare species might not meet the definition of ESHA because scattered individuals might be common and not significant to the species. However, this is relative to the actual distribution and abundance of the species in question. If a few individuals of a species previously thought to be extinct were found, the area would clearly meet the definition. Whereas, if the same number of individuals of a species with a population of 25,000 were found in an isolated, degraded location, the area would probably not meet the definition. A conclusion of whether an area meets the definition of ESHA is thus based on a site- and species-specific analysis that generally includes a consideration of community role, life-history, dispersal ability, distribution, abundance, population dynamics, and the nature of natural and human-induced impacts. The results of such analysis can be expected to vary for different species.

Case-by-case analysis of ESHA necessarily occurs at discrete moments in time. However, ecological systems and the environment are inherently dynamic. One might expect, therefore, that the rarity or sensitivity of species and their habitats will change over time. For example, as species or habitats become more or less abundant due to

changing environmental conditions, they may become more or less vulnerable to extinction. In addition, our scientific knowledge and understanding of ecosystems, specific species, habitat characteristics and so forth is always growing. Large numbers of new species are discovered every year. The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California grew from approximately 1400 listings in 1974 to over 2100 listings in 2001. New legal requirements, such as the numerous environmental laws adopted in the 1970s, may be adopted that reflect changes in our values concerning the current conditions of natural resources. Consequently, ESHA evaluations may change over time. Areas that were once not considered ESHA may become ESHA. It is also possible that rare species might become less so, and their habitats may no longer be considered ESHA. Because of this inherent dynamism, the Commission must evaluate resource conditions as they exist at the time of the review, based on the best scientific information available.

Federally Designated Critical Habitat as ESHA

The definition of environmentally sensitive area in Section 30107.5 of the Coastal Act shares a common focus with the Endangered Species Act definition of critical habitat for those species listed as threatened or endangered. Specifically, critical habitat for a threatened or endangered species is defined in section 3(5)(A) of the Endangered Species Act (ESA) as:

- (i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and
- (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Additionally, the term "endangered species" is defined in the ESA as "any species which is in danger of extinction throughout all or a significant portion of its range" and the term "threatened species" is defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."

In other words, critical habitat includes those habitat areas in which species imminently or foreseeably at risk of becoming extinct are located that may require special protection and that are essential to the conservation of those species; or those areas not directly occupied by threatened or endangered species but that otherwise have been determined to be essential for the existence-conservation of those species.

This definition of critical habitat is similar to the Coastal Act definition of ESHA because endangered and threatened species can, by definition, also be expected to be rare. This common focus on rare species would ensure that those portions of critical habitat so

designated due to the presence of a threatened or endangered species would also qualify as ESHA. Additionally, it is often true that those species listed, protected and designated with critical habitat under the Endangered Species Act are recognized as being under imminent threat of extinction due to human induced habitat loss or degradation, or, as stated in the Coastal Act definition of ESHA, “easily disturbed or degraded by human activities.”

For those areas determined to be critical habitat due to the second provision of the critical habitat definition, “specific areas outside the geographic area occupied by a species at the time it is listed” but determined to be “essential for the conservation of the species” it can reasonably be assumed that these areas meet the ESHA definition’s meaning of “especially valuable based on their special nature or role in an ecosystem” due to the recognized importance of these areas to the conservation of a species threatened with extinction and the often critical role that endangered species play in the ecosystems that support them. Thus, although the Commission is not limited to designated critical habitats when defining ESHA, the Commission can rely on critical habitat designations as one of the components supporting an ESHA determination.

As detailed below, the Commission finds that those areas within the coastal zone portion of the proposed project area that are currently or have previously been specifically designated as critical habitat by the U.S. Fish and Wildlife Service (FWS) due to the recognized and established presence of federally listed threatened or endangered species and/or the importance of these areas to the conservation of threatened or endangered species also qualify as environmentally sensitive habitat areas, ESHAs.

Project Description

The proposed temporary and permanent development of approximately 138 acres⁴ within the coastal zone portion of the project area, including a substantial amount of undeveloped open space within one of the largest and least developed coastal valleys in southern California, has the potential to adversely affect a large number of the sensitive and unique species and habitats that exist within this area, including approximately ~~66~~⁵about 31 acres of federally designated critical habitat for species that are listed as threatened or endangered under the federal Endangered Species Act. The proposed use of heavy equipment and machinery for extended periods of time to achieve the amount of grading, cut, and fill of soil required to construct the proposed ~~six lane~~four lane toll road would result in elevated noise levels for prolonged periods, remove habitat and destroy or dislocate many species of plants and animals that currently exist within the project’s disturbance limits, including currently or previously designated critical habitat for four federally listed threatened or endangered species and occupied habitat for several other sensitive and

⁴ Personal communication from [Glenn Lukes Associates TCA](#) on September 11, 2007: “The total area of CCC jurisdiction that falls within the disturbance limits is approximately 138 acres.”

⁵ This estimate is based on the amount of federally designated critical habitat for federally listed threatened or endangered species located within the disturbance limits of the proposed project as demonstrated in Exhibit 15 and was calculated by staff of the Commission’s Technical Services – Mapping Unit.

protected species. In addition, the proposed expansion of existing bridges and placement of additional elevated bridge structures would require pilings and support structures to be placed within and in close proximity to the sensitive wetland areas of San Onofre Creek and San Mateo Creek, thus subjecting these environmentally sensitive habitat areas and the species that they support to potential adverse affects associated with noise, vibration, fill, sedimentation, degraded water quality and other similar disturbances associated with the movement and use of construction equipment, personnel and materials. The following discussion will detail the types and locations of sensitive species and environmentally sensitive habitat areas within the project area and analyze the extent to which these terrestrial biological resources may be affected by the proposed project.

In addition to potential impacts to ESHA, as explained below, the proposed project also has the potential to adversely affect and compromise the continued survival of at least six species with federal designations under the Endangered Species Act. Potential impacts to these species resulting from the proposed project are also detailed below.

Pacific Pocket Mouse

The Pacific pocket mouse (*Perognathus longimembris pacificus*) is a critically endangered species of small mammal that is only found within 2.5 miles of the coast on fine-grained sandy substrates in coastal sage scrub, coastal strand, and river alluvium. The species remains one of the most endangered animals in the United States and was provided with an emergency federal Endangered Species Act listing in February of 1994 following the discovery of a single population on the Dana Point Headlands. Prior to this re-discovery, the Pacific pocket mouse had been assumed to have gone extinct approximately 20 years earlier. At the time of the emergency designation in 1994, the global Pacific pocket mouse population was known to consist of no more than 39 individuals at one location despite intensive surveys of all remaining, undisturbed locales where this species historically occurred. Upon expiration of the emergency listing, the Pacific pocket mouse (henceforth referred to as pocket mouse) was federally listed as endangered in September of 1994 and two additional populations were discovered within MCB Camp Pendleton during small mammal surveys conducted in 1995. Of these three known populations, one occurs within and adjacent to the proposed project area. This population is comprised of two occupied areas immediately to the north and south of San Mateo Creek, referred to as the San Mateo North and San Mateo South pocket mouse sites, respectively.

Despite the well recognized and established presence of the pocket mouse at only three general areas within Orange and San Diego counties, FWS has not designated critical habitat for this species. The basis for this decision, as described in a September 2000 petition to designate critical habitat for the pocket mouse jointly submitted by the Natural Resources Defense Council, Endangered Habitats League and Center for Biological Diversity to FWS, was that:

When the Service listed the Pacific pocket mouse as an endangered species in 1994, it declined to designate critical habitat, determining that to do so would not be “prudent.” Specifically, the Service concluded that designating critical habitat for the Pacific pocket mouse (1) would lead to an increased threat to the species through the publication of maps identifying the location of the sole Pacific pocket mouse population then known to exist; and (2) would not provide any conservation benefit to the species because the only population then known was located on private property that lacked a “federal nexus” subjecting it to the critical habitat provisions of the ESA.

Because these select locations provide the only known habitat and viable populations for the pocket mouse, their importance to the conservation of the species and its protection from extinction is well recognized. The *Recovery Plan for the Pacific Pocket Mouse* produced by FWS in 1998, details the vital nature of existing population locations:

The immediate recovery goal is to avert the extinction of the Pacific pocket mouse by focusing on short-term strategies to improve the subspecies’ prospects for survival. Foremost among these are the immediate protection and restoration of existing populations and the habitat of the subspecies. Considering the extremely small population size of the Pacific pocket mouse (fewer than 150 individual animals were detected from 1993 to 1997) and the fragmentation and depletion of the coastal strand, river alluvium, and coastal sage scrub habitats upon which the subspecies depends, further losses of occupied or potential habitat would seriously reduce the probability of the persistence of the subspecies. Given the small sizes of the populations at the three known extant locales, the apparent sedentary nature of the subspecies (Meserve 1972), and the severe fragmentation and diminution of the subspecies’ habitat, the Pacific pocket mouse is highly susceptible to extinction as a result of environmental or demographic factors alone (see Mace and Lande 1991).

Unless, or until sufficient, additional viable populations are discovered and/or established and protected, it is imperative that existing populations be protected and expanded through active management. Loss or degradation of any of the populations at the three known extant locales could irretrievably diminish the likelihood of the subspecies’ survival. All known extant populations are essential, including the Dana Point Headlands population (Boggs 1997, Buck 1997, Price 1997, Silver 1997, Silver and Drumm 1996, Soule’ 1996). [emphasis added]

Although the pocket mouse has not been directly observed during TCA’s biological surveys within the coastal zone portion of the project area, as detailed in the attached memorandum from Commission ecologist Dr. Engel - Exhibit 13, the San Mateo North pocket mouse population site exists within an area contiguous with suitable, potentially occupied habitat within the coastal zone. As detailed in Exhibit 13, the suitability of this habitat area within the coastal zone has been independently analyzed by the Commission

ecologist and determined to qualify as habitat essential for the preservation and potential recovery of the species. This essential habitat area is graphically depicted in Attachment 1 of Dr. Engel's memorandum. As demonstrated in this Pacific pocket mouse essential habitat map, approximately 12 acres of essential habitat is within the proposed project's disturbance limits.

In addition, in an August 2005 letter to FWS, Dr. Wayne Spencer - a leading expert on the Pacific pocket mouse, determined that "the ability of the San Mateo North population to disperse and expand under favorable environmental conditions is critical to its continued survival and recovery." Dr. Spencer developed a map of those areas he considered to be "minimally essential to accommodating potential population expansions" and attached it to the 2005 letter. This map supports those independent conclusions made by the Commission ecologist regarding essential pocket mouse habitat within the coastal zone portion of the project area and is included as Exhibit 14. Dr. Spencer also notes that the proposed project would likely be the "last nail in the coffin" for the San Mateo pocket mouse population. As detailed in Dr. Spencer's comments on the FEIR, the document continues to downplay the impacts to the mouse for reasons that are biologically unsupportable. His comments also makes clear that the primary specific mitigation strategy proposed for the pocket mouse – building an undercrossing – is completely untested for this species, there being no scientific support for the idea that a small mammal would be able to use it.

As detailed by the Commission ecologist in Exhibit 13, due to the rarity and sensitivity to disturbance of the pocket mouse, those habitat areas within the coastal zone that support this species have been determined to qualify as ESHA. This ESHA area is graphically depicted in Attachment 1 of Dr. Engel's memorandum (Exhibit 13) and is shown to include approximately 12 acres within the proposed project's disturbance limits. Potential project related impacts to this ESHA area, the Pacific pocket mouse and the mitigation measures that TCA has proposed to offset or minimize these impacts are detailed in Exhibit 13 and include fragmentation and destruction of essential habitat due to construction and placement of the proposed toll road, increased potential for vehicle strike related mortality, the isolation of the two separate sites of the San Mateo population, increased potential for wildfires, and increased lighting of essential habitat areas (which may greatly increase predation levels).

Conclusion

For those reasons detailed in the Commission ecologist's memorandum, the proposed project would adversely affect the pocket mouse, temporarily and or permanently degrade approximately 12 acres of pocket mouse essential habitat/ESHA and would likely contribute to the local extirpation of this species from the project area – thereby greatly increasing the probability of its eventual extinction. The Commission therefore finds the proposed project inconsistent with the resource protection requirements contained in Section 30240 of the Coastal Act, both because it is not a resource dependant use, and because it does not protect the pocket mouse from significant disruption of its habitat.

Tidewater Goby

The tidewater goby (*Eucyclogobius newberryi*) is a small benthic fish native to California's coastal estuaries and best known from enclosed lagoons near the mouths of coastal streams and the brackish waters adjoining these marshes and streams. The tidewater goby is unique among North American fishes due to its narrow adaptation to brackish water, a rare condition among fishes, and its ability to construct vertical burrows in the sandy substrate of its habitat.

As discussed in much of the scientific literature regarding the tidewater goby, populations throughout the state (but especially in southern California) have suffered serious declines over the past several decades due to habitat losses and alterations. With the loss of roughly 80% of California's coastal wetlands, the tidewater goby had been extirpated from all but fifty locations by 1990, prompting the U.S. Fish and Wildlife Service to designate the tidewater goby as endangered throughout its historic range in California in 1994. As required under the federal Endangered Species Act, critical habitat for the tidewater goby was designated in Orange and San Diego counties in November of 2000 and a final recovery plan was adopted in December of 2005. The U.S. Fish and Wildlife Service (FWS) explains the rationale behind limiting the designation of tidewater goby critical habitat to these two counties in the November 2000, *Designation of Critical Habitat for the Tidewater Goby*, by stating that, "We have limited our designation to Orange and San Diego Counties, because it is within this area that tidewater gobies are threatened with extinction and essential habitat areas for this species can be identified."

The designated critical habitat area for the tidewater goby in Orange and San Diego counties is comprised of portions of ten coastal streams and creeks totaling approximately nine miles of riparian habitat. According to the U.S. Fish and Wildlife Service's December 2005, *Recovery Plan for the Tidewater Goby*, "Critical habitat includes the stream channels and their associated wetlands, flood plains, and estuaries. These habitat areas provide for the primary biological needs of foraging, sheltering, reproduction, and dispersal, which are essential for the conservation of the tidewater goby."

Included within the designated critical habitat are several areas within the project footprint, namely San Mateo Creek and its associated lagoon and marsh (from the Pacific Ocean to approximately 0.9 miles upstream) and San Onofre Creek and its associated lagoon and marsh (from the Pacific Ocean to approximately 0.4 miles upstream). The tidewater goby critical habitat along these creeks includes the current creek bed as well as all upland or riparian areas within the 50-year floodplain of these creeks. In areas where the 50-year flood plain is not delineated, the presence of alluvial soils (soils deposited by streams), obligate and facultative wetland vegetation, abandoned river channels, or evidence of high water marks were used to determine the extent of the flood plain and the boundaries for the designation. The extent of the tidewater goby designated critical habitat within the coastal zone portion of the project area is shown in Exhibit 15. This

area includes approximately 24 acres within the proposed project's disturbance limits, as delineated by TCA and calculated by the Commission staff based on FWS designated critical habitat.

Surveys conducted by TCA and referenced in the document titled *Focused Summary of Environmental Impacts in the Coastal Zone*, support the continued presence of the tidewater goby within the coastal zone portion of its critical habitat area. Specifically, in this document, TCA states that:

Populations of the tidewater goby in San Diego County exist in the San Mateo [and] San Onofre... lagoons. A large population of tidewater gobies (137) was observed in San Mateo Lagoon, and one individual was caught in San Mateo Creek during the 1995 survey. In addition, a population of approximately 10,000 individuals is present in San Onofre Lagoon in the [toll road] study area. There is potential for this species to be affected during construction of the bridge structures over San Mateo and San Onofre Creek.

Because of the critical population status of the tidewater goby and the requirements and rationale behind the designation of its critical habitat, the Commission finds that the final designated critical habitat for this species within the coastal zone portion of the project area, as represented in Exhibit 15 and described in the November 2000 *Designation of Critical Habitat for the Tidewater Goby*, meets the Commission definition of environmentally sensitive habitat area (ESHA). Due to the affinity of this species for riparian habitat and its recorded location among these habitats within the project area, areas designated as ESHA by the Commission ecologist due to their importance for the tidewater goby have also been identified as wetlands and critical habitat/ESHA for the least Bell's vireo and arroyo toad (as discussed below). These wetland areas and potential project related impacts to them are additionally detailed in Section B (Wetlands) of this staff report.

Potential Effects on ESHA and Tidewater Gobies

As stated by TCA in the project EIS, approximately 29 acres⁶ of tidewater goby critical habitat exists within or directly adjacent to the proposed project's designated disturbance limits within the coastal zone. Proposed project activities within this area include the construction of an access road along San Mateo Creek and under the north- and south-bound toll road connectors and the existing I-5 freeway, the construction of two several hundred foot long retaining walls (to facilitate the placement of this access road), the placement of several thousand feet of elevated, multi-lane north- and south-bound toll road connectors, the use of a pile driver to anchor and reinforce support structures for the elevated connectors, the extension and support of existing bridges along I-5 and the associated placement, positioning, removal and use of heavy machinery including

⁶ As detailed in Table 4.12-4A of the project EIS; this number closely matches Commission staff's more refined estimate of 24.22 acres.

graders, earthmovers, pile drivers, cement pourers, cranes, and material transport trucks. These activities are anticipated to be carried out over the span of approximately three years and have the potential to adversely affect the tidewater goby in a variety of ways.

Although much of the proposed toll road would be elevated above the critical habitat area, TCA has estimated that the pilings and support structures would permanently displace approximately 0.16 acres of wetlands and potential tidewater goby habitat. In addition to the obvious detrimental effects associated with this proposed placement of permanent structures within critical habitat areas and the corresponding loss of current and future fish habitat, the proposed activities also involve substantial amounts of soil disturbance, earth moving and vegetation clearance as well as the temporary occupation of critical habitat areas for construction equipment, material and personnel staging. These activities would occupy approximately 29 acres of wetlands and tidewater goby critical habitat within the coastal zone and nearly 109 additional acres⁷ within the coastal zone. Prolonged construction activities have the potential to increase the amount of sediment entering the San Mateo and San Onofre Creeks and their associated lagoons through the settlement of dust as well as potential increases in wind and waterborne erosion of sediments into the creek and lagoon areas. Furthermore, the proposed project involves extensive use of construction equipment and heavy machinery that have the potential to release materials that could contaminate the air, water and sediment in and around tidewater goby critical habitat. The project EIS provides additional details regarding some of the potential threats to the tidewater goby associated with the proposed project by stating that, “if construction occurs during the breeding season, construction activities would result in a disruption of breeding activities” and “physical activities in stream courses could cause additional mortality of individuals.” Examples of these physical activities within stream beds are given and include the proposed placement of temporary cofferdams and draining or de-watering of portions of San Mateo Creek and lagoon to facilitate the placement of falsework and scaffolding during construction. Such activities may result in direct mortality due to removal of gobies from the water as well as the temporary loss of habitat in de-watered areas. The project EIS also states that “long-term impacts to the physical characteristics (substrate materials and creation of impediments due to upstream improvements) could also occur during the construction of the bridge/culvert structures that could affect movement of local populations.”

The size and elevated nature of the proposed toll road could also lead to additional adverse impacts to the tidewater goby by increasing shading affects on habitat below the elevated spans which could alter the character of vegetation and change the temperature profile of shaded water areas, potentially reducing the suitability of these habitats. Although the extent to which shading along the San Mateo Creek portion of designated critical habitat would affect the tidewater goby population in this area is largely unknown, the abundance and availability of prey species may change if the primary

⁷ Personal communication from Glenn Lukos Associates on September 11, 2007: “The total area of CCC jurisdiction that falls within the disturbance limits is approximately 138 acres.”

productivity of this area experiences a decline due to reduced availability of sunlight. Foraging success rates of individual gobies within shaded areas may also decline if the shading is substantial enough to affect the availability of visual cues.

The proposed use of pile driving equipment to facilitate the placement of bridge and elevated toll road supports also has the potential to result in adverse impacts to the tidewater goby. Pile driving and its unavoidable noise and vibration components, when conducted within or adjacent to water bodies, have been known to negatively affect fish and aquatic life.

In the December 2005 *Recovery Plan for the Tidewater Goby*, the U.S. Fish and Wildlife Service discusses existing and future threats to the species, including alteration of sediment flows and polluted runoff from the use of vehicles in close proximity to occupied habitat:

*The tidewater goby is threatened by modification and loss of habitat as a result of coastal development, channelization of habitat, diversions of water flows, groundwater overdrafting, and alteration of water flows. Potential threats to the tidewater goby include discharge of agricultural and sewage effluents, increased sedimentation due to cattle grazing and feral pig activity, summer breaching of lagoons, upstream alteration of sediment flows into the lagoon areas, introduction of exotic gobies (e.g., yellowfin and shimofuri gobies) and rainwater killifish (*Lucina parva*), habitat damage, and watercourse contamination resulting from vehicular activity in the vicinity of lagoons.*

The vulnerability of tidewater gobies to increased sedimentation is further established by Sean Manion in a 1993 tidewater goby re-introduction study which states that “Fine silty sediments deposited and overlaying the essential coarse clean spawning sands very likely damage and reduce potential viable spawning habitat...”. The study goes on to note that because “many fishes depend on good visibility to secure prey species” and turbidity or “fine sediments in prolonged suspension in the water column could create a visibility problem...”, sedimentation could result in “A reduction in visibility [that] could possibly hinder visual cues and negatively impact predation and reproductive success of tidewater gobies and other fishes.”

Although Section 7 of the Endangered Species Act requires TCA/FHWA to consult with the U.S. Fish and Wildlife Service (FWS) regarding the project’s potential to affect critical habitat and listed species, FWS has yet to release a Biological Opinion for this project. However, in the November 2000, *Designation of Critical Habitat for the Tidewater Goby*, the FWS considers the proposed toll road alignment through tidewater goby critical habitat areas in San Mateo Creek and San Onofre Creek. As this document describes, the proposed toll road – referred to under its previous nomenclature, the “CP alignment” – would be likely to adversely affect the continued existence of goby populations in these creeks:

The proposed ``CP alignment'' of the Foothill Transportation Corridor South (FTCS), if constructed, may have substantial negative impacts to the tidewater goby, specifically in San Mateo and San Onofre Creeks (Michael Brandman and Associates 1997). The lagoons at the mouth of San Mateo Creek and San Onofre Creek are both now occupied by tidewater gobies, and these two lagoons typically support large goby populations from several thousand to approximately 70,000 gobies (Swift and Holland 1998). These two populations, along with Las Flores Creek, are the largest and most persistent in the region and are thought to serve as source populations for dispersal into the ephemeral estuaries and streams in the area. Thus these populations are important to the recovery of the tidewater goby.

The FTCS CP alignment would have both significant short-term and long-term impacts to tidewater gobies in the San Mateo Creek and San Onofre Creek drainage basins (Michael Brandman and Associates 1998). Short-term impacts would include mortality and temporary loss of habitat for breeding, feeding, and sheltering due to blockage or diversion of water flow, increased siltation from the required cut and fill of thousands of tons of earth, and the disturbance of low oxygen sediments. Long-term impacts would include: the permanent alteration of the hydrologic regime, primarily in changes to flow regimes, temperature patterns, and sediment movement characteristics of the streams; permanent loss of habitat for breeding, feeding, and sheltering due to siltation; and permanent deterioration in water quality of the streams from the continuous input of heavy metals and other contaminants. These types of changes to the abiotic elements of a stream are often associated with corresponding changes to the ichthyofauna (fish species assemblage within a region). Generally, this kind of disturbance results in an increase of exotic fish species to the detriment of the indigenous (native) ichthyofauna (Moyle and Light 1996). A preliminary investigation of the impacts to tidewater gobies from the CP alignment found that these impacts would be less than significant after mitigation (Michael Brandman and Associates 1998). However, we believe that the benefits of the proposed mitigation would be minimal and that construction of the CP alignment would likely result in the loss of these populations and potentially preclude recovery for this species. [emphasis added]

Despite this analysis in 2000, FWS has subsequently suggested, in a September 30, 2005, letter from FWS to FHWA, that “draft analyses” support a “preliminary conclusion” that the proposed project will result in “no adverse modification” of tidewater goby critical habitat. As stated previously, however, the FWS has yet to issue a final biological opinion regarding the proposed project’s potential to adversely affect the tidewater goby.

Despite the conflicting analyses released to date by FWS regarding the tidewater goby, the project EIS concludes that the tidewater goby is one of a variety of “threatened and endangered species that would be directly impacted due to the construction and operation [of the proposed toll road]” and that designated tidewater goby critical habitat is among several areas of “current and previously designated critical habitat for federally threatened and endangered species that would be impacted by the [proposed toll road].”

Mitigation

To address the potential impacts to threatened or endangered species that TCA has recognized would be associated with the proposed project, TCA has proposed to implement a variety of mitigation measures. These measures include both general and specific strategies that appear to be relevant to the tidewater goby. General measures include: (1) the designation of a project biologist responsible for overseeing biological monitoring, regulatory compliance, and restoration activities; (2) consideration of the project biologist’s recommendations for avoidance and minimization of impacts to sensitive biological resources; and (3) development of a Biological Resources Management Plan that is proposed to provide specific design and implementation features of the biological resources mitigation measures and discusses resource avoidance, minimization, and restoration guidelines, performance standards, maintenance criteria, and monitoring requirements.

While these measures may have the potential to reduce the magnitude and severity of impacts to sensitive species and habitats, many of the key elements of these measures have not been provided to Commission staff. For example, measures TE-1 and TE-2 state that:

Measure TE-1. Prior to construction, the TCA or other implementing agencies shall designate a Project Biologist responsible for overseeing biological monitoring, regulatory compliance, and restoration activities associated with construction of the selected alternative in accordance with the adopted mitigation measures and applicable law.

Measure TE-2. During final design of the project, the Project Biologist shall review the design plans and make recommendations for avoidance and minimization of sensitive biological resources. TCA or other implementing agencies’ Environmental and Engineering Staff shall determine the implementation of those recommendations.

These measure do not described the qualifications and experience necessary for the project biologist and do not establish the authority of this individual to halt project activities that may be inconsistent with mitigation measures, applicable law or the preservation of sensitive species and habitats. Accordingly, these measures can not be guaranteed to mitigate anticipated adverse project effects on sensitive resources and ESHA.

Measure TE-3 also provides insufficient information and level of commitment to assume a reduction in impacts would occur:

Measure TE-3. A Biological Resources Management Plan (BRMP) shall be prepared prior to construction. The BRMP shall provide specific design and implementation features of the biological resources mitigation measures outlined in the resource agency approval documents. Issues to be discussed in the BRMP shall include, but are not limited to, resource avoidance, minimization, and restoration guidelines, performance standards, maintenance criteria, and monitoring requirements. The Draft BRMP shall be submitted to the USFWS, NMFS, CDFG, USACOE, RWQCB, FHWA, and Caltrans for review and approval to the extent required by permit by such agencies.

The primary goals of the BRMP will be to ensure (1) the long-term perpetuation of the existing diversity of habitats in the project area and adjacent urban interface zones and prevent minimize offsite or indirect effects; (2) that the project is not likely to jeopardize the continued existence of any federally listed or state-listed endangered or threatened species; and (3) impacts to endangered and threatened species are minimized and mitigated to the maximum extent practicable. The BRMP shall contain at a minimum specific construction monitoring programs for thread-leaved brodiaea, arroyo toad, coastal California gnatcatcher, least Bell's vireo, and Pacific pocket mouse.

The Biological Resources Management Plan referenced above has not been developed or provided to Commission staff for review, which makes an adequate assessment of its potential to mitigate the project's anticipated adverse effects on sensitive species and ESHA within the project area difficult. Furthermore, the measure above does not include the tidewater goby among the list of species for which monitoring programs would be developed.

The following general mitigation measures have also been identified by TCA as relating directly or indirectly to potential impacts to the tidewater goby:

Measure WV-15. Prior to final design of the selected alternative, the Project Biologist shall ensure that the location of the proposed wildlife bridges and culvert identified in the NES will provide adequate travel capabilities, contain adequate vegetation cover, have adequate daylight, and have appropriate fencing to encourage animals to use these underpasses. Upon selection of and refinement to, the selected alternative, smaller culverts and bridges that will be necessary to provide drainage and/or avoid impacts to jurisdictional areas shall also be designed, at the direction of the Project Biologist, to promote local and regional wildlife movement.

Measure WV-21. During final design, the TCA or other implementing agencies, in coordination with the RMP, shall design, construct, and/or maintain any structure/culvert placed within a stream where sensitive fish species do/may occur such that it does not constitute a barrier to upstream or downstream movement of aquatic life, or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth for fish migration.

Measure WV-27. Before entering or leaving the construction site, all construction equipment shall be inspected for evidence of invasive species and/or their seeds. Should any plants and/or seeds be detected, the equipment will be washed to ensure no invasive species and/or their seeds will be brought into or removed from the site.

Measure WV-28. Prior to construction, substantial populations of invasive plant species identified on the State of California List of Noxious Weed Species and the California Exotic Pest Plant Council Exotic Pest Plants (CalEPPC) of Greatest Ecological Concern in California List adjacent to the grading limits shall be mapped.

Measure WV-29. The Project Biologist shall prepare an invasive species management program to be incorporated into the BRMP. The program shall discuss the invasive species within landscaping and mitigation areas to be eradicated or controlled and eradication methods, which may include mowing, hand removal, or herbicide application. Removal of invasive plant species on the State of California List of Noxious Weed Species with Pest Rating A shall be required, at the direction of the Project Biologist. Eradication, containment, or control of all invasive plant species on the State of California List of Noxious Weed Species with Pest Rating B shall be at the discretion of the Project Biologist. The program shall also address invasive species identified in the California Exotic Pest Plant Council Exotic Pest Plants of Greatest Ecological Concern in California List and methods for their control. The potential for contribution of funds to such programs as the Arundo Removal Program to assist with removal of giant reed or other species from riparian habitats such as San Juan Creek shall also be addressed. The program shall also discuss monitoring of the landscaped and mitigation areas to ensure invasive species are properly controlled or eradicated. The maintenance of the mitigation sites along the corridor will be under the supervision of the Project Biologist (Executive Order 13112, Feb. 3, 1999).

The project EIS also includes a specific mitigation measure related to fish and aquatic species:

Measure TE-9. During final design, the TCA or other implementing agencies, as described in the [Runoff Management Plan], shall design, construct, and/or maintain any structure/culvert placed within a stream where endangered or threatened fish do/may occur such that it does not constitute a barrier to upstream or downstream movement of aquatic life, or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth for fish migration.

While this measure may help ensure that upstream and downstream migration corridors remain open, it does not proposed to address the adverse impacts to tidewater gobies and ESHA described in the above section and therefore would not serve to mitigate the adverse effects to this species anticipated to result from the proposed project.

In addition, as detailed in Section B of this report (Wetlands), to address impacts associated with the proposed permanent placement of elevated “flyway” support structures on 0.16 acres of wetlands, TCA has conceptually proposed to restore and create a one acre area of southern willow woodland adjacent to the proposed water treatment extended detention basin #2 in an area that is currently occupied by an irrigated agricultural field. This woodland area would provide only marginally suitable habitat for the tidewater goby and would therefore not offset the loss of aquatic habitat anticipated to occur as a result of the placement of temporary and permanent structures and equipment within goby occupied ESHA.

With regard to wetland areas temporarily affected through construction of the proposed toll road, as described by TCA in the document titled, *Conceptual Habitat Mitigation and Monitoring Plan for Impacts to Areas within the Jurisdiction of the United States Army Corps of Engineers, the Regional Water Quality Control Board, the California Department of Fish and Game and the California Coastal Commission*, “the applicant will re-contour and re-vegetate all temporarily impacted areas at a 1:1 ratio to replace pre-construction aquatic function.” This measure may reduce long-term effects associated with the loss of habitat due to construction activities but would require a substantial amount of time to be realized and may result in directly adverse effects during implementation.

Conclusion

Despite the mitigation measures included above, the Commission finds that the permanent removal of 0.16 acre of designated critical habitat for the tidewater goby as well as the long-term disturbance of between 24 and 29 additional acres through the placement and use of staging areas within tidewater goby critical habitat and proposed construction activities would likely result in an adverse impact to this species. In addition, the anticipated project related increases in several of the factors identified in the scientific literature and December 2005 *Recovery Plan for the Tidewater Goby* as representing primary threats to the survival of the tidewater goby, namely sedimentation,

stream alteration and vehicle related pollution, would further increase the likelihood of adverse impacts to the tidewater goby resulting from the proposed project. Although the proposed mitigation measures may result in reduced impacts to this species, the lack of detail regarding the specific provisions of the Biological Resources Management Plan and the uncertainty regarding the extent and adequacy of the project biologist's recommendations and whether or not these recommendations will be fully implemented, do not guarantee that all potential adverse affects to the tidewater goby and its critical habitat areas will be avoided. Overall, the proposed use of at least 24 acres of tidewater goby critical habitat that has been designated as ESHA by the Commission ecologist would be inconsistent with the resource protection requirements detailed in Section 30240 of the Coastal Act, both because it is not a resource dependent use (or an allowable use of wetland fill as discussed in the following section of this report), and because it does not protect the tidewater goby from significant disruption of its habitat.

Arroyo Toad

The arroyo toad (*Bufo californicus*) is a small dark spotted amphibian that is known from 22 river basins in the coastal and desert areas of nine counties along the central and southern coast of California and northwestern Baja California. The arroyo toad is endemic to the coastal plain and mountains of southern California and northwestern Baja California and inhabits intermittent or perennial streams, small streams, riparian areas and upland oak woodland, coastal sage scrub, chaparral and grassland areas within close proximity⁸ of riparian zones. As stated by FWS in the 2001 *Final Designation of Critical Habitat for the Arroyo Toad*,

The riparian/wash habitats as well as adjacent upland habitats are essential for this species' survival. Periodic flooding that modifies stream channels, redistributes channel sediments and alters pool location and form, coupled with upper terrace stabilization by vegetation, is required to keep a stream segment suitable for all life stages of the arroyo toad.

Because arroyo toad habitats are favored sites for water storage reservoirs, flood control structures, roads, agriculture, urbanization, and recreational facilities such as campgrounds and off-highway vehicle parks, many arroyo toad populations were reduced in size or extirpated due to extensive habitat loss from 1920 to 1980. The loss of habitat, coupled with habitat modifications due to the manipulation of water levels in many central and southern California streams and rivers, as well as predation from introduced aquatic species, caused arroyo toads to disappear from about 75 percent of their previously occupied habitat in California and prompted the inclusion of this species on the federal endangered species list in 1994.

⁸ Although arroyo toads have been found up to 1.2 miles from the nearest stream, typically they are within about 1100 feet of a watercourse.

Within the project area, the lower reaches of both the San Mateo Creek and San Onofre Creek, as well as nearby uplands, provide important habitat for the arroyo toad. Both of these riparian areas were identified in the 1999 *Recovery Plan for the Southwestern Arroyo Toad*, as areas necessary to achieve arroyo toad recovery. Specifically, the recovery plan describes that:

The lower portions of the San Mateo Creek basin and the following two basins, San Onofre Creek and Santa Margarita River, which are located on Camp Pendleton, may be the only remaining coastal plain lands in southern California on which the arroyo toad occurs within 10 kilometers (6 miles) of the coastline and down to the coastal marsh zone. As such, they may harbor populations with phenotypic characteristics that are now limited in representation throughout the range of the arroyo toad in California. The lack of agricultural and urban development on these lands probably has allowed these populations to persist.

Furthermore, as FWS goes on to note in the 2001 *Final Designation of Critical Habitat for the Arroyo Toad*, the San Mateo Creek drainage basin was selected as critical habitat because:

San Mateo and Christianitos creeks support large core populations (Holland and Goodman 1998) and are essential to conservation of the species. An unusual and potentially important aspect of this unit is its close proximity to the coast. Historically, there were probably many near-coast populations, but few remain due to extensive urbanization and river channelization. Distinctive climatic conditions near the coast may provide different selective pressures on toads in this area, potentially favoring specific genetic characteristics.

Additionally, this area was found to satisfy one or more of the following characteristics essential for a designation as critical habitat:

(1) supports a substantial core population of arroyo toads; (2) supports at least a small toad population and possesses favorable habitat conditions for population expansion and persistence; (3) suitable habitat situated in a location that appears to be crucial for maintaining the viability of a larger metapopulation; (4) occupied habitat on the periphery of the arroyo toad's geographic range; and (5) occupied habitat in atypical or underrepresented ecological environments (e.g., high elevation or desert-edge populations).

In April of 2005, due in part to a legal challenge of the original 2001 *Final Designation of Critical Habitat for the Arroyo Toad* brought against the U.S. Fish and Wildlife Service by TCA,⁹ FWS released a revised, *Final Designation of Critical Habitat for the*

⁹ This lawsuit was based entirely on arguments regarding the economic analysis conducted by FWS in the critical habitat designation document and did not refute the existence of arroyo toads within San Mateo and San Onofre Creeks or the importance of these areas to the conservation of the species.

Arroyo Toad that excluded all habitat areas within the project footprint, including the San Mateo Creek and San Onofre Creek drainage basins. Despite the exclusion of these previously designated critical habitat areas from the revised critical habitat designation document, FWS again underscored the importance of these areas to the survival of the species. The April 2005 *Final Designation of Critical Habitat for the Arroyo Toad* refers to the San Mateo Creek and San Onofre Creek basins as “Unit 11” and states that:

Unit 11 contains an indispensable arroyo toad population in the San Mateo Creek and San Onofre Creek Basins. Unit 11 contains several primary constituent elements of low-gradient stream segments with sandy or fine gravel substrates, shallow pools for breeding and rearing of tadpoles and juveniles, and riparian and adjacent uplands habitats for foraging and dispersal to other populations. With so many favorable habitat conditions, this area is able to support a considerable arroyo toad population (Holland and Goodman 1998; CNDDDB 2005) and is essential for the species. ...Lands within this unit are threatened by cumulative impacts from human activities, including direct mortality from vehicle collisions and vehicular crossings of stream beds, recreational activities, camping, fire, exotic predators, and invasive plants (Holland and Goodman 1998) and require special management to reduce impacts associated with these threats.

Although focused surveys for arroyo toads have not been conducted by TCA since the late 1990s, the most recent presence/absence surveys TCA conducted in and around San Mateo Creek (from 1996 to 1998) suggest that arroyo toads continue to inhabit the riparian and nearby upland areas surrounding this creek basin. Additionally, in the arroyo toad population census conducted by Dan Holland et al. in 2001, one of the largest populations of toads within MCB Camp Pendleton was found to exist in the lower portion of San Mateo Creek. These results are referenced by TCA in the project EIS. Specifically, the EIS states that:

During surveys conducted between 1996 and 2001, [arroyo toad] were found to occur in areas associated with all [toll road] alignments that would cross San Juan Creek, and Gabino Creek or parallel San Mateo and Cristianitos Creeks. On MCB Camp Pendleton, San Onofre Creek is known to support [arroyo toad], and it is likely that suitable habitat within this drainage occurs in the [study area].

Similarly, the refined TCA document titled *Focused Summary of Environmental Impacts in the Coastal Zone* states that “there is potential for [arroyo toad] to be affected during construction of the bridge structures over San Mateo and San Mateo Creeks and associated upland aestivation areas...”. Furthermore, the March 2007 MCB Camp Pendleton *Integrated Natural Resources Management Plan* further establishes the importance of San Mateo and San Onofre Creeks to the arroyo toad:

It is likely that some of the largest remaining populations of [arroyo toad] occurs on Camp Pendleton. Additionally, the lower portions of the San Mateo Creek Basin, the San Onofre Creek, and Santa Margarita, all of which are located on Camp Pendleton, may be the only remaining coastal plain lands in southern California on which the arroyo toad occurs within 10 kilometers (6 miles) of the coastline and down to the coastal marsh zone. As such, they may harbor populations with phenotypic characteristics that are now limited in representation throughout the range of the arroyo toad in California... In 2003, a spatial and temporal monitoring approach...that tracks the presence of arroyo toad breeding populations by documenting the presence of eggs and larvae was implemented. In 2003, 78% of potential toad breeding habitat contained water during survey efforts. Of these areas, 87.4% (se = 9.5) of the habitat was occupied by breeding arroyo toads. The greatest occupancy was recorded on the San Mateo watershed (97.9%), followed by the San Onofre (90.9%) and Santa Margarita (83.8%) watersheds. [emphasis added]

Due to the recorded occupancy and use of riparian and upland habitat areas within the coastal zone portion of the project area, the well established importance of these areas for local and global populations of arroyo toads, and their recognized susceptibility to disturbance, the Commission ecologist has determined that those areas within the coastal zone portion of the project area that were designated as critical habitat by FWS in 2001, meet the Coastal Act definition of ESHA. As demonstrated in Exhibits 15 and 16, due to the affinity of this species for riparian and adjacent upland habitat and its recorded location among these habitats within the project area, areas designated as ESHA for the arroyo toad have also been identified as wetlands and/or critical habitat/ESHA for the tidewater goby, least Bell's vireo and coastal California gnatcatcher (as discussed in the analysis for those species in this section). Wetland areas and potential project related impacts to them are additionally detailed in Section B (Wetlands) of this staff report.

Potential Effects on ESHA and Arroyo Toads

Proposed project activities within this area have the potential to adversely affect the arroyo toad population in a variety of ways. The proposed use of nearly 66 acres¹⁰ of previously designated arroyo toad critical habitat in and around San Mateo Creek for equipment and materials storage and staging, construction and use of access roads, scaffolding, elevated support structures, retaining walls, and other construction related activities for approximately three years would result in the loss of upland and riparian habitat, increased sedimentation and habitat alteration, and would increase the potential for direct mortality to toads due to interactions with construction vehicles and equipment and sediment and water contamination due to the release of construction related fluids and materials. As stated in the 1999 *Recovery Plan for the Southwestern Arroyo Toad*:

¹⁰

Although the project EIS does not include a calculation of previously designated arroyo toad critical habitat within the proposed project's disturbance limits, staff of the Commission's Technical Services Mapping Unit have calculated the area of previously designated arroyo toad critical habitat within the disturbance limits to be 65.95 acres, as demonstrated in Exhibit 15.

Human activities that affect water quality, influence the amount and timing of nonflood flows or frequency and intensity of floods, affect riparian plant communities, or alter sedimentation dynamics can reduce or eliminate the suitability of stream channels for arroyo toad breeding habitat. Degradation or loss of surrounding uplands reduces and eliminates foraging and overwintering habitat. The effects of such activities may not become apparent until many years later when the habitat finally becomes sufficiently degraded that arroyo toads can no longer reproduce and survive. These negative human activities include urbanization and agriculture within and adjacent to riparian habitats, dam building and the resulting reservoirs, water flow manipulations, sand and gravel mining, suction dredge mining, road placement across and within stream terraces, livestock grazing, off-highway vehicle use of roads and stream channels, the placement of campgrounds in arroyo toad habitat (especially on stream terraces), and the use of stream channels and terraces for other recreational activities.

Many of the activities described above would occur as a result of the proposed project, greatly increasing the likely occurrence of both short- and long-term adverse affects to the arroyo toad. TCA recognizes these potential affects and others in the project EIS and states that:

Impacts to [arroyo toad] from construction include construction of bridges in drainages where this species is known to occur or has the potential to occur. Bridge construction would result in impacts to sandy bottoms of areas where [arroyo toad] is known to breed and burrow. Construction of bridges would also displace adjacent upland habitat and increase the risk of vehicular mortality. Noise from construction activities during breeding season would result in impacts to mating behaviors by masking [arroyo toad] calls. [Arroyo toads] were identified in the [proposed toll road's] disturbance limits.

In addition to the potential for construction related impacts to the arroyo toad, the placement and operation of the proposed toll road within previously designated arroyo toad critical habitat areas would result in additional threats to the species. In both the project EIS and the 1999 *Recovery Plan for the Southwestern Arroyo Toad*, the placement and existence of roads within occupied habitat are discussed as a potentially serious impediment to the survival of the species:

Both paved and unpaved roads can have negative effects on arroyo toads, especially when the roads are on stream terraces close to arroyo toad breeding habitats. Although arroyo toads crossing or foraging on paved roads are subject to high mortality at times, especially on rainy nights, (D. C. Holland, in titt. 1997; W. E. Hans et al., in titt. 1998) the loss of arroyo toads to traffic is particularly apparent on unpaved dirt roads where increased food availability causes toads to

congregate at night to feed. Many subadult and adult toads can be killed by even one or a few vehicles... Toads may use roads and trails as dispersal routes, exposing them to traffic risks at significant distances from the breeding habitats (W. B. Hans et al., in litt. 1998). Toads also burrow into sandy roadbeds during the day, when they also may be crushed by vehicular and foot traffic (Nancy Sandburg, Los Padres National Forest, pers. comm. 1997; 5. 5. Sweet, in litt. 1997). Wet season burrows tend to be very shallow and are often in areas accessible to foot or vehicular traffic, as well as livestock (W. E. Hans et al., in litt. 1998).

The problems associated with roads are not limited to those near campgrounds. On Camp Pendleton, San Diego County, and Fort Hunter Liggett, Monterey County, roads on stream terraces and stream crossings are utilized by military vehicles, often during maneuvers or training sessions at various times of the day and night, throughout the year. These activities can lead to high mortalities of toads within areas of arroyo toad habitat (D. C. Holland, pers. comm. 1997). Construction of major roads such as the Foothill Transportation Corridor can have significant direct and indirect effects on arroyo toads and their habitat.

As evidenced by the specific inclusion of the Foothill Transportation Corridor, the proposed toll road, in this document and the 2001 *Final Designation of Critical Habitat for the Arroyo Toad* which states that “The completion of the Foothill Transportation Corridor could affect toads in the San Mateo basin,” the proposed project’s potential to adversely affect the arroyo toad has long been recognized and established. It should be noted, however, that the proposed use of the elevated connector structures for the north- and southbound lanes of the toll road may not have been contemplated during the drafting of these documents. The use of these structures will greatly reduce the amount of arroyo toad accessible road surface within the coastal zone portion of arroyo toad occupied habitat during the operational phase of the proposed project and thereby reduce the operational impacts associated with the project. As demonstrated in Exhibit 15 however, a substantial portion of un-elevated roadway would still exist within and adjacent to arroyo toad occupied habitat outside of the coastal zone. In addition, the construction of the elevated roadway will require the use of substantial amounts of equipment and machinery such as pile drivers, material and concrete trucks, graders, and cranes in the riparian and upland areas surrounding San Mateo Creek for as long as three years. The dirt access roads required by these vehicles and their passage through arroyo toad occupied habitat are exactly the types of activities described as posing serious threats to the arroyo toad in the above excerpt for the 1999 recovery plan and would substantially increase the potential for direct mortality to toads within the project’s disturbance limits. Furthermore, the proposed project includes the construction and placement of a military access road directly adjacent to San Mateo Creek and through arroyo toad critical habitat. Even after the construction access roads have been abandoned, the existence of this road would continue to pose a threat to the local population of arroyo toad.

An additional potential indirect affect of the elevated roadway on the arroyo toad may also arise from the increase in shading in and around San Mateo Creek and San Onofre Creek that would result from the proposed project. The proposed toll road alignment includes the placement of several hundred feet of elevated structures and bridges around these riparian areas which would substantially alter the availability of sunlight and therefore the temperature of surface waters and abundance of the photosynthetic algae that provides forage for larval toads. This potential issue is addressed by FWS in the 1999 *Recovery Plan for the Southwestern Arroyo Toad* which states that, "Heavily shaded pools are generally unsuitable for larval and juvenile arroyo toads because of lower water and soil temperatures and poor algal mat development (Sweet 1992)." Although little scientific study has been conducted regarding the exact shading levels that would cause pools to become unsuitable for young arroyo toads, increased shading resulting from the proposed project may result in declines in the population of juvenile and larval arroyo toads within the project area.

Beyond the direct effects on the arroyo toad population within the project area, proposed project activities would also substantially alter or degrade large areas of ESHA that provide arroyo toads with habitat and were previously designated as critical habitat. As mentioned previously, the proposed project includes the clearing, grading and use of nearly 66 acres of ESHA for three years during construction to facilitate staging areas, access roads, and construction areas. In addition, proposed project activities would likely degrade additional arroyo toad occupied or potentially occupied ESHA outside of the 66 acres directly within or adjacent to the proposed project's disturbance limits. For example, the proposed use of pile driving equipment would increase sound levels to at least 65 decibels within a radius of 2800 feet around the pile driver. Each pile driving site would therefore result in 565 acres being subjected to elevated sound levels of at least 65 decibels. This sound level has been determined to be of sufficient volume to cause speech interference in humans. To construct the proposed elevated "flyway" structures, TCA has proposed conducting pile driving activities for approximately one year. Although the affects of these proposed noise levels on arroyo toads have never been subjected to scientific scrutiny, if pile driving is conducted during evening or night hours, arroyo toad mating calls may be rendered inaudible, resulting in potentially substantial declines in the reproductive success of any or all arroyo toads within the 565 acre pile driving sound footprint and thereby degrading the quality of habitat within this area.

Overall, as described in an August 2007 letter to Commission staff from Robert Lovich, a recognized expert on the arroyo toad with nearly a decade of direct experience with the management, research, and conservation of the species:

This project would significantly disrupt arroyo toad populations in the coastal zone of San Mateo Creek watershed, and over the long term would impact populations in neighboring watersheds and tributaries as well.

...

...potentially irreversible fragmentation of arroyo toad populations within and without

the coastal zone would result from the construction of the proposed toll road. The toll road footprint represents the last wildlife corridor that extends from the Pacific Ocean inland to the Santa Ana Mountains. Areas to the north and south have already been compromised by development, and arroyo toads vanished from these areas long ago. The toll road in this location would degrade and fragment this extraordinary relict of a once larger functional ecosystem in southern California.

Mitigation

Due to the fact that the project EIS identified a variety of potential and likely adverse affects to arroyo toads as a result of the proposed project, TCA has proposed several mitigation measures to minimize and offset these impacts. The following is a brief description of the relevant mitigation measures excerpted from the project EIS. These measures are in addition to the development of the Biological Resources Management Plan that was previously described and is proposed to contain a construction monitoring program for the arroyo toad:

Measure TE-9. During final design, the TCA or other implementing agencies, in coordination with as described in the RMP, shall design, construct, and/or maintain any structure/culvert placed within a stream where endangered or threatened fish do/may occur such that it does not constitute a barrier to upstream or downstream movement of aquatic life, or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth for fish migration.

The implementation of this measure may benefit the arroyo toad by ensuring that water is maintained in portions of San Mateo Creek and San Onofre Creek that support the tidewater goby and also provide breeding and spawning areas for the arroyo toad. However, as described in the 1999 arroyo toad recovery plan, arroyo toads require “Periodic flooding that modifies stream channels, redistributes channel sediments and alters pool location and form” and are very sensitive and vulnerable to alteration of stream bed habitat that may change the frequency and extent of these flooding events. If the placement of bridge and elevated toll road support structures within riparian areas and/or the implementation of the provisions of this mitigation measure change the existing hydrology of either creek, arroyo toads within these areas may be adversely affected. TCA has not provided a sufficient level of detail regarding the proposed in-stream construction activities to allow an adequate analysis of the likelihood and magnitude of these potential affects.

Measure TE-10. An Arroyo Toad Resource Management Plan (ATRMP) will be prepared and will comply with the requirements of Section 7(a)(2) of the Federal Endangered Species Act. The ATRMP will be incorporated into the BRMP, and action items identified in the plan will be implemented by TCA and monitored by the Project Biologist. The plan shall include measures detailing how the impact area will be surrounded with a silt fence enclosure, and how arroyo toads will be removed and relocated from the construction impact area during the breeding season (when they are detectable by vocalizations) and placed in suitable habitat either upstream or downstream of the selected alternative during construction. The ATRMP will identify areas of collection, suitable areas for temporary housing, and restoration guidelines to be in place prior to release of toads to their original location. The plan shall be submitted to the USFWS to the extent required by such agency. The locations of areas known to support arroyo toads shall be identified in the ATRMP and on the ESA maps to comply with the requirements of the biological opinion.

The implementation of this mitigation measure also has the potential to minimize adverse construction impacts to the arroyo toad population within the project area. The uncertainty and temporal gaps contained within the mitigation strategy proposed above are sufficient to call into question the ability of this strategy to adequately minimize construction impacts, however. Because the strategy proposed above only commits to capturing and re-locating toads within construction areas “during the breeding season (when they are detectable by vocalizations),” typically a six-month period from February to July of each year, approximately half of each year would pass without this strategy in place. As TCA describes in a September 7, 2007, document responding to questions and comments from Commission staff, “The total construction duration within the coastal zone will last approximately 3 years to complete. This includes earthwork, utilities, the [northbound] and [southbound] connectors, Basilone Bridge, San Onofre Bridge widening, ramps, Camp Pendleton San Onofre Gate and Green Beach access road and water quality basins.” Therefore, construction operations are proposed to occur for approximately 18 months without an active capture/relocation program in place to protect those arroyo toad individuals that may inhabit the construction zone. Furthermore, the mitigation strategy detailed above depends heavily on the requirements and provisions of the Endangered Species Act Section 7 consultation conducted by FWS. Because this consultation has yet to be completed and publicly released, an analysis of the adequacy and completeness of provisions and requirements that may be included within this document is not possible.

Measure TE-11. Prior to initiating any ground-disturbing activities in occupied/suitable habitats, or habitats proximal to suitable or occupied habitats for arroyo toad, exclusionary fencing shall be installed around the perimeter of the construction area. Fencing or screening approximately 60 cm (two ft) in height (30 cm [one ft] of which will be buried below the surface) shall be installed to prevent arroyo toads from entering the area after the onset of construction. The

fencing will be installed at least 14 days prior to the initiation of work and must be made of a material appropriate to preclude any arroyo toads from entering the construction area. Fencing will be removed each winter during construction and at the end of project construction. Vehicle use will be restricted within areas known to support populations of the arroyo toad that are shown on the ESA maps.

Again, this measure has the potential to reduce the number and likelihood of adverse affects to the arroyo toad from construction related activities. As with the previous mitigation measures, however, this measure does not include a sufficient level of detail to adequately assess its potential for success. While exclusionary fencing may provide a barrier to the movement of toads, TCA has yet to develop and release the “ESA maps” referenced above and it is therefore not possible to determine whether or not this measure would be implemented within all areas identified in the 1999 *Recovery Plan for the Southwestern Arroyo Toad*, and the 2001 and 2005 *Final Designation of Critical Habitat for the Arroyo Toad*, as suitable, essential and critical habitat for the arroyo toad.

Measure TE-12. a. The Project Biologist shall conduct three focused arroyo toad surveys within the fenced construction site for arroyo toads a minimum of 14 nights prior to initiating project construction. If climatic conditions are not appropriate for arroyo toad movement during the surveys, the Project Biologist may attempt to illicit a response from the arroyo toads, during nights with temperatures of 13°C (55°F) or greater, by spraying the project area with water to simulate a rain event. During construction, arroyo toads surveys will be performed a minimum of once per week and on all nights where the combination of rain/humidity and temperature would increase the movement of arroyo toads.

b. If arroyo toads are found with the construction side of the exclusionary fencing, arroyo toads will be removed by the Project Biologist and relocated from the construction impact area and placed in suitable habitat either upstream or downstream of the construction area as outlined in the Arroyo Toad Resource Management Plan.

The likelihood of arroyo toads to respond to “simulated rain events” has not been adequately established in the scientific literature and it is therefore uncertain what percentage of the total arroyo toad population within the fenced construction areas would be captured through the use of this technique. Accordingly, it would be possible for arroyo toads to become trapped in the enclosed construction areas during construction and disturbance activities and suffer mortality. In addition, the proposed Arroyo Toad Resource Management Plan referenced above has yet to be developed or provided to Commission staff for review. An assessment of the adequacy of habitat areas proposed to be used for relocated arroyo toads is therefore not possible.

Measure TE-13. The Contractor shall locate staging areas for construction equipment outside of areas within the jurisdiction of the USACOE or CDFG known to support arroyo toad to minimize impacts to sandy creek benches that

may provide aestivating habitat for the arroyo toad to avoid taking any individuals.

Despite this proposed mitigation measure, as demonstrated in Exhibit 17, one of the principal proposed staging areas for construction activity within the coastal zone portion of the project area would be located within an area that was designated as critical habitat for the arroyo toad in the 2001 *Final Designation of Critical Habitat for the Arroyo Toad* and was recognized as essential and occupied habitat in both the 2005 *Final Designation of Critical Habitat for the Arroyo Toad* and the 1999 *Recovery Plan for the Southwestern Arroyo Toad*. This area encompasses roughly a dozen acres of occupied upland habitat, and although it may technically be located “outside of areas within the jurisdiction of the USACOE or CDFG known to support arroyo toad” it should be noted that the USACOE jurisdiction is limited to riparian or wetland areas and does not include the upland habitats that are essential to the survival of the arroyo toad and CDFG jurisdiction is limited within federal lands. This mitigation strategy will not provide a sufficient level of protection for the arroyo toad and, furthermore, TCA’s proposed placement of a primary staging area within essential and well recognized arroyo toad habitat represents a significant threat to the species.

Measure TE-14. When conducting construction and/or other ground-disturbing activities in arroyo toad occupied habitats or in adjacent upland areas proximal to known arroyo toad habitats, the Contractor shall cover all grubbing spoils or other grading debris with plastic sheeting to prevent arroyo toads from opportunistically burrowing in these exposed and friable soil piles. This sheeting must be placed on the soil piles before sunset and shall remain on (during nighttime hours) for the duration of the construction/ground disturbing activities. The areas where these measures must be implemented shall be determined by the Project Biologist in coordination with the USFWS. If the sheeting does not remain in place due to unforeseen circumstances, (inclement weather or other disturbances) a biologist will monitor the soil piles for the arroyo toad. Any arroyo toads found within the soil piles will be removed and relocated as outlined in the Arroyo Toad Resource Management Plan.

Similar to other measures included above, this proposal has the potential to minimize potential adverse impacts to the arroyo toad. However, the placement of “grubbing spoils”¹¹ and other grading debris within occupied arroyo toad habitat and the subsequent covering of these debris piles with plastic sheeting would impinge on those potentially important upland foraging habitats and movement corridors occupied by these debris piles. Although specific size and area figures have not been provided by TCA for these debris piles, based on the proposed grading and fill of several million cubic yards of soil,

¹¹ “Grubbing” typically refers to the process of removing all vegetation, roots and/or stumps from an area. these debris piles could encompass a substantial portion of arroyo toad habitat and result in increased spatial, breeding and forage resource competition among the remaining habitat areas.

Measure TE-15. The Contractor shall not drive upon construction roads or other roads/surfaces adjacent to arroyo toad occupied habitat after sunset. If the site must be accessed, a biologist permitted to handle arroyo toad must be present in the vehicle to identify any individuals on the road and the vehicle shall not exceed a speed of 16 km per hour (10 mi per hour) within these areas.

As described above, the use of vehicles in occupied arroyo toad habitat has been identified as one of the primary threats to the continued existence of this species. Although the implementation of this mitigation measure would likely reduce the number of arroyo toad mortalities that would occur after sunset, daytime vehicle use in arroyo toad occupied habitat areas would still occur and would have the potential to adversely affect the species through direct mortalities.

Measure TE-16. Prior to construction, the Project Biologist shall document the area of pools and gravel bars within the temporary disturbance areas of creeks occupied by the Arroyo Toad. At the conclusion of construction, the TCA or other implementing agencies shall construct artificial pools and gravel bars within these temporary disturbance areas of creeks that are known to be occupied by arroyo toad. The artificial pools and gravel bars shall provide potential breeding and aestivating habitat for arroyo toad. These areas will be identified and established by the Project Biologist in the BRMP. The artificial pools and gravel bars shall be equal to or greater in size than those areas impacted by project implementation. Because of the natural flooding and scouring conditions of the creeks within the study area, no maintenance of these areas will be required. The construction of these features shall not preclude required Caltrans bridge maintenance. Plans shall be submitted to USFWS for review and approval, to the extent required by such agency, prior to implementation.

As discussed previously, there is some scientific evidence that suggests that shaded pools may provide unsuitable or marginal habitat for larval and juvenile arroyo toads. It should be noted, therefore, that the majority of those arroyo toad occupied creek areas that would be within the disturbance limits of the proposed project, and would be used to locate the artificial pools and gravel bars, would also be within areas that would experience some increased level of shading due to the presence of the expanded I-5 bridge structures over San Mateo and San Onofre Creeks and/or the elevated toll road “flyway” structures. These artificial pools and gravel bars may therefore not provide habitat for arroyo toads that would be similar to the habitat that was removed or disturbed during construction activity within arroyo toad occupied stream beds and therefore may not provide a net benefit to the species.

Measure TE-17. Prior to the arroyo toads' re-establishment to their original locations, specific activities to enhance their habitat and improve their potential for re-occupation will be implemented. These measures include the removal (up to 15 days in advance of the re-establishment), to the extent practicable, of predatory species such as bullfrogs, western mosquito fish, yellow bullheads, bluegill, and additional predatory invertebrates, amphibians, and introduced fish species. Plans shall be submitted to USFWS for review and approval prior to implementation to determine compliance with the biological opinion.

This measure, if implemented in such a way as to not adversely affect existing populations of arroyo toads and tidewater gobies, has the potential to substantially benefit arroyo toads. Introduced predators have been identified as representing a substantial threat to arroyo toads and the removal of these species would likely reduce the level of predation currently experienced by the toad. However, any process that involves selectively eliminating pest species within an area that is simultaneously occupied by sensitive and endangered species may be difficult and complicated to implement successfully. Accordingly, this measure would need to be carefully designed and developed so as to not inadvertently affect non-target species such as arroyo toads and tidewater gobies. Because the specific details of this proposal have not been established or developed it is not possible to determine if the implementation of this measure would result in a net benefit to the species.

Conclusion

As detailed above, the proposed project has the potential to adversely affect the arroyo toad population within the coastal zone portion of the project area in a variety of ways. Adverse impacts to this species are recognized and anticipated by TCA and numerous mitigation measures have been developed to minimize and offset these impacts. As the above discussion makes clear however, these mitigation strategies have either not been developed in sufficient detail to permit an adequate analysis of their potential for success, or questions remain as to their ability to provide a net benefit to the species. Therefore, the Commission finds that apart from proposing a use of nearly 66 acres of ESHA that is fundamentally inconsistent with Section 30240 of the Coastal Act, the proposed project also has a strong potential to result in substantial adverse impacts to one of the few and remaining coastal populations of the endangered arroyo toad. The Commission therefore finds the proposed use of arroyo toad occupied ESHA to be inconsistent with the resource protection policies stipulated in Section 30240 of the Coastal Act, both because it is not a resource dependent use, and because it does not protect the arroyo toad from significant disruption of its habitat.

Coastal California Gnatcatcher

The coastal California gnatcatcher (*Polioptila californica californica*), a small, long tailed bird with dark blue-gray plumage on its dorsal side and gray-white plumage on its underside, feeds primarily on insects and is one of three subspecies of the California gnatcatcher. The coastal California gnatcatcher (hereafter referred to as gnatcatcher) is

restricted to coastal areas in southern California and northwestern Baja California. Within these areas the gnatcatcher occurs primarily in the coastal sage scrub community – a distinctive vegetation type composed of relatively low-growing, summer deciduous and succulent plants such as coastal sagebrush, sage, lemonadeberry, California encelia, prickly pear and cholla cactus – but is also known to use habitat in other vegetation communities including Venturan coastal sage scrub, Diegan coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub. The gnatcatcher is a non-migratory species that exhibits high site fidelity, strongly defends breeding territories (ranging in size from 2 to 14 acres) between late February and early August, and occupies home ranges of between 13 and 39 acres.

Although considered locally common in the mid-1940s, by the 1960s the gnatcatcher had experienced a significant population decline in the U.S. that has been attributed to widespread habitat destruction and declining reproductive success due to nest parasitism by the brown-headed cowbird.¹² As described by researchers Pyle and Small in 1961, “the California subspecies is very rare and lack of recent records of this race compared with older records may indicate a drastic reduction in population.” Studies conducted by Dr. Jonathan Atwood of the Manomet Bird Observatory in 1980 estimated that no more than 1,000 to 1,500 pairs of gnatcatcher remained in the United States and that remnant portions of its habitat were highly fragmented with nearly all being bordered on at least one side by rapidly expanding urban centers. The coastal sage scrub habitat preferred by the gnatcatcher has declined some 90% from historical levels and is among one of the most depleted and threatened habitat types in North America. Accordingly, the species was listed as threatened under the Endangered Species Act in March 1993, due to habitat loss and fragmentation resulting from urban and agricultural development, and the combined effects of cowbird parasitism and predation.

As required under the Endangered Species Act, the U.S. Fish and Wildlife Service designated critical habitat for the gnatcatcher in 2000. The *Final Determination of Critical Habitat for the Coastal California Gnatcatcher*, released in October of 2000, was based on a comprehensive compilation of the most up to date academic and commercial knowledge of the range, distribution and habitat requirements of the gnatcatcher and relied on site specific surveys, habitat evaluation models, gnatcatcher occurrence data and reserve design criteria that established both core gnatcatcher populations, as well as linkage areas essential for the conservation of the species. As stated by FWS in the final critical habitat determination:

All areas designated as critical habitat for the gnatcatcher contain one or more of these physical or biological features, also called primary constituent elements.

¹² Cowbirds do not build their own nests but instead lay their eggs in the nests of other species, usually to the detriment of the host birds’ own eggs or young. Cowbirds have expanded tremendously in both range and numbers since 1900 as irrigated agriculture and animal husbandry increased.

The primary constituent elements for the gnatcatcher are those habitat components that are essential for the primary biological needs of foraging, nesting, rearing of young, intra-specific communication, roosting, dispersal, genetic exchange, or sheltering

(Atwood 1990). Primary constituent elements can be provided in undeveloped areas that support various types of sage scrub or chaparral, grassland, and riparian habitats where they occur in an essential core population or linkage area proximal to sage scrub and where they may be utilized for biological needs such as breeding and foraging (Atwood et al. 1998, Campbell et al. 1998). Primary constituent elements associated with the biological needs of dispersal are also found in undeveloped areas that provide connectivity or linkage between or within larger core areas, including open space and disturbed areas containing introduced plant species that may receive only periodic use.

FWS also specifically notes in the 2000 critical habitat designation that the undeveloped open space and scrub habitat located within portions of the project area has been identified as important habitat for the gnatcatcher:

Marine Corps Base Camp Pendleton represents one of the largest contiguous blocks of coastal sage scrub in southern California. The base provides habitat for numerous core populations of gnatcatchers and essential habitat linkages between core populations in northern San Diego County to those in southern Orange and southwestern Riverside Counties. In light of these factors, we proposed 20,613 ha (50,935 ac) of the approximately 50,000 ha (125,000 acre) base as critical habitat for the gnatcatcher.

Despite the initial decision and proposal to include this substantial portion of MCB Camp Pendleton as critical habitat, FWS later determined that the development of a gnatcatcher resource management plan by the Marine Corps, contained within MCB Camp Pendleton's Integrated Natural Resource Management Plan, as well as the potential adverse effect that the designation of habitat within critical training areas on the base would have on the operational requirements of the Marines, were sufficient reasons to exclude lands within MCB Camp Pendleton from designation as critical habitat. However, FWS clearly stated in the 2000 *Final Determination of Critical Habitat for the Coastal California Gnatcatcher* that this exclusion did not apply to those lands leased by the California Department of Parks and Recreation for the San Onofre State Beach:

We conclude that the benefits of excluding Camp Pendleton exceed the benefits of including the base in the critical habitat designation; further, we have determined that excluding the base will not result in the extinction of the gnatcatcher, as numerous gnatcatcher core areas remain within the final critical habitat designation and sections 7(a)(2) and 9 still apply to the activities affecting gnatcatchers on Camp Pendleton. This exclusion does not include that part of Camp Pendleton leased to the State of California and included within San Onofre State Park (including San Mateo [subunit]). Because these lands are used

minimally, if at all, by the Marines for training, the 1,195 ha (2,960 ac) of lands proposed within the state park are retained in the final designation. These lands do not include lands leased for agricultural purposes. [emphasis added]

The final critical habitat area designated for the coastal California gnatcatcher therefore includes all 2,960 acres of San Onofre State Beach, including a substantial portion of the project area and 48 acres¹³ within the proposed project's disturbance limits. Although a subsequent lawsuit brought against FWS by TCA and others called into question the economic analysis component of the 2000 critical habitat designation and required FWS to re-initiate the process of designating critical habitat, as stated in the *2003 Reopening of Public Comment Periods for the Proposed Designations of Critical Habitat for the Coastal California Gnatcatcher*, "Areas currently designated as critical habitat for the coastal California gnatcatcher will remain in place until such time as new final regulations for this species become effective." Because revised critical habitat for the gnatcatcher has yet to be finalized and released publicly, gnatcatcher critical habitat areas within SOSB that were designated in 2000 remain in place and valid.

Biological surveys conducted by TCA in 1995 and 2001 recorded the presence of gnatcatchers within designated critical habitat areas within the project area. As stated by TCA in the project EIS, "In the biological study area [gnatcatchers] were recorded at 234 locations in 1995. During the 2001 surveys, an estimated 140 [gnatcatcher breeding territories] were recorded in the survey area." Because the area included within these surveys was both within and outside the coastal zone portion of the project area, TCA compiled a refined document titled, *Focused Summary of Environmental Impacts in the Coastal Zone* to differentiate these areas. The focused summary concludes that, "The proposed project will impact approximately 49.75 acres of coastal sage scrub habitat and three coastal California gnatcatcher [breeding territories] within the project's disturbance limit in the Coastal Zone." In addition, more recent surveys conducted as part of the MCB Camp Pendleton Integrated Natural Resources Management Plan, and included as Exhibit 18, indicate the continued presence of gnatcatchers in and around both San Mateo Creek and San Onofre Creek.

As demonstrated in Exhibits 15 and 18, due to the gnatcatcher's affinity for upland coastal sage scrub habitat and its recorded location among these habitats within the project area, those areas determined to be ESHA by the Commission ecologist due to the presence of coastal sage scrub vegetation communities and their importance for the gnatcatcher are contiguous with some areas have also been identified as critical habitat/ESHA for the arroyo toad.

¹³ Staff of the Commission's Technical Services Mapping Unit have calculated the area of designated gnatcatcher critical habitat within the coastal zone portion of the proposed project's disturbance limits to be 48 acres, as demonstrated in Exhibit 15. This calculation closely matches the estimate of 49.75 acres provided to Commission staff by TCA.

Potential Effects on ESHA and Gnatcatchers

Designated critical habitat within the coastal zone portion of the project area is comprised

almost entirely of gnatcatcher occupied coastal sage scrub vegetation, a habitat type which the Commission has repeatedly classified as ESHA, most recently in Consistency Certification CC-004-05 on a portion of MCB Camp Pendleton located south of the project area. Through the proposed removal of nearly 50 acres of gnatcatcher occupied coastal sage scrub ESHA that has been designated as critical habitat for this species, project activities within the coastal zone have the potential to adversely affect the gnatcatcher population in a variety of ways. As described by TCA in the project EIS, these effects “include, but are not limited to, noise impacts, road mortality from operation and construction... and population decline from habitat fragmentation and degradation of occupied and suitable habitat.” The project EIS also states that “Impacts to the [gnatcatcher] from construction include removal, degradation, modification, or fragmentation of [coastal sage scrub] habitat and [coastal sage scrub]/grassland ecotones, especially those communities dominated by California sagebrush and California buckwheat.” Additional adverse effects would be caused by vehicle strikes, displacement, destruction of nests, eggs and nestlings, increased competition due to loss of available foraging and breeding areas, and changes in the vegetation community through the spread and colonization of invasive plant species and increased frequency of fires.

Vehicle strikes to gnatcatchers during both the operational and construction phases of the proposed project have the potential to result in increased levels of mortality to this sensitive species due to the sharp increase in the number and speed of cars and trucks within and adjacent to occupied critical habitat areas. TCA has not provided the Commission with sufficient analysis of this potential source of mortality to enable an adequate assessment of its likelihood to compromise the continued existence of this population of gnatcatchers. While the annual number of gnatcatcher mortalities during the operation of the toll road may be high, immediate direct mortalities of juvenile and adult gnatcatchers as a result of construction activities is anticipated to be relatively low, due to the high mobility of gnatcatchers and their ability to flee construction areas. However, the removal of habitat will displace those gnatcatchers with territories in and adjacent to the project’s proposed disturbance limits, greatly increasing the population density and competition for resources within remaining habitat areas. In addition, the clearing of occupied territories, if conducted during the breeding season, may potentially result in the destruction and/or loss of gnatcatcher nests, eggs or nestlings.

Regardless of whether or not construction activities occur during the gnatcatcher breeding season, however, proposed project activities include the removal of roughly 215 acres of gnatcatcher occupied coastal sage scrub habitat that has been designated as critical habitat. Of these 215 acres, approximately 49.75¹⁴ acres would be located within the coastal zone portion of the project’s disturbance limits. These nearly 50 acres would

¹⁴ Paragraph 4 of page 2.8-14 of the *Focused Summary of Environmental Impacts in the Coastal Zone*.

support project construction activities for approximately three years and would experience substantial amounts of grading activities and vegetation clearance. TCA has not proposed mitigation for this use of coastal sage scrub ESHA and gnatcatcher critical habitat within the coastal zone.¹⁵ Additionally, because the proposed project includes the placement of one of the primary construction staging areas and approximately one year of pile driving (six months for each of the two elevated toll road “flyways”) within this 50 acre footprint, it is likely that elevated noise levels would extend well into adjacent areas during the construction phase of the proposed project. As described in the December 2003 document titled *Noise Assessment for Southern Orange County Transportation Infrastructure Improvement Project* provided by TCA, anticipated noise levels of 65 decibels or more would extend at least 2800 feet in all directions and encompass approximately 565 acres of adjoining habitat during pile driving activities. This elevated noise footprint would extend well beyond the proposed project’s defined disturbance limits and would therefore include a substantially larger area of gnatcatcher critical habitat than that which would be directly removed through grading and vegetation clearance. Elevated noise levels in and adjacent to gnatcatcher occupied areas have the potential to adversely effect this species by increasing the number of times that gnatcatchers are flushed from the area and interrupting or drowning out breeding and territory demarcation calls.

As detailed in the *Final Determination of Critical Habitat for the Coastal California Gnatcatcher*, the habitat area within San Onofre State Beach and MCB Camp Pendleton, including the 49.75 acres proposed to be used by TCA during the construction and operational phases of the proposed project, represents not only a breeding area for gnatcatchers but also provides a vital linkage between several important gnatcatcher populations. The continued existence of this linkage is important to maintain genetic exchange between separate populations and is essential to preserve the genetic diversity of the species and thereby augment its ability to adapt to environmental changes, including those induced by climate change. The permanent and temporary loss of these 49.75 acres has the potential to lower the overall carrying capacity of the greater habitat area for which these acres are a part by reducing the amount of available forage and breeding habitat. Furthermore, the 49.75 acres that are proposed to be removed consist of one of California’s most imperiled vegetation and habitat communities, coastal sage scrub. Within San Diego County this habitat type has routinely been designated as ESHA by the Commission (in CDP numbers 6-03-098, 6-03-099 and Consistency Certification CC-004-05, for example). Although re-vegetation of disturbed project areas with native plant species is proposed to occur upon completion of construction activities, the amount of time required for this re-vegetation process to be completed would preclude this area from becoming viable gnatcatcher habitat for at least several years post-construction. In addition, TCA has not provided sufficient details regarding proposed re-vegetation activities to allow the Commission to assume that the specific

¹⁵ Areas proposed by TCA to serve as mitigation for the loss of coastal sage scrub within the coastal zone are located approximately 12 to 16 miles inland from the coastal zone boundary and are therefore considered to be inappropriate mitigation for impacts to coastal resources.

suite of plant species required for gnatcatcher habitat would be returned to those areas disturbed by project activities. While TCA has proposed mitigation for these disturbed and occupied acres of coastal sage scrub in the form of habitat restoration and preservation, the area proposed to be restored and preserved would be located approximately 12 to 16 miles outside of the coastal zone and therefore would not mitigate the loss of coastal resources.

As mentioned previously, the gnatcatcher is characterized by its strong site fidelity and aggressive territoriality. Once a gnatcatcher pair establishes a territory, that area is vigorously defended from use and intrusion by other gnatcatchers. These characteristics of the gnatcatcher would severely limit the ability of gnatcatchers with territories that would be disturbed or destroyed by the proposed toll road from successfully reestablishing territories in gnatcatcher occupied areas. Displaced gnatcatchers may experience mortality or reproductive declines if unable to rapidly and successfully reestablish a territory. In addition, even if displaced gnatcatchers are able to become successfully reestablished, it is likely that all nearby gnatcatchers would suffer due to increased competition for remaining suitable habitat and prey. In effect, the removal of approximately 50 acres of gnatcatcher occupied sage scrub habitat would substantially increase competition in the remaining habitat areas and may result in a cascading effect of territory displacement and crowding of remaining areas. These effects may adversely affect a larger portion of the gnatcatcher population in and around the project area than would otherwise be expected due to the direct loss of habitat due to the placement of the toll road alone.

In addition to the adverse affects associated with direct loss of habitat and mortality during the construction phase of the project, the proposed operation of the toll road may also increase the likelihood of fires occurring within gnatcatcher habitat surrounding the proposed toll road route. Studies have demonstrated a direct link between increased human access and use of an area, especially through the placement of a road, and increased prevalence of accidental and intentional fires. The proposed placement of the toll road within an area of sage scrub habitat that is typically dry and fire-prone would drastically increase the human use of this area and the number of fire ignitions from vehicle sparks, discarded cigarettes and arson may experience a corresponding rise as well. Because of the gnatcatcher's preference and use of fire-prone habitat, these birds are susceptible to adverse affects from fire including habitat loss and mortality.

Mitigation

To reduce the magnitude and likelihood of impacts to the coastal California gnatcatcher identified by TCA, TCA has proposed several mitigation measures. The following is a brief description of the relevant mitigation measures excerpted from the project EIS. These measures are in addition to the development of the Biological Resources Management Plan that was previously described and is proposed to contain a construction monitoring program for the gnatcatcher:

Measure TE-18. To minimize and offset adverse effects of the selected alternative on the coastal California gnatcatcher, habitat suitable for this species (as determined by the Project Biologist) shall be grubbed from the project footprint area from September to February if feasible (generally outside the breeding season for these species). The Project Biologist shall survey the suitable habitat within the areas to be grubbed one day prior to any vegetation disturbance to determine the location and numbers of coastal California gnatcatchers. The Project Biologist will be on-site and present during all suitable habitat clearing and removal activities to minimize the potential for individual coastal California gnatcatchers to be wounded or killed during the clearing of habitat.

Measure TE-19. If grubbing activities are unavoidable during the coastal California gnatcatcher breeding season, which is between February and August, the following measures will be implemented:

Surveys by the Project Biologist will be conducted a minimum of three times on separate days after the initiation of the nesting season to determine the presence of coastal California gnatcatchers, nest building activities, egg incubation activities, or brood rearing activities. These surveys will be conducted within the week prior to the initiation of brushing, grading, or other construction activities. One survey will be conducted the day immediately prior to the initiation of work. The USFWS will be notified in writing seven days prior to the initiation of surveys.

If no nest(s), nesting behavior, or brood rearing activities are detected, work may commence. Prior to and during work activities, the Project Biologist will locate any individual coastal California gnatcatchers on-site and direct operators to begin in an area away from the birds. The pattern of brushing/grubbing activities will be designed to optimize opportunities for flushed birds to be directed towards the open space areas in the vicinity of the impact area. During construction, no activity will occur within approximately 150 m (500 ft) of active nests.

Although these measures have the potential to reduce the likelihood of mortalities to gnatcatchers during the breeding season, these measures do not provide a guarantee that construction activities, grading and vegetation clearance would not occur within gnatcatcher occupied areas during the breeding season. In addition, the potential success of surveys conducted by the project biologist to detect the occurrence of nests, nesting behavior or brood rearing activities remains uncertain and unproven. Furthermore, although the commitment to restrict activity to those areas at least 500 feet away from active nests would protect these nests from destruction, increases in construction activities, noise and habitat destruction – even if conducted at least 500 feet from nests - would likely increase the potential for these nests to be abandoned. The provision in mitigation measure TE-18, described above, that would require the presence of the project biologist during habitat clearing and removal activities within gnatcatcher

occupied areas would also provide no guarantee that mortalities would be avoided. Finally, these measures would be unable to offset the anticipated adverse effects on the gnatcatcher resulting from the destruction and loss of occupied habitat. Although some of these habitat areas may eventually be re-vegetated with the specific community of vegetation types required as habitat by the gnatcatcher, TCA has provided insufficient detail regarding their re-vegetation plans to assume that this will indeed occur. Re-vegetation would also require several years to be completed and the habitat would remain lost and unsuitable for gnatcatcher occupation during that interval.

Conclusion

In addition to directly removing and occupying 50 acres of gnatcatcher occupied coastal sage scrub ESHA during the construction phase of the proposed project, the project also has the potential to indirectly and directly cause mortality to this endangered species during both the construction and operational phases of the proposed project. Adverse effects resulting from habitat loss, increased resource competition, interruption of breeding activities, reduced reproductive success, increased incidence of wildfire, loss of population linkages, and loss of nests, eggs and juvenile or nestling birds have the potential to negatively affect the gnatcatcher population throughout the region. In addition, the effects of elevated noise and construction activities may result in adverse impacts to gnatcatchers well beyond the 50 acres identified by TCA as within the immediate construction footprint. As described in the introduction to this section, Section 30240 of the Coastal Act specifies that “...*only uses dependent on those resources* shall be allowed within ... [environmentally sensitive habitat] areas.” The proposed use of 50 acres of ESHA for the construction and placement of a toll road is clearly inconsistent with this Coastal Act policy.

Least Bell's Vireo

The least Bell's vireo (*vireo belie pastilles*) is a small migratory songbird that feeds primarily on insects and typically inhabits dense, willow dominated riparian habitats with lush under story vegetation, which is limited to the immediate vicinity of water courses. The least Bell's vireo (henceforth referred to as vireo) typically forages and nests within areas of riparian vegetation but studies cited in the 1986 vireo Endangered Species Act listing document, *Determination of Endangered Status for the Least Bell's Vireo*, indicate that as much as 50% of feeding occurs in upland areas of coastal sage scrub and chaparral as well. The vireo typically migrates to breeding areas in southern California between March and April of each year and remains until late August or September when it departs for wintering areas in Mexico. Upon arrival, male vireos establish and defend breeding territories by singing to announce and demarcate territory boundaries and by physically chasing intruders. Territories typically range in size from 0.5 to 7.5 acres.

Historically, the vireo occupied riparian habitats from northern California to northwestern Baja California and was found as far eastward as Owens Valley, Death Valley and the Mojave River. Regional declines in vireo populations became apparent in the 1940s and by the 1980s the central California populations were believed to have been extirpated and

over two-thirds of formerly occupied localities were devoid of vireos. Currently, the worldwide distribution of vireo is restricted to southern California south of the Tehachapi Mountains and several locations in Baja California.

In response to the dramatic decline of the vireo population and widespread loss of its riparian habitat, the vireo was listed as endangered by the State of California in 1980 and by the U.S. Fish and Wildlife Service in 1986. As required under the federal Endangered Species Act, critical habitat was designated for the vireo in 1994. At the time of listing, the U.S. population had plummeted to only 291 known active vireo territories and the historic distribution had been restricted to less than 5% of its former range, with greater than 99 percent of remaining territories concentrated in southern California and 77 percent of those within San Diego County alone. As stated in the 1986 ESA listing document, *Determination of Endangered Status for the Least Bell's Vireo*, no other perching songbird species in California is known to have declined as dramatically as the vireo. This situation has changed only slightly in the thirty one years since listing and although the current population is estimated at approximately 3,000 territories, the known range remains restricted to southern California and Baja exclusively. Of the 46 California localities known to support breeding populations of the vireo in 1986, all but 7 supported less than 10 breeding pairs.

The primary cause of vireo population decline prior to listing has been attributed to loss of habitat due to agricultural and water control practices, urbanization, and the spread of invasive exotic plants in prime vireo habitat areas. Reduced nesting success due to high levels of nest parasitism by the brown-headed cowbird has also been identified as a contributing factor.

Designated vireo critical habitat includes roughly 38,000 acres in ten locations in six southern California counties. The critical habitat designation for the vireo identifies the primary constituent elements that support feeding, nesting, and sheltering and that are essential to the conservation of the species as including riparian woodland vegetation that generally contains both canopy and shrub layers and some associated upland habitats. Although no designated critical habitat for this species is included within the project area, as demonstrated in Exhibit 19, the least Bell's vireo has been recorded at several locations within the project's disturbance limits and occupied habitat exists within the riparian areas of both San Mateo Creek and San Onofre Creek. As stated by TCA in the document titled *Focused Summary of Environmental Impacts in the Coastal Zone*:

Territorial least Bell's vireos were observed at 16 locations in the study area during the 1995 surveys. All but one of the observations occurred along San Mateo Creek. During the 2001 surveys, a minimum of at least 27 least Bell's vireo use areas were recorded in the study area...All previously recorded least Bell's vireo locations in all impact areas of the various [toll road] alternatives were confirmed during 2003 focused surveys... Within the coastal zone, one territory of the least Bell's vireo was identified within San Mateo Creek.

As Exhibit 20 demonstrates, vireos were recorded within the coastal zone directly adjacent to the proposed project's disturbance limits, suggesting that the territory for these birds includes areas within the project footprint.

In addition, more recent surveys conducted as part of the MCB Camp Pendleton Integrated Natural Resources Management Plan indicated as many as 68 vireos at various locations along San Mateo Creek and 56 vireos along San Onofre Creek (as shown in Exhibit 19).

Due to the rarity of this species and its sensitivity to habitat loss and disturbance, primary causes of its decline, the Commission's staff ecologist has determined that vireo occupied riparian habitat within the coastal zone portion of the project area meets the Coastal Act definition of ESHA. As demonstrated in Exhibits 15 and 19, due to the affinity of this species for riparian habitat and its recorded location among these habitats within the project area, areas designated as ESHA by the Commission ecologist due to their importance for the vireo have also been identified as wetlands and critical habitat/ESHA for the tidewater goby and arroyo toad (as discussed above). These wetland areas and potential project related impacts to them are additionally detailed in Section B (Wetlands) of this staff report.

Potential Effects on ESHA and Vireos

Similar to those potential impacts detailed in the above section on gnatcatchers, the proposed project also has the potential to cause direct and indirect adverse effects to the least Bell's vireo and its occupied and potentially occupied habitat areas. As described by TCA in the project EIS:

Impacts to [least Bell's vireo] from construction include removal, degradation, modification, and fragmentation of occupied or potential occupied riparian habitats. All the [toll road] alternatives, with the exception of the I-5 alternative, would directly affect [vireo] occupied habitat. Additionally, noise and lighting from bridge construction along or across drainages where this species occurs or potentially occurs would result in indirect impacts.

...

Long term impacts to [vireos] include noise, lighting, habitat fragmentation, and invasive species...

In addition to the above specific impacts to vireos identified by TCA, many of the adverse affects identified by the project EIS in relation to non-listed bird species would also apply to the vireo:

Direct impacts to these species would consist of the mortality of animals that occupy or temporarily reside in habitats located within the impact footprint and the blockage/preclusion of movements necessary for foraging, breeding or other requisite life history behaviors. In addition, the removal of habitats that contain food or other resources necessary for individuals located outside the impact area may cause additional direct mortality if these are necessary for survival and/or cause deleterious competitive interactions between remaining individuals.

Furthermore, vireos may also be adversely affected by vehicle strikes during construction and operation of the proposed toll road and destruction or abandonment of occupied nests during construction.

Direct mortality through vehicle strikes would be likely to increase with the proposed project due to the substantial increase in vehicle traffic within vireo occupied areas that is anticipated to result from construction of both the proposed toll road and the proposed military access road adjacent to San Mateo Creek. Although the proposed toll road would be elevated above vireo occupied and potentially occupied riparian areas along San Mateo Creek and may therefore remain outside of vireo use areas, during the three year construction phase, large pieces of heavy equipment and machinery would be on the ground and adjacent to the creek and riparian habitat for long periods of time. In addition to the increased likelihood that vireos may experience mortality through accidental interactions with these machines, the proposed project also includes the construction of an access road along San Mateo Creek and beneath the I-5 freeway bridge. The use of this access road would permanently increase the number of vehicles operating within close proximity to vireo occupied habitats and thus permanently increase the number and likelihood of future vehicle strikes.

The proposed temporary and permanent use of vireo occupied breeding territories and habitats during construction and operation would likely result in the displacement of those breeding individuals with territories located adjacent to or within the project area. The displacement of these birds into adjoining habitats may constrain remaining occupied habitat and increase competition for resources, potentially affecting the reproductive and foraging success of both displaced individuals and adjoining territory holders as well. Furthermore, although vireo surveys conducted by TCA suggest that only one breeding territory is within the immediate disturbance footprint, the proposed use of this area for three years to conduct grading, pile driving and other loud, heavy equipment oriented activities may affect vireos in areas outside of the disturbance limits but within the area affected by elevated construction noise. These effects may continue during the operational phase of the proposed project as well because the proposed use of the toll road is anticipated to increase existing noise levels. The project EIS discusses the potential for increased construction and operational noise to adversely affect vireos and other songbirds within the project area:

Long-term noise impacts from traffic would impact habitat that supports threatened or endangered avian species such as [the vireo] and [gnatcatcher]...

The individual impacts of noise [on wildlife] are not well quantified, and there are no regulatory or scientific thresholds for determining an adverse impact. To date, most of the interest has been focused on response of avian species to noise, because of their reliance on auditory cues for selecting a mate, territory defense, and predatory alerts.

...

One study addressing noise was conducted by Forman and Alexander (1998). They reported that traffic noise may increase stress hormones, alter behaviors, interfere with communication during breeding, produce sensitivity to different frequencies, and create harmful decreases in food supply in avian species... [C]onstant [traffic] noise may interfere with avian species' ability to hear communication signals, which they rely on for mating and alerting other individuals of danger, monitoring young development, and detecting predators. Traffic noise may also change the perceived location of the bird signals and must reduce the distance where signals are heard or interpreted.

Although TCA demonstrates in the project EIS that the effects of noise on birds is still being researched and definitive conclusions have yet to be made, several studies and projects are referenced in which a noise impact threshold of 60 decibels was established. These references include a southern California roadway detour project through vireo breeding habitat in which "USFWS identified that the noise level at the loudest hour would be 60 dB of A-weighted sound (dBA) and therefore used 60 dB as the criteria for mitigation..." and a Caltrans biological study that measured the traffic sound levels at various vireo nest sites near a proposed project and determined "The loudest hour noise level averaged 61 dBA [which] became the noise level mitigation criterion for that project." Although neither study conclusively determined that "vireo nesting did not occur or that breeding success would be jeopardized at noise levels above 60 dB" the 60 decibel level was nevertheless determined to be appropriately precautionary.

Furthermore, the results of these studies may indicate an environmental or habitat preference of vireos to locations with low to moderate ambient sound levels. The absence of occupied vireo territories in apparently suitable riparian habitat along portions of both San Mateo and San Onofre Creeks that are within close proximity to the existing I-5 freeway may lend further support to this theory and suggest a sensitivity of this species to the high levels of noise produced by a large multi-lane highway. If vireos are indeed sensitive to noise factors when selecting breeding territories or nesting sites, the placement of the proposed toll road may result in the indirect loss or destruction of several of the vireo territories that are not located adjacent to the project footprint but may nevertheless be within sufficient distance to be rendered unsuitable for vireo use due to increased noise levels.

If, for conservative purposes, the 60 decibel threshold level were to be considered for this project, the project "disturbance limits" established by TCA would need to be expanded outward. At present, these limits extend approximately 100 feet beyond each of the proposed

support structure locations of the toll road elevated “flyways” within the San Mateo Creek riparian corridor. TCA has proposed that each of these locations would support pile driving activities for up to several weeks. Therefore, based on the noise assessment, *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project*, provided to the Commission staff by TCA that estimates the noise produced by pile driving to remain at 65 decibels 2800 feet from the site of the activity. Therefore, the 60 decibel sound contour would extend outward well over 2800 feet further than the current “disturbance limits.” During the one year of proposed pile driving required to construct the proposed elevated “flyway” structures, this anticipated area of elevated sound would include substantially more occupied and potentially occupied vireo habitat than the physical construction footprint. For instance, each proposed pile driving location would result in approximately 565 surrounding acres¹⁶ subjected to sound levels of 65 decibels or more. For reference, 65 decibels has been recognized as the sound level at which human speech interference occurs. Whether or not this habitat would be sufficiently degraded by these noise levels to cause it to be abandoned or rejected by breeding vireos remains uncertain. However, the existing level of understanding regarding vireo habitat preferences suggests that such an outcome would not be unlikely.

Elevated sound levels would also be produced during the operation of the proposed toll road, substantially altering the existing sound environment of the area surrounding the proposed project. In contrast to the construction noise levels that would continue for several years but would ultimately cease, elevated noise levels from traffic on the proposed toll road would continue indefinitely, permanently altering the area and potentially degrading its potential to provide productive habitat for the least Bell’s vireo. Based on sound modeling described within the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* produced for TCA, anticipated operational sound levels from the toll road¹⁷ would approach 60 decibels at a distance of over 500 feet. Although sound propagation distances are highly variable and dependant on environmental factors such as topography and vegetation, this distance would extend approximately 400 feet beyond the edge of the disturbance limit identified by TCA and encompass substantially more habitat.

The increased shading produced by the proposed toll road as well as its physical presence may also adversely affect vireo habitat. Indeed, the established habitat preferences of the vireo demonstrate an apparent affinity for areas with open sky above the upper riparian canopy layer, suggesting that the presence of the two proposed elevated “flyways” may

¹⁶ Based on the area of a circle with a radius of 2800 feet.

¹⁷ As described for the nearest sound receptor to San Mateo Creek, receptor 009 located approximately 500 feet from the edge of the proposed toll road and within San Mateo Campground.

be inconsistent with the vireo’s habitat requirements. In addition, the increased levels of shade produced by the elevated toll road structures may alter the composition and abundance of riparian vegetation within the project’s shade footprint, potentially degrading habitat areas that are currently suitable for the vireo.

In addition to the potential loss of vireo habitat due to the shading and sound presence of the proposed toll road, TCA identifies that within the coastal zone, the proposed project would also require the temporary use or disturbance of approximately 19.12 acres of riparian habitat during the three year construction phase and the permanent loss of approximately 0.16 acres due to the placement of “flyway” support structures. Although, as detailed in Section B of this report (Wetlands), the accuracy of these figures is called into question by the inadequacy of the wetland delineation provided to Commission staff by TCA, the temporary and permanent loss of this amount of vireo occupied or potentially occupied ESHA would nevertheless result in adverse affects to the local population. Vireos within and surrounding the approximately 19 acres of riparian habitat included within the proposed project’s disturbance area would potentially be displaced by construction activities and vegetation clearance, may lose or abandon nests, young and/or important foraging areas and may increase resource competition within adjoining habitat areas.

Mitigation

To address the adverse impacts to the least Bell’s vireo identified by TCA in the project EIS, several mitigation measures have been proposed. The following is a brief description of the relevant mitigation measures excerpted from the project EIS. These measures are in addition to the development of the Biological Resources Management Plan that was previously described and is proposed to contain a construction monitoring program for the vireo. Although the project EIS does not include least Bell’s vireo mitigation measures in the analysis of the proposed toll road, mitigation measures that are proposed to be applied to several of the other toll road alternatives are discussed below:

Measure TE-20. To minimize and offset adverse effects of the selected alternative on the least Bell’s vireo, suitable habitat for this species, as determined by the Project Biologist, shall be grubbed from the impact area from 16 September to 14 March (generally outside the breeding season for this species), if feasible.

While this measure has the potential to minimize the loss of active or occupied vireo nests and reduce the likelihood of adult or juvenile vireos suffering mortality resulting from grading and vegetation removal activities during the breeding season, by stating that these activities will only occur outside of the breeding season “if feasible,” this measure provides no assurance that all suitable vireo habitat will be “grubbed” outside of the breeding season. The conditions for a feasibility determination are not described and similarly, the criteria that would be employed by the project biologist to determine which riparian habitat areas are suitable for the vireo are not detailed either. Furthermore, given the strong site fidelity of vireos and their potential to occupy the same breeding territories

on successive years, the removal of suitable vireo habitat during the non-breeding season may adversely affect breeding vireos when they return from their migration to encounter a degraded or destroyed former territory area. Given the lack of firm commitments and specificity of this mitigation measure, it is uncertain whether or not this measure would produce a positive benefit for the species or even if it would appreciably reduce the magnitude of the anticipated impact. Additionally, whether or not vireo habitat would be removed during or after the breeding season, at least 19 acres of riparian ESHA would still be lost, resulting in a variety of impacts to vireos that occupy or use that habitat.

Measure TE-21. If grubbing activities between 15 March and 15 September (generally within the breeding season for the least Bell's vireo) are unavoidable, the following contingency measures will be implemented:

- a. Surveys by the Project Biologist will be conducted a minimum of three times on separate days after the initiation of the nesting season to determine the presence of least Bell's vireos, nest building activities, egg incubation activities, or brood rearing activities. These surveys will be conducted within the week prior to the initiation of brushing, grading, or other construction activities. One survey will be conducted the day immediately prior to the initiation of work. The USFWS will be notified in writing prior to the initiation of surveys.*
- b. If no nest(s), nesting behavior, or brood rearing activities are detected, work may commence. Prior to and during work activities, the Project Biologist will locate any individual least Bell's vireos on-site and direct operators to begin in an area away from the birds. The pattern of brushing/grubbing activities will be designed to optimize opportunities for flushed birds to be directed towards the open space areas in the vicinity of the impact area.*
- c. During construction, no activity will occur within approximately 150 m (500 ft) of active nests.*

Although these measures have the potential to reduce the likelihood of mortalities to vireos during the breeding season, these measures do not provide a guarantee that construction activities, grading and vegetation clearance would not occur within vireo occupied areas during the breeding season. In addition, the potential success of surveys conducted by the project biologist to detect the occurrence of nests, nesting behavior or brood rearing activities remains uncertain and unproven. Furthermore, although the commitment to restrict activity to those areas at least 500 feet away from active nests would protect these nests from direct destruction, increases in construction activities, noise and habitat destruction – even if conducted at least 500 feet from nests - would likely increase the potential for these nests to be abandoned. Finally, these measures would be unable to offset the anticipated adverse effects on the vireo resulting from the destruction and loss of occupied habitat. Although some of these habitat areas may eventually be re-vegetated with the specific community of riparian vegetation types required as habitat by the vireo, TCA has provided insufficient detail regarding their re-

vegetation plans to assume that this will indeed occur. Re-vegetation would also require several years to be completed and the habitat would remain lost and unsuitable for [gnateater vireo](#) occupation during that interval.

Measure TE-22.

a. To minimize indirect disturbance of nesting least Bell's vireos, the Contractor will not engage in any construction activities within 61 m (200 ft) of occupied least Bell's vireo habitat between the hours of 0600 and 1100 every day during the peak nesting period of 1 April to 15 July of any given calendar year if said construction activities result in noise readings greater than 60 dBA measured at the edge of the territory of the vireo in the area.

b. For construction, temporary or permanent noise barriers may be installed under the direction of the Project Biologist and USFWS to reduce noise levels. The Project Biologist shall be responsible for monitoring the noise level.

c. The Project Biologist shall be responsible for all noise monitoring reports which shall include, at a minimum, (1) baseline noise measurements at known least Bell's vireo nesting sites within riparian communities within the impacts area, prior to construction, (2) the effect construction noise has on nesting pairs in the vicinity of construction, (3) baseline noise measurements at known nesting adjacent to the alignment, prior to traffic, and (4) the effect traffic noise has on nesting pairs in the vicinity of the selected alignment. These reports will be submitted to the TCA or other implementing agencies.

This measure, intended to minimize the project's anticipated noise impacts, is inadequate for several key reasons. Foremost, the initial commitment to restrict construction activities that would result in sound levels greater than 60 decibels at the edge of vireo occupied territories would apply only to those construction activities conducted within 200 feet of vireo territories and would therefore not be applicable to pile driving activities that may result in sound levels of 65 decibels even when located fourteen times farther away- at a distance of 2800 feet from the vireo territory area. Pile driving activities are by far the loudest component of project construction and are proposed to be extensively used for long periods of time in close proximity to vireo occupied and potentially occupied riparian habitat areas. The fact that these activities may be exempt from this measure, if conducted more than 200 feet from occupied vireo territories, calls into question the potential effectiveness of this measure. In addition, this measure does not consider the operation of the proposed toll road that may subject large areas of vireo occupied and potentially occupied habitats to sound levels greater than 60 decibels as well.

The commitments included in this measure to possibly install temporary or permanent noise barriers and compile noise monitoring reports that would document the effect that traffic noise has on nesting vireo pairs in the vicinity of the proposed toll road also do not qualify as guarantees that noise impacts on vireos will be avoided or minimized. Details regarding the type, size and location of noise barriers that would be considered are

necessary to adequately assess their potential effectiveness while the documentation of noise related impacts to vireos by the project biologist would do nothing to reduce the occurrence of these impacts.

In addition, as described in Section B of this report (Wetlands), to address impacts associated with the proposed permanent placement of elevated “flyway” support structures on 0.16 acres of wetlands, TCA has conceptually proposed to restore and create a one acre area of southern willow woodland adjacent to the proposed water treatment extended detention basin #2 in an area that is currently occupied by an irrigated agricultural field. When completed this woodland area may provide suitable habitat for the vireo. The one acre area would be located within close proximity to both the toll road connector and the existing I-5 freeway however. In light of the discussion included above regarding the potential sensitivity of the vireo to elevated sound levels, this location may not be colonized by vireos.

With regard to wetland areas temporarily affected through construction of the proposed toll road, as described by TCA in the document titled, *Conceptual Habitat Mitigation and Monitoring Plan for Impacts to Areas within the Jurisdiction of the United States Army Corps of Engineers, the Regional Water Quality Control Board, the California Department of Fish and Game and the California Coastal Commission*, “the applicant will re-contour and re-vegetate all temporarily impacted areas at a 1:1 ratio to replace pre-construction aquatic function.” As noted above, this proposed restoration of wetland areas would likely require the passage of several years to be completed and would provide only marginally suitable habitat to vireos during this interval.

Conclusion

Overall, the proposed project includes the use and possible temporary destruction of at least 19 acres of vireo occupied and potentially occupied riparian ESHA within the project area as well as the potential degradation of considerably more essential habitat due to the effects of shading and noise during construction and operation of the toll road. These proposed activities are not uses dependant on ESHA and are therefore not allowable uses of ESHA, as defined by the Coastal Act. Through increased resource competition, increased potential for vehicle strikes and the possible removal of essential habitat during the breeding season, the proposed project also has the potential to result in direct mortality to a State and federally listed endangered species. The Commission therefore finds the proposed project to be inconsistent with the environmentally sensitive habitat resource protection requirements contained within Coastal Act Section 30240.

Southern California Coast Steelhead

The steelhead is a sea-run species of rainbow trout with an average length of 20 to 30 inches. A mature steelhead weighs approximately 8 to 9 pounds but can reach as much as 36 pounds. The body of the steelhead is somewhat compressed with a rounded snout and a large mouth. The spawning male experiences minor changes to its head, mouth and color. Typically, steelhead migrate to marine waters after spending one to four years in

freshwater and spawn between December and June in southern California when seasonal streams have adequate flow volumes. Unlike some salmon species, steelhead do not perish after spawning and typically attempt to return to the ocean. Historically, steelhead have been found from Alaska to Baja California.

The National Marine Fisheries Service determined the southern California coast steelhead (*Oncorhynchus mykiss*) to comprise a unique Evolutionarily Significant Unit of steelhead based on the fact that this population of steelhead is: 1) substantially reproductively isolated from other conspecific (same species) population units, and 2) represents an important component of the evolutionary legacy of the species. The range of the southern California coast steelhead Evolutionarily Significant Unit (henceforth referred to as the southern steelhead or steelhead) begins at the Santa Maria River north of Point Conception and continues south to the California/Mexico border. The anadromous¹⁸ portion of the southern steelhead population is currently listed as endangered under the federal Endangered Species Act due to a decline from a historic population of over 55,000 individuals to the current population of approximately 500 individuals.

The anadromous portion of the southern steelhead population was listed by the California Department of Fish and Game as a species of special concern in 1995 and federally listed as an endangered species by the National Marine Fisheries Service in 1997. In the March 2007 technical report titled, *Viability Criteria for Steelhead of the South-Central and Southern California Coast*, the National Marine Fisheries Service explains the relationship between anadromous and non-anadromous steelhead populations:

We believe that juvenile steelhead in our area co-occur with their non-anadromous conspecifics (rainbow trout). Elsewhere, steelhead have been observed to have trout among their progeny, and vice versa (Zimmerman and Reeves 2000). Unfortunately, we do not know how often these transitions occur in south-central or southern California, nor what factors bring them about, though clearly individual populations can be polymorphic for life-history type. Depending on the rate of transition, a group of resident and anadromous fish may function as a single population; two completely distinct populations; or something in between.

At the time of listing, southern steelhead had been thought to be extirpated from all of its historic range in southern California south of Malibu Creek. In 1999, however, juvenile southern steelhead were observed in San Mateo Creek, which prompted the National Marine Fisheries Service to extend the southern-most border of the southern steelhead range from its previous location at Malibu Creek to the California/Mexico border. This range extension was finalized in 2002. As noted in the May 1, 2002 *Range Extension for Endangered Steelhead in Southern California*:

18

Anadromous fishes are those that spend all or part of their adult life in salt water and return to freshwater streams and rivers to spawn.

*In 1999 and 2000, new information became available which indicated that the anadromous life form of *O. mykiss* (i.e. steelhead) or their progeny occurred in at least two coastal streams south of Malibu Creek (Topanga Creek and San Mateo Creek). This new information included observations of juvenile *O. mykiss* in Topanga Creek by a NMFS biologist and field and laboratory investigations conducted by the California Department of Fish and Game (CDFG) which demonstrated the presence and spawning of anadromous *O. mykiss* in San Mateo Creek (DFG, 2000). Based on this new information, NMFS published a Federal Register notice in December 2000 proposing to formally recognize that anadromous *O. mykiss* (or steelhead) ranged further southward in Southern California than was previously believed to be the case by extending the range of the listed population to San Mateo Creek (65 FR 79328).*

...

*Since the range extension was proposed in December 2000, NMFS has obtained some additional new information on *O. mykiss* in San Mateo Creek which was considered in this final determination. Additional microsatellite and mitochondrial DNA (mtDNA) analyses were conducted by Jennifer Nielsen (U.S. Geological Service, Alaska Science Center in Anchorage, AK.) on tissue samples taken from 16 *O. mykiss* collected in San Mateo Creek in 1999 and 2000 (Nielsen and Sage, 2002). All 16 fish that were analyzed shared the MYS5 haplotype that is found throughout the range of *O. mykiss* in California, but which is most commonly found in Southern California populations (Nielsen et al. 1994). This finding is consistent with previous genetic analysis reported for *O. mykiss* in San Mateo Creek (DFG, 2000) and cited in NMFS' proposed range extension (65 FR 79328). According to Nielsen and Sage (2002), this haplotype has not been found in their previous survey of hatchery *O. mykiss* strains in California, and, therefore, suggests an endemic population structure in San Mateo Creek. Secondly, the DFG has undertaken periodic field surveys in upper San Mateo Creek and Devil's Canyon since May 2000 which have documented the continued presence of *O. mykiss* in the watershed. In many instances, these surveys were carried out in conjunction with efforts to remove exotic species that might prey upon or compete with *O. mykiss*. Although these surveys were limited in scope and methodology, they documented the presence of *O. mykiss* through at least August 2001 in Devil's Canyon. Summaries of the DFG field surveys for *O. mykiss* and exotic species removal are contained in a series of file memoranda prepared by DFG staff. [emphasis added]*

Overall, as described by TCA in the document titled, *Focused Summary of Environmental Impacts in the Coastal Zone*, California Department of Fish and Game biologists observed 78 southern steelhead in San Mateo Creek between March and September of 1999. While TCA notes that the majority of these observations occurred in

the upper reaches of San Mateo Creek, approximately 9.5 miles from the coast, the anadromous nature of southern steelhead suggests that the passage of these fish into the lower reaches of San Mateo Creek is a possibility. However, as noted by David Woelfel in his 1991 master's thesis, *The Restoration of San Mateo Creek: A Feasibility Study for a Southern California Steelhead Fishery*, although it once boasted a viable fishery and consistent spawning runs, San Mateo Creek has changed considerably since earlier times:

There are several factors that have contributed to the changes in the physical and biological characteristics of San Mateo Creek over the past 50 years. Dewatering of the aquifer in the lower creek valley has reduced stream flow which has eliminated or disrupted steelhead migrations and killed off significant amounts of bank-stabilizing riparian vegetation. Increased erosion has widened and created a braided channel. Exotic fish have eliminated the residual steelhead population in the upper reaches of the creek. Construction on sand and gravel operations and dikes in the creek channel has restricted the creek's flow. An extremely dry period from 1945 to 1950 was the first part of a longer dry cycle of rainfall which continued to 1976. The below average rainfall in several years after 1976 has not allowed the creek to overcome the altered conditions and create sufficient streamflow to enable a steelhead migration.

Although the return of steelhead to San Mateo Creek suggests that the situation described above may have improved in the years since 1991, the lower San Mateo Creek continues to provide only sporadic winter flows and dry conditions have returned to the area in recent years. Despite the variable and seasonally suitable habitat provided to steelhead in the lower reaches of San Mateo Creek, there is evidence to suggest that the San Mateo Lagoon, which stretches from the I-5 overcrossing within the project area to Trestles Beach, may provide higher quality and more reliably suitable habitat for the southern steelhead. Coastal lagoons were specifically evaluated in the March 2007 technical report titled, *Viability Criteria for Steelhead of the South-Central and Southern California Coast*, by the National Marine Fisheries Service:

In the study area, the estuaries at the mouths of rivers and creeks are typically transformed into lagoons during the dry season, when the combination of low streamflow and coastal wave action allows a sandbar barrier to form between the ocean and the stream's mouth. Several case studies from outside the study area indicate that seasonal lagoons often comprise exceptionally good rearing habitat for juvenile steelhead.

Additionally, the 2006 National Marine Fisheries Service report titled, *Steelhead Population Characterization of the South-Central/Southern California Steelhead Recovery Domain* notes that "lagoon-anadromous" steelhead (i.e. those fish that move between the ocean and coastal lagoons) comprise an established and highly robust life-history class:

Bond (2006), working at a study site in northern Santa Cruz County, has recently shown that each summer a fraction of juvenile steelhead over-summered in the estuary of their natal creek. Like elsewhere in California, this estuary was cut off from the ocean during the summer by the formation of a sandbar spit, and thus is more properly referred to as a seasonal lagoon. Bond (2006) showed unequivocally that juvenile steelhead do very well if they over-summer in the lagoon – many grow fast enough to migrate to the ocean their first year, and most enter the ocean at a larger size than fish coming from the freshwater portion of the stream system. Large size enhances survival in the ocean, and thus the lagoon-reared fish tend to be disproportionately represented in the adult spawning population (Bond 2006).

Although this research was conducted in central California, the potential exists for a similar situation to occur within the San Mateo Creek and lagoon.

Critical habitat was initially designated for the southern steelhead by the National Marine Fisheries Service in 2000 but because the southern range boundary had yet to be extended, no streams or rivers south of Malibu Creek were considered or designated as critical habitat. Due to legal challenge, designated critical habitat for southern steelhead was removed in 2002 and re-established in 2005. Although recognized as occupied southern steelhead habitat, San Mateo Creek was again excluded from critical habitat designation, this time as a result of the National Defense Authorization Act for Fiscal Year 2004. This Act amended the Endangered Species Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(I) of the Endangered Species Act (16 U.S.C. 1533(a)(3)(B)(I)) now provides:

The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.

As described in the September 2, 2005, *Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California*, at the time of review, MCB Camp Pendleton had developed and initiated a final Integrated Natural Resource Management Plan that recognized the presence of southern steelhead within San Mateo Creek and contained measures that provided benefits to the ESA-listed species. Examples of the types of benefits included actions to control erosion, protect riparian zones, minimize stormwater and construction impacts, reduce contaminants, and monitor listed species and their habitats. In addition, the December 10, 2004, *Proposed Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California*, noted that in correspondence between the U.S. Marine Corps and the National Marine Fisheries Service, the military agency “cited their

ongoing and positive consultation history with NMFS and underscored cases where they are implementing best management practices to reduce impacts on listed salmonids” before concluding that “critical habitat designation at [MCB Camp Pendleton] would likely impact national security by diminishing military readiness.” Therefore, as stated in the proposed designation document, despite the fact that approximately 6-7 miles was found to be accessible to anadromous southern steelhead in the mainstem and tributaries of San Mateo Creek and that in assessing the conservation values of these areas of habitat in Camp Pendleton, the Critical Habitat Analytical Review Team “concluded that all of them were of high conservation value to the [southern steelhead],” the National Marine Fisheries Service determined “that the benefits of exclusion outweigh[ed] the benefits of designation, and [did not propose] to designate these DoD sites as critical habitat.”

Although San Mateo Creek has been excluded from critical habitat designation due to national security reasons, the proposed and final designation documents clearly establish the presence of southern steelhead in San Mateo Creek within the last several years and provide an indication of the importance of this habitat area to the conservation and existence of the species. As described above, recent research also suggests that the San Mateo Creek lagoon may also play a potentially vital role in the continued viability of this population.

Overall, as the National Marine Fisheries Service notes in a 2004 letter to TCA:

...given the low numbers of steelhead in southern California and the small number of Orange County streams open to the ocean which contain O. mykiss and satisfactory trout habitat, San Mateo Creek... may be essential to the survival and recovery of steelhead in the southern portion of the southern California [Ecologically Significant Unit's] range.

Indeed, the San Mateo Creek and lagoon is a unique and vital coastal habitat resource for the southern steelhead because it represents not only the southern-most occupied creek system for the southern steelhead Ecologically Significant Unit but also the southern most occupied creek system for the entire steelhead species. By providing habitat for those steelhead individuals that exist at the far southern edge of the species’ habitable range, San Mateo Creek may provide an important refuge for members of this species that are more suitably adapted to both warmer oceanic and riverine water temperatures. Considering the potential for climate change induced sea surface temperature rise and northward shifting of marine habitat zones, preservation of southern steelhead populations that may demonstrate specific adaptations and genetic traits that have enabled them to exist within the warmest portion of occupied habitat may be vital for the continued existence of the species as a whole.

The importance of sea surface temperatures as a selective pressure and habitat constraint is well supported in the scientific literature. For example, the National Marine Fisheries Service Technical Report titled, *Viability Criteria for Steelhead of the South-Central and*

Southern California Coast, determined that “Variation in ocean conditions is known to have dramatic impacts on marine survival of Pacific salmonids” and that among these ocean conditions “Sea-surface temperature was the strongest predictor of ocean survival, and the correlations were strongest at times of early ocean survival (Mueter et al. 2002).” Therefore, by providing habitat for steelhead that may be better suited to warm water conditions, the San Mateo Creek may provide essential genetic material to the rest of the species.

For the reasons described above, the Commission ecologist has determined that those portions of the San Mateo Creek and associated lagoon located within the coastal zone portion of the project area meet the Coastal Act definition of ESHA. These areas are contiguous with areas previously determined to be ESHA due to their importance for the tidewater goby, arroyo toad and least Bell’s vireo (as described above) and are estimated to comprise between 19 and 24 acres within the proposed project’s disturbance limits.

Potential Effects on ESHA and Southern Steelhead

Proposed activities within and directly adjacent to the San Mateo Creek portion of the project’s disturbance limits within the coastal zone include the construction of an access road along San Mateo Creek and under the north- and south-bound toll road connectors and the existing I-5 freeway, the construction of two several hundred foot long retaining walls to facilitate the placement of this access road, the placement of several thousand feet of the elevated, multi-lane toll road connectors, the use of a pile driver to anchor support structures for the elevated connectors, the extension and support of existing bridges along I-5 and the associated placement, positioning, removal and use of heavy machinery including graders, earthmovers, pile drivers, cement pourers, cranes, and material transport trucks. These activities are anticipated to be carried out ~~over approximately three years~~within 12 months or less within San Mateo Creek and have the potential to adversely affect occupied and potentially occupied southern steelhead habitat in a variety of ways.

Although much of the proposed toll road would be elevated above the ESHA within and surrounding San Mateo Creek, TCA has estimated that the pilings and support structures would occupy at least 0.16 acre of the creek. In addition to the obvious detrimental affects associated with this proposed placement of permanent structures within the creek and the potential corresponding loss of current and future steelhead habitat, the proposed activities also involve substantial amounts of soil disturbance and earth moving as well as the temporary occupation of riparian and adjacent upland areas for construction equipment, material and personnel staging. These activities have the potential to increase the amount of sediment entering the San Mateo Creek and its associated lagoon through the settlement of dust as well as potential increases in wind and waterborne erosion of sediments into the creek areas. Furthermore, the proposed project involves extensive use of construction equipment and heavy machinery that have the potential to release materials that could contaminate the air, water and sediment in and around the creek area

and thereby degrade water quality within the creek. The project EIS provides additional details regarding some of the potential threats to the southern steelhead associated with the proposed project by stating that:

Although during most years the likelihood of impacts on southern steelhead would be low, the possibility still exists for the future presence of this species in the project area, especially during years with higher rainfall totals. Potential impacts to southern steelhead may occur from construction activities along or across streams, creeks, or any drainage. Direct impacts to southern steelhead during spawning runs from construction include disruption in breeding activities or removal of individuals. Physical activities in stream courses could cause additional mortality of adults or dispersing juveniles through impacts to the physical characteristics (substrate materials and creation of impediments to upstream movements) of the stream, which could occur during construction of the bridge/culvert structures.

The project EIS also states that “long-term impacts to the tidewater goby and southern steelhead trout may occur as a result of road improvements along San Mateo and San Onofre Creeks” that would adversely affect the water quality of these riparian areas and therefore potentially degrade the quality of habitat and ESHA. The project EIS references the development of a Runoff Management Plan for the proposed project and describes the surface water quality benefits anticipated to be derived from the implementation of this plan. As discussed in Section E of this report (Water Quality), however, the proposed Runoff Management Plan contains many key uncertainties and may not be able to fully provide the level of anticipated water quality benefits described by TCA.

The proposed use of pile driving equipment to facilitate the placement of bridge and elevated toll road supports also has the potential to result in adverse impacts to the southern steelhead, if these fish are present in the project area during such activities. Pile driving and its unavoidable noise and vibration components, when conducted within or adjacent to water bodies, have been known to negatively affect fish and aquatic life.

In addition, the proposed placement of toll road and bridge support structures and falsework, construction equipment and machinery within the San Mateo Creek ~~and lagoon~~ has the potential to degrade habitat, displace steelhead and impede upstream migration. No work, and therefore no construction equipment and machinery will occur within the lagoon. These types of activities are specifically identified in the 2004 *Proposed Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California*, as representing a threat to the southern steelhead:

“The majority of the spawning and rearing habitat of the major river systems has been rendered inaccessible as a result of dams, debris basins, road crossings, and other in-stream structures which block or impede migration of adult steelhead to headwater spawning and rearing tributaries, as well as restricted the emigration of juveniles to the ocean.”

Mitigation

In addition to the development of the Runoff Management Plan described above and analyzed in Section E of this report (Water Quality), and the development of the Biological Resources Management Plan that was previously described, TCA has also proposed an additional mitigation measure to specifically offset or minimize the proposed project's potentially adverse affects on southern steelhead:

Measure TE-9. During final design, the TCA or other implementing agencies, as described in the [Runoff Management Plan], shall design, construct, and/or maintain any structure/culvert placed within a stream where endangered or threatened fish do/may occur such that it does not constitute a barrier to upstream or downstream movement of aquatic life, or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth for fish migration.

While this measure may help ensure that upstream and downstream migration corridors remain open, thereby providing a benefit to the species, it does not proposed to address the additional adverse impacts to southern steelhead and steelhead occupied and potentially occupied ESHA described in the above section and therefore would not serve to mitigate the adverse effects to this species and ESHA anticipated to result from the proposed project.

Conclusion

The proposed project would require the temporary and permanent occupation and use of steelhead occupied and potentially occupied ESHA within the San Mateo Creek and lagoon to facilitate the construction and placement of the proposed toll road, associated support structures and military access road beneath I-5. The use of ESHA for these purposes is not dependant on ESHA resources and is therefore not an allowable use of ESHA (nor, as will be discussed in the wetlands section of this report, is the project an allowable use for wetland fill). Therefore the Commission finds that in addition to presenting a variety of threats to an important population of southern steelhead, the proposed project is inconsistent with the resources protection requirements contained in Section 30240 of the Coastal Act.

San Diego Fairy Shrimp

The San Diego fairy shrimp (*Branchinecta sandiegonensis*) is a small freshwater shrimp that inhabits vernal pools (seasonal shallow pools that are typically filled by winter and spring rains between November and May) in coastal southern California and south to northwestern Baja California. San Diego fairy shrimp (henceforth referred to as fairy shrimp) are habitat specialists found in small, shallow vernal pools and ephemeral (lasting a short time) basins that range in depth from approximately 2 to 12 inches and are characterized by specific water chemistry and temperatures. All known occupied localities are below 2,300 feet and are within 40 miles of the Pacific Ocean.

Adult fairy shrimp range in size from 0.4 to 0.6 inches long and have large stalked eyes and 11 pairs of swimming legs. Little data is available for what fairy shrimp feed on, although algae, bacteria, protozoa, rotifers, and bits of organic matter are thought to be a large part of their diet.

Adult San Diego fairy shrimp are usually observed from January to March; however, in years with early or late rainfall, the hatching period may be extended. The species hatches and matures within 7 days to 2 weeks depending on water temperature. San Diego fairy shrimp disappear after about a month, but animals will continue to hatch if subsequent rains result in additional water or refilling of the vernal pools. The eggs are either dropped to the pool bottom or remain in the brood sac until the female dies and sinks. The “resting eggs,” or “cysts,” are capable of withstanding temperature extremes and prolonged drying. When the pools refill in the same or subsequent rainy seasons, some but not all of the eggs may hatch. Fairy shrimp egg banks in the soil may be composed of the eggs from several years of breeding. Studies have shown that vernal pools and ephemeral wetlands that support fairy shrimp, and occur in areas with variable weather conditions or filling periods (such as southern California), may hatch only a fraction of the total cyst bank (organisms in a resting stage) in any given year. Thus, reproductive success is spread over several seasons.

This species of fairy shrimp has been listed as endangered on the federal Endangered Species Act list since 1997 due to extensive loss and degradation of habitat from development and urbanization. At the time of listing, FWS estimated that only 200 of the original 500 acres of vernal pool habitats suitable for fairy shrimp occupation in San Diego remained. This decline in suitable habitat in San Diego, in addition to the near complete loss of once extensive vernal pool soils within the coastal plain of Los Angeles and Orange counties was a major factor in the listing status of this species. As required under the Endangered Species Act, final critical habitat was designated for the fairy shrimp in 2000. As demonstrated in Exhibit 15, critical habitat was designated for the fairy shrimp within the southern extent of the project area. This area includes a several dozen acre vernal pool complex on the coastal side of I-5 within the San Onofre Surfer Beach subunit of SOSB. Subsequent to the designation of critical habitat for the fairy shrimp, a lawsuit brought against the FWS by TCA and others challenged the designation due to inadequacies within the economic analysis portion of the document. As a result of this lawsuit, it was determined that FWS must re-designate critical habitat for the fairy shrimp. As stated in the April 3, 2007, *Reopening of Public Comment Periods for the Proposed Designations of Critical Habitat for the Coastal California Gnatcatcher and the San Diego Fairy Shrimp*, however, “Areas currently designated as critical habitat for the coastal California gnatcatcher and San Diego fairy shrimp will remain in place until such time as new final regulations for these species become effective.” At this time, because revised final critical habitat designations have yet to be developed and released by FWS, those habitats designated in 2000 remain in place.

As noted by TCA in the document titled, *Focused Summary of Environmental Impacts in the Coastal Zone*, fairy shrimp continue to be observed in designated critical habitat within the project area:

A total of 13 [vernal pool] basins occur within the coastal zone portion of the proposed project study area along the bluff overlooking Surf Beach in San Onofre State Beach. Surveys for fairy shrimp conducted in 2001 and 2003 identified San Diego fairy shrimp in 7 of these 13 basins. These occupied basins are located more than 500 ft from the proposed project. Therefore, the habitat containing this species will be avoided by the proposed project.

Despite the distance between the proposed toll road and fairy shrimp occupied vernal pools, approximately 2.16 acres of fairy shrimp critical habitat are included within the project's disturbance limits.

Due to the rarity, sensitivity and importance of vernal pool soils as well as the fact that these areas support sensitive species, such as the fairy shrimp, the Commission staff ecologist has determined that the majority of fairy shrimp critical habitat within the coastal zone portion of the project area meets the Coastal Act definition of ESHA. However, an analysis of the fairy shrimp critical habitat within the proposed project area has revealed that the 2.16 acres that lie within the proposed construction footprint do not provide substantial habitat value to the fairy shrimp and should therefore not be considered as ESHA. The 2.16 acres in question are located on the coastal side of the I-5 freeway but are separated from fairy shrimp occupied and potentially occupied vernal pool habitat by the two lane paved frontage road that provides access to both the San Onofre Nuclear Generating Station and the San Onofre Surfer's Beach subunit of San Onofre State Beach. Considering both the distance between the proposed project construction area and the fairy shrimp vernal pools (estimated at 500 feet by TCA, as noted above) and the buffer provided by the presence of this paved frontage road, it is unlikely that the 2.16 acres of critical habitat directly adjacent to I-5 provides viable habitat for the fairy shrimp. Therefore, the Commission does not consider this area to be ESHA. Those areas that contain and immediately surround the occupied and potentially occupied vernal pools do, however, meet the coastal act definition of ESHA.

Potential Effects on ESHA and San Diego Fairy Shrimp

In the project EIS, TCA contends that the fairy shrimp would not be directly affected by the proposed project, due to the fact that there is no known evidence to suggest that fairy shrimp have occupied or could potentially occupy the habitat area within the construction limits:

Direct impacts to federally endangered fairy shrimp species from construction will be avoided because there will be no disturbances of any occupied vernal pool habitat. Indirect impacts include decreased water quality from erosion, runoff, siltation, and introduction of invasive species to vernal pools occupied by fairy

shrimp. These indirect impacts have been reduced through implementation of [best management practices] implemented as part of the [Runoff Management Plan].

The basis for this opinion appears to be the fact that fairy shrimp occupied vernal pools surveyed four to six years ago were approximately 500 feet from the proposed location project activities on the I-5 freeway. Although this distance would preclude direct effects such as the physical destruction of those fairy shrimp occupied vernal pools surveyed in 2001 and 2003, as noted above, this distance may not be sufficient to eliminate consideration of all potential project related indirect impacts to fairy shrimp occupied and potentially occupied critical habitat/ESHA, however.

Areas within the proposed project's disturbance limits may experience reductions in water quality due to increased erosion, sedimentation, and potential release of contaminated materials such as fuels, lubricants and oils. In addition, grading and the operation of heavy machinery within construction areas may alter the pattern of water runoff from these areas. Given the sensitivity of vernal pool organisms to water depth, temperature and chemical composition, any changes in the amount or composition of runoff coming from those critical habitat areas within the project's disturbance limits may lead to a degradation in the quality of vernal pool habitats and adversely influence their suitability for the fairy shrimp. While TCA has committed to implementing a Runoff Management Plan to reduce the potential for these effects to occur, as detailed in Section E of this report (Water Quality), this plan is incomplete.

Proposed soil disturbance and grading may also alter the vegetation communities within and surrounding the fairy shrimp critical habitat areas by increasing the number and variety of introduced or invasive plant species. Although TCA has committed to restoring the project area post-construction, the construction phase of the proposed project is substantially prolonged and the re-vegetation process would also require time to be completed. During this period, invasive species may propagate and spread in and around the project area (including the fairy shrimp critical habitat area) and alter the amount of runoff, shade, soil nutrients and native vegetation.

The deposition of dust and airborne pollution may also adversely affect the quality and suitability of fairy shrimp critical habitat. Although the magnitude and extent of these impacts on fairy shrimp and their habitat have not investigated in detail by TCA, there is a reasonable potential for adverse pollution-related effects.

Mitigation

Because TCA has not recognized any potential direct adverse effects to the fairy shrimp or its critical habitat area, specific mitigation measures for this species have not been proposed. Those general mitigation measures that may minimize the magnitude and extent of adverse effect described above are included below as General Mitigation Measures. Applicable measures include the implementation of a Runoff Management

Plan and use of Best Management Practices to avoid the release of contaminated materials, reduce erosion and sedimentation and avoid sensitive areas. While questions remain regarding the adequacy of these measures to completely mitigate direct and indirect project related impacts, the combination of the distance between fairy shrimp occupied and potentially occupied ESHA and the project construction footprint, the presence of the frontage road and its ability to act as a buffer to contaminated or sediment laden runoff or erosion and the implementation of the general mitigation measures noted above, would substantially reduce the likelihood of adverse project related effects affecting the fairy shrimp of fairy shrimp occupied ESHA.

Conclusion

As described above, although the proposed project would require the temporary and permanent occupation and use of approximately 2.16 acres of fairy shrimp critical habitat to facilitate the construction and placement of the proposed toll road, these 2.16 acres are not considered to be ESHA for the San Diego fairy shrimp. Therefore the Commission finds that the proposed project presents only a minor and insignificant threat to the fairy shrimp and fairy shrimp occupied or potentially occupied ESHA and is not inconsistent with the resources protection requirements of Section 30240 of the Coastal Act as it pertains to this species.

General Mitigation Measures

In addition to those specific impacts to the Pacific pocket mouse, tidewater goby, arroyo toad, coastal California gnatcatcher, least Bell's vireo, southern California coast steelhead trout and San Diego fairy shrimp and at least 66 total acres of ESHA, as detailed above and demonstrated in Exhibit 15, the proposed project would also potentially adversely affect additional species and habitat located within and adjacent to the 138 acres of the project footprint located within the coastal zone. As described in the project EIS, a wide variety of species have been observed to use the coastal zone portion of the project area including migratory and resident raptors, migratory songbirds, bats, native amphibians, reptiles, small mammals and insects. TCA has proposed a variety of mitigation measures to reduce impacts to these species and their habitats. Those measures highlighted by TCA in the *Focused Summary of Environmental Impacts in the Coastal Zone* as potentially applicable to threatened or endangered species and habitats are included below:

Measure WW-1. Prior to construction, the TCA or other implementing agency/agencies shall designate a Project Biologist responsible for overseeing biological monitoring, regulatory compliance, and restoration activities associated with construction of the selected alternative in accordance with the adopted mitigation measures and applicable law.

Measure WW-2. During final design of the project, the Project Biologist shall review the design plans and make recommendations for avoidance and minimization of sensitive biological resources. The TCA or other implementing agency/agencies Environmental and Engineering Staff shall determine the implementation of those recommendations.

Measure WW-3. A Biological Resources Management Plan (BRMP) shall be prepared prior to construction. The BRMP shall provide specific design and implementation features of the biological resources mitigation measures outlined in the resource agency approval documents. Issues during construction and operation to be addressed in the BRMP shall include, but are not limited to, resource avoidance, minimization, and restoration guidelines, performance standards, maintenance criteria, and monitoring requirements. The Draft BRMP shall be submitted to the USFWS, National Marine Fisheries Service (NMFS), CDFG, USACOE, RWQCB, FHWA, the California Coastal Commission, and Caltrans for review to the extent required by permit by such agencies.

The primary goal of the BRMP will be to ensure the long-term perpetuation of the existing diversity of habitats through restoration in the project area and adjacent urban interface zones and to prevent offsite or indirect effects. The BRMP shall contain at a minimum the following:

- a. Identification of all Environmental Sensitive Areas (ESA). ESAs are defined as sensitive habitats including, but not limited to, areas subject to the jurisdiction of the CDFG, USACOE, and USFWS.*
- b. Design of protective fencing (i.e., t-bar or yellow rope) around ESAs and the construction staging areas.*
- c. Locations of trees to be protected as wildlife habitat (roosting sites).*
- d. For areas that will be restored, the quality of the adjacent habitat will be characterized.*

This characterization shall include species composition, density, coverage, and presence of nonnatives. This characterization will provide a baseline to compare the success of the restoration. The site preparation plan for each restoration site will include:

- Sources of plant materials and methods of propagation.*
 - Site preparation (clearing, grading, weed eradication, soil amendment, topsoil storage), irrigation, planting (container plantings, seeding), and maintenance (weed control, irrigation system checks, replanting) of restoration areas. Specification of parameters for maintenance and monitoring of restoration areas, including weed control measures, frequency of field checks, and monitoring reports for temporary disturbance areas within the right-of-way.*
 - Remedial measures to be taken if performance standards are not met.*
 - Methods and requirements for monitoring of the restoration efforts.*
 - Specification of the purpose, type, frequency, and extent of chemical use for insect and disease control operations as part of vegetative maintenance within restoration areas.*
- e. Specific measures for the protection of sensitive habitats to be preserved in and adjacent to the rightof- way to ensure that construction does not increase beyond the impacts identified in the EIS/SEIR.*

These measures will include, but are not limited to, erosion and siltation control measures, protective fencing guidelines, dust control measures, grading techniques, construction area limits, and biological monitoring requirements. Details of the erosion, siltation, and dust control mitigation measures will be provided in the Storm Water Pollution Prevention Plan (SWPPP).

Measure WW-4. In conjunction with the development of final plans and specifications for construction, or other activities involving vegetation/habitat removal, the Project Biologist shall review and approve the contractor's map of all sensitive habitats (Environmentally Sensitive Areas) within 152.4 meters (500 feet) of the grading limits on the grading plans. The ESA maps shall be prepared by the construction contractor's qualified biologist and approved by the TCA or other implementing agency/agencies. All ESAs to be avoided and performance standards established by the resource agencies shall be clearly noted on the grading, construction, and landscape plans. Additionally, the landscape plans shall indicate that plant materials be local southern Orange County natives.

Measure WW-5. During grading activities and construction operations, the Project Biologist shall conduct monitoring within and adjacent to sensitive habitats including monitoring of the installation of protective devices (silt fencing, sandbags, fencing, etc.), installation and/or removal of creek crossing fill, construction of access roads, vegetation removal, column installation, falsework installation and removal, and other associated construction activities, as deemed appropriate by the Project Biologist. Biological monitoring shall be conducted to document adherence to habitat avoidance and minimization measures addressed in the project mitigation measures and as listed in the USFWS, CDFG, and USACOE permits/agreements.

Measure WW-6. Final design and construction shall restore the perennial river and stream channels and ephemeral drainages and washes to their original contours upon completion of construction where feasible, with the exclusion of areas of permanent impact.

Measure WW-7. During all construction activities, the Contractor shall ensure that construction equipment or vehicles shall not be stored in areas defined as ESAs, including areas within the jurisdiction of the USACOE and/or CDFG. There shall be no fueling, lubrication, storage, or maintenance of construction equipment within 46 meters (150 feet) of CDFG or USACOE jurisdictional areas. Construction equipment staging/storage shall be located in previously disturbed or non-native areas to the maximum extent possible.

Measure WW-8. During all construction activities, the Contractor shall ensure that no waste material shall be discharged to any CDFG or USACOE jurisdictional areas. Spoil sites shall not be located within any CDFG or USACOE jurisdictional areas, or in areas where it could be washed into any surface water body.

Measure WW-9. Prior to final design, the Contractor shall prepare the final construction Runoff Management Plan (RMP). The plan shall address the final location of facilities to route and detain corridor runoff for the purpose of maintaining peak flows and flow velocities downstream of the Alignment at existing rates and preventing project pollutants from reaching improved and unimproved downstream drainages. County of Orange Best Management Practices (BMPs) will be included in these runoff facilities of the Alternatives as determined appropriate by the Design Engineer. The final RMP will contain provisions for changes to the plan (e.g., alternative mechanisms plant materials) if necessary during project design and/or construction phases to achieve the stated goals

and performance standards at an equal or greater level. The RMP will address issues of detention and settlement basin design for mitigation requirements in relation to water quality. The plan shall be submitted to the Regional Water Quality Control Board (RWQCB), Caltrans, and the Orange County Environmental Management Agency (OCEMA) Environmental Planning Division for review and comment. (RMP, Psomas 2003.)

Measure WW 10. The Contractor shall locate staging areas for construction equipment outside of areas in the jurisdiction of the USACOE or CDFG to minimize impacts to sandy creek benches.

Measure WV-6. Prior to the commencement of grading activities or other activities involving vegetation/habitat removal, the Project Biologist shall attend preconstruction meetings with construction foremen, bridge engineers, and the TCA or other implementing agencies to confirm that all environmental conditions are discussed. Monthly, or on an as needed basis, new construction personnel shall complete an educational program. Issues to be covered will include, but are not limited to, environmental measures for avoiding impacts to sensitive biological resources, ESAs, waste disposal, vehicle transportation routes, seasonal restrictions, fueling/maintenance restrictions, and other relevant topics.

Conclusion

Despite the implementation of these mitigation measures, as well as those described for each endangered or threatened species listed above, the Commission concludes that the proposed project's permanent and/or temporary use of approximately 66 total acres of ESHA is not a use allowable within such habitat, and would not protect such habitat, and is therefore inconsistent with the requirements of Section 30240 of the Coastal Act.

B. Wetlands.

Section 30233 of the Coastal Act provides:

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

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

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

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

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

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

(6) Restoration purposes.

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

...

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary.

The coastal zone wetland communities of San Mateo Creek are found within a large mosaic of uplands, riparian wetlands, and estuarine wetlands—a relatively rare situation in coastal Southern California. The San Mateo and San Onofre watersheds, through which the proposed toll road will cross, are estimated to have the highest level of natural watershed functions in the region. This is evidenced in part by the presence of multiple protected species, many of which have been unable to survive in more impacted and

19
fragmented wetlands found elsewhere. The six federally threatened or endangered species that depend on these wetlands for breeding, feeding, and shelter include: tidewater goby (*Eucyclogobius newberryi*), arroyo toad (*Bufo californicus*), southern California coast steelhead (*Onchorhynchus mykiss*), coastal California gnatcatcher (*Poliopitila californica*), least Bell's vireo (*Vireo bellii pusillus*), and San Diego fairy shrimp (*Branchinecta sandiegonensis*). The habitats that support these endangered species qualify as environmentally sensitive habitat areas (ESHA) and are analyzed in the previous section of this report entitled Environmentally Sensitive Habitat Areas.

According to TCA's consistency certification and subsequently submitted wetlands analysis, the proposed toll road would include the installation of new bridge supports in San Mateo Creek, new bridge bents in San Onofre Creek, and grading of wetlands in San Mateo Marsh. These impacts trigger the 3-part test under Section 30233(a) for projects involving wetland fill: (a) the allowable use test; (b) the alternatives test; and (c) the mitigation test. TCA estimates the wetland fill to consist of 0.16 acres of permanent impacts and 7.70 acres of temporary impacts to wetlands within the coastal zone. As will be discussed in the mitigation section below, TCA's wetland delineations are incomplete as neither soil samples were assessed nor hydrological information provided. Nevertheless, what TCA has submitted is sufficient to enable the Commission to determine the project's consistency with the first two tests of Section 30233(a), since the project clearly results in wetland fill (and a completed delineation would only maintain or increase the wetland acreage).

1. Allowable Use Test Under the first of these tests, a project must qualify as one of the seven stated uses allowed under Section 30233(a). TCA maintains that the project is an allowable use under Section 30233(a)(4), which authorizes wetland fill for "*Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*"

TCA's position is that the proposed toll road is an incidental public service because it fits within the historically accepted interpretation of the term. TCA cites the North County Transit District's double tracking project on Camp Pendleton as an example. TCA states:²⁰

The Coastal Commission has considered expansions of existing roads, an airport runway (City of Santa Barbara, CC-058-02) and several past North County

¹⁹ Michael D. White, Senior Ecologist, Conservation Biology Institute, *Impacts of the Foothill Transportation Corridor-South (FTC-S) on Wetland Resources in the Coastal Zone*, Letter to Dan Silver, Endangered Habitats League, September 13, 2007.

²⁰ Transportation Corridor Agencies, *Coastal Consistency Certification and Analysis for the Foothill Transportation Corridor-South (FTC-S), Marine Corps Base Camp Pendleton, California*, March 23, 2007 at 47.

Transit District (NCTD) double tracking rail projects just east of I-5 on Camp Pendleton (including CC-55-05, CC-52-05, and CC-86-03) in certain situations to qualify as “incidental public service purposes,” and thus allowable under Section 30233(a)(5) where no other alternative existed and where the expansion was deemed necessary to maintain existing traffic capacity.

The Commission initially found North County Transit District’s double tracking proposals were incidental public services because they were necessary to maintain existing passenger service levels. However, upon realizing the overall approach of the North County Transit District (NCTD), in the subsequent two double tracking proposals (CC-004-05 and CC-008-07), the Commission found:

In finding those projects [CC-086-03 and CC-052-05] “limited expansions” and “necessary to maintain existing capacity,” and thus an allowable use as an incidental public service under Section 30233(a)(5), the Commission reserved the concern over future double tracking proposals, stating that they would not necessarily continue to qualify under this section, because at some point with increasing numbers of double tracking proposals, the double tracking: (a) will no longer be limited; and (b) will contain enough length of a second set of tracks to in fact constitute an increase in capacity. However, at that time and in those locations the Commission found that the double tracking projects did not meet either of these thresholds that would render the projects ineligible for consideration as an incidental public service.

The piecemeal nature of NCTD’s submittals has faced the Commission with a continuum of improvements, rather than a single unified project, which has made the determination of when increases in capacity are triggered a difficult one. To assist in this determination the Commission staff has requested information both about future double tracking proposals NCTD (or other proponents) are considering or planning for, and about documenting the public access benefits of improving public transit. On the first request, NCTD states future double-tracking proposals on Camp Pendleton would likely only be part of more comprehensive transportation improvement programs such as Los Angeles-San Diego Rail Corridor Agency (LOSSAN) and/or California High Speed Rail Authority projects. NCTD states:

Currently, no additional future double-track projects have been identified by NCTD to be constructed within the Camp Pendleton area. It should be noted, however, that NCTD performs railroad maintenance-of-way activities on a continuous basis, is required to respond promptly to emergency situations as they may occur along the railroad right-of-way, and is mindful of pursuing potential opportunities that may improve railroad operations. As such, it is possible that double-tracking projects may arise in the future as individual projects or as part of comprehensive

transportation improvement programs, such as LOSSAN and/or the California High Speed Rail Authority.

On the second request for individual and cumulative benefits, NCTD has provided the detailed discussion . . . which establish that the project will benefit public access. This discussion, combined with the programmatic operational discussion contained in the Fish and Wildlife Service’s Biological Opinion . . . make it clear that the numbers and speeds of trains are going to increase, if not individually from this project, then certainly cumulatively based on currently planned improvements, leading the Commission to conclude that the project is likely to increase capacity. If it increases capacity, it does not qualify as an allowable use under Section 30233(a) as an incidental public service, and none of the other eight allowable uses in Section 30233 apply. Therefore, as discussed in the previous section of this report (Section B, and with elaboration in Section F), the only way the Commission could find the project consistent with the Coastal Act would be through the “conflict resolution” provision (Section 30007.5).

The Santa Barbara Airport Case cited by TCA is also not relevant because the Commission found the runway extension did not increase capacity and could be considered an incidental public service. Moreover, the Commission has never considered a new road an incidental public service. The Commission considered the possibility of a new road replacing an existing road with identical capacity in the Caltrans Devil’s Slide Tunnel case (CC-094-00) and determined that this could not meet the test of being an incidental public service. The Commission found:

*Thus, fill for the expansion of existing roadways and bridges may be considered to be an “incidental public service purpose” only if: (1) the expansion is limited; and (2) the expansion is necessary to maintain **existing** traffic capacity. The proposed project, a 2-lane tunnel replacing a failing 2-lane existing highway, qualifies as a project designed to maintain existing traffic capacity. However, it is less clear whether the project qualifies as a limited expansion of an existing road. The Commission has generally used this definition for activities maintaining an existing road along its same alignment. Since the proposed tunnel essentially constitutes a new alignment, it therefore may not qualify as an expansion of an existing road. Furthermore, in approving the “Measure T” LCP amendment, the Commission has already determined that the proposed roadway fill is neither an incidental public service, nor an allowable use. The Commission therefore concludes at this time that the project does not constitute an allowable use under Section 30233(a).*

Thus, the Commission strongly disagrees with [TCA’s The Collaborative’s](#) assertion that the proposed toll road is necessary to maintain existing traffic capacity. An additional highway will increase capacity by its very definition. TCA undermines its own argument when it asserts later in its consistency certification that the proposed toll road will improve public

access to the coast for inland visitors. Finally, as noted in the Devil's Slide case, the Commission's historic interpretation of the scope of incidental public services has been that expansion of existing roadways and bridges may be considered to be an "incidental public service purpose" only if: (1) the expansion is limited; and (2) the expansion is necessary to maintain existing traffic capacity. This historic interpretation was supported in the case of *Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County* (1999) 71 Cal.App.4th 493, 517, and the court found that:

... we accept Commission's interpretation of sections 30233 and 30240... In particular we note that under Commission's interpretation, incidental public services are limited to temporary disruptions and do not usually include permanent roadway expansions. Roadway expansions are permitted only when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.

The Commission concludes: (a) that the project is not a temporary disruption; (b) that the project is not a limited expansion of an existing road; (c) that the project will increase highway capacity; and, therefore, (d) that it cannot be considered an allowable use under Section 30233(a)(4).

2. Alternatives Test

The second test of Section 30233(a) is that the project needs to be the least environmentally damaging feasible alternative. In support of its consistency certification, TCA has submitted several documents discussing alternatives, including: Alternatives Analysis Summary for FTC-S (Feb. 2007) An Evaluation of Alternative Designs for FTC-S Connectors; Memo "Transit Opportunities"; and Information on the Citizen's Beltway Concept.

Most of this information is included in TCA's SEIR Response to Comments general discussion of alternatives; the rest is in response to specific Commission staff questions about whether wetland fill at San Mateo Creek could be avoided by spanning the creek, and about whether the "Citizen's Beltway Concept" alternative had been seriously considered.

Concerning the general discussion of alternatives, TCA notes that planning efforts have been continuing over the past 20 years for the Foothill Transportation Corridor. Published planning documents go as far back as 1981 when the County certified an EIR that included a conceptual alignment for a transportation corridor facility on the County Master Plan of Arterial Highways (MPAH). From 1989 to 1991, TCA published documents showing two basic alignments, one through San Clemente and one on Camp Pendleton. These were referred to as the "C" (Camp Pendleton) and "BX" (San Clemente) alignments, and included a number of sub-alignments as variations on the basic alignment, with "C" turning into a refined "CP" alignment (not to be confused with the CC alignment – the CC alignment stands for Central Corridor and is a

variation on the BX alignment, not the C or CP alignments). In December 1993, the TCA initiated the preparation of a Subsequent EIR to evaluate the CP Alignment, the BX Alignment and the No Build Alternative.

TCA was subsequently mandated to participate in a “NEPA/Section 404 MOU” process. Under this process, from August 1999 to November 2000, the NEPA/Section 404 MOU signatory agencies and the TCA developed the alternatives to be evaluated in the Draft EIS/SEIR. The MOU signatory agencies are: U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Federal Highway Administration, Caltrans, as well as the U.S. Marine Corps and TCA, and are collectively referred to as the “SOCTIIP Collaborative.”

By November 2000, the SOCTIIP Collaborative had concurred on a list of 24 Alternatives to be evaluated in the technical studies supporting the Draft EIS/SEIR. These alternatives include 19 toll road Alternatives, 3 non-toll Road Alternatives and 2 no action Alternatives. This list was subsequently reduced to eight build alternatives and 2 no action alternatives, presented in the Draft EIR and depicted on Exhibits 3-4. Essentially this list can be characterized, in terms of “build” alternatives, as consisting of:

- (a) three toll road alternatives that converge to one in the San Mateo Creek watershed (i.e., the three FEC (Far East Corridor) alternatives, one of which (A7C-FEC-M) is the proposed toll road);
- (b) one full toll road in San Clemente (i.e., the CC (Central Corridor));
- (c) one toll road not fully connecting with I-5 (i.e., the CC-ALPV (Central Corridor, Avenida La Pata);
- (d) improvement of existing arterials in San Clemente (i.e., AIO (Arterial Improvements Only)); and
- (e) I-5 widening.

TCA states that during Phase II of the Collaborative effort, January 2001 to November 2005, further refinements were considered to reduce environmental effects. Comparable refinements to seek to reduce socioeconomic effects were not undertaken; TCA states (EIS/SEIR, p. ES-6):

During that time the FHWA/TCA realized that the socioeconomic impacts of the Alternatives that connected to the I-5 at Pico Avenue could not be appreciably avoided by specifically refining those Alternatives. Development in the City of San Clemente had increased substantially, especially in the undeveloped areas where the Foothill- South Corridor Alignments were proposed.

The environmental refinements for the proposed alignment included: (a) significantly reduced wetland acreages (for Corps defined wetlands, from an initial 17 acres to less than one acre); (b) coastal sage scrub impact reductions from 538 acres to 385 acres; (c) riparian ecosystems reductions from 160 to 43 acres; and (d) moving the alignment to avoid areas where surveys had documented Pacific pocket mice. Overall, TCA states “The total disturbance limits for the Preferred Alternative have been reduced approximately 30 percent resulting in significantly less impact to the natural environment.”

TCA further states that, through the effort of the SOCTIIP Collaborative, the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency have “recently issued their preliminary agreement that the Preferred Alternative is the least environmentally damaging practicable alternative.” TCA also states that “the U.S. Fish and Wildlife Service has preliminarily determined that the Preferred Alternative complies with the requirements of the Endangered Species Act.”

In pages ES-9 to ES-2-19 of the EIS/SEIR (Exhibit 25) TCA summarizes the Collaborative’s alternatives considerations. The analysis began with a “a multi-dimensional evaluation of the alternatives in order to identify a Least Environmentally Damaging Practicable Alternative (LEDPA).” This included developing:

... a comprehensive matrix to assist in evaluating the alternatives using several parameters including: traffic conditions, air quality, aquatic resources (including compliance with Section 404 of the Clean Water Act/CDFG Streambed Alteration Program), water quality, endangered species impacts (including compliance with Section 7 of the ESA), socioeconomic impacts, land use impacts, military impacts on MCB Camp Pendleton, earth resources, cultural and historic resources, recreational resources, and project costs.

The matrix was then looked at in the context of regional habitat planning programs (NCCP, SAMP), due to the importance of those programs for regional open space and habitat protection. The Collaborative then attempted to define what would be a “practicable” alternative, based on U.S. Army Corps of Engineers and EPA guidance documents (Section 404(b)(1) Guidelines). The Collaborative considered “practicable” to mean “as one that is available²¹ and capable of being done²² after taking into consideration: (1) cost²³; (2) existing technology; and (3) logistics in light of the overall project purposes.” The Collaborative considered an alternative not to be practicable if:

²¹ “Available” means obtainable for meeting the project purposes. Available site may include property already owned by a permit applicant, as well as properties that could be obtained, utilized, expanded, or managed.

²² “Capable of being done” means that it is possible to achieve the basic purpose on a given site, after consideration of cost, existing technology, and logistics.

²³ If an Alternative is unreasonably expensive to the applicant, the Alternative is not practicable.

- a. It does not meet the project purpose and need;
- b. Cost of construction (including mitigation) is excessive;
- c. There are severe operational or safety problems;

- d. There are unacceptable adverse, social, economic, or environmental impacts;*
- e. There would be serious community disruption;*
- f. There are unsuitable demographics (for transit Alternatives); and*
- g. There are logistical or technical constraints.*

Applying these criteria, the Collaborative determined:

The Collaborative applied the seven criteria listed to the eight SOCTIIP Alternatives. Based on that evaluation, the following SOCTIIP Alternatives were determined to be not practicable: Central Corridor (CC) (yellow); Central Corridor-Avenida La Pata (CC-ALPV) (light orange); Alignment 7 Corridor-Avenida La Pata (A7C-ALPV) (dark orange); Arterial Improvements Only (AIO) (blue); the I-5 Widening Alternative (I-5) (red); and the No Action Alternatives.

The reasons for the determinations are as follows:

Criterion 1: It does not meet the project purpose and need

- No Action Alternatives*

Criterion 2: Cost of construction (including mitigation) is excessive

- CC Alternative*
- I-5 Widening Alternative*
- A7C-ALPV Alternative*
- AIO Alternative*

Criterion 3: There are severe operational or safety problems

- CC Alternative*

Criterion 4: There are unacceptable adverse, social, economic, or environmental impacts

- CC Alternative (aquatic resources, built environment and social and economic impacts)*
- CC-ALPV Alternative (aquatic resources, built environment and social and economic impacts)*
- A7C-ALPV Alternative (built environment, social and economic impacts)*
- AIO Alternative (built environment, social and economic impacts)*
- I-5 Widening Alternative (built environment, social and economic impacts)*

Criterion 5: There would be serious community disruption

- CC Alternative*
- CC-ALPV Alternative*

- *A7C-ALPV Alternative*
- *AIO Alternative*
- *I-5 Widening Alternative*

Criterion 6: There are unsuitable demographics

- *None. (This criterion applies to mass transit Alternatives, not highway Alternatives)*

Criterion 7: There are logistical and technical constraints

- *AIO Alternative*
- *I-5 Widening Alternative*

This left only the three FEC/San Mateo Creek watershed alternatives in contention, as at this point the Collaborative had essentially agreed that: (1) the no project alternative is not practicable because it does not meet the project need; (2) the AIO and I-5 alternatives are not practicable because they lack funding sources; (3) the CC, CC-ALPV, and A7C-ALPV alternatives are not practicable because they would result in “severe community disruption.”

With design refinements including bridges and wildlife crossings, the Collaborative determined that of these three, the proposed (A7C-FEC-M) alternative would have the least effect on habitat fragmentation and would preserve larger blocks of open space and preferable habitat linkages. These three eastern alternatives all converge in southern Orange County and become the same alignment in the San Diego County/SOSB/San Mateo Creek watershed.

The Collaborative also compared the alternatives by comparing wetland impacts and by compiling a matrix of environmental issues. TCA states:

Evaluation Criteria and Screening Process

Summary of Jurisdictional Delineation Evaluation. A Jurisdictional Determination and Wetlands

Delineation Technical Assessment was prepared for six of the project Alternatives in August 2004 and revised in April 2005 by Glenn Lukos Associates, Inc. (GLA). The report is Attachment 12 of the Response to Comments document. The Wetlands Delineation Technical Report describes the location and extent of aquatic features located within the disturbance limits of six of the corridor alternatives considered in the EIS/SEIR. The impacts of the six corridor alternatives are compared in Table 3 below.

Table 3
Summary of Permanent Impacts to Corps Jurisdiction (Acres)

Alternative	Corps		
	Total	Non-Wetland	Wetland
Preferred Alternative (A7C-FEC-M – Initial)	6.27	5.45	0.82
A7C-FEC-M Ultimate	6.90	5.97	0.93
CC – Initial	14.87	1.47	13.40
CC - Ultimate	15.08	1.51	13.57
CC-ALPV - Initial	12.38	0.97	11.41
CC-ALPV - Ultimate	13.39	1.01	12.38
A7C-ALPV - Initial	2.52	1.96	0.56
A7C-ALPV - Ultimate	3.34	1.98	1.36
FEC-W - Initial	6.69	4.07	2.62
FEC-W - Ultimate	6.96	4.32	2.64
FEC-M - Initial	5.44	3.73	1.71
FEC-M - Ultimate	6.02	4.04	1.99

Source: Glen Lukos 2004

Based on the Collaborative’s overall environmental impacts matrix TCA states (FEIS-SEIR, p. ES-16):

Review of the results indicate that of the eight categories evaluated (Criteria 1, 2, 3a, 3b, 3c, 4a, 4b and 4c), the Preferred Alternative is ranked best in four categories (3a, 3b, 3c and 4a), second in two categories (2 and 4b), fourth in one category (1) and fifth in one category (4c). Being ranked at the top in four categories is the best for any of the alternatives evaluated. The normalized rank score for each of the integrity indices evaluated in the functional assessment for each the six corridor alternatives is provided in Table 4 below.

Table 4
Normalized Rank Scores for all Criteria and Corridor Alternatives for the Initial Corridor Footprints

Corridor Alternatives (Initial)	Criteria 1: Miles of Stream Channel	Criteria 2: Acres of Riparian	Criteria 3: Hydrology	Criteria 3: Water Quality	Criteria 3: Habitat	Criteria 4: Hydrology	Criteria 4: Water Quality	Criteria 4: Habitat	Total Normalized Rank Scores
A7C-ALPV	0.4	0.4	0.4	0.5	0.4	0.6	0.5	0.7	3.9
A7C-FEC-M (Preferred Alternative)	0.8	0.3	0.2	0.2	0.2	0.4	0.6	0.9	3.7
CC ALPV	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	7.0
CC	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	8.0
FEC-M	0.9	0.4	0.4	0.4	0.4	0.9	1.0	0.9	5.2
FEC-W	0.7	0.2	0.2	0.2	0.2	0.5	0.7	0.7	3.6

Source: R.D. Smith, ERDC, 2005

[TCA’s The Collaborative’s](#) alternatives/LEDPA analysis concludes (FEIS-SEIR, p. ES-19):

Preferred Alternative and LEDPA Selection

Of the three corridor alternatives remaining after the practicability analysis, the A7C-FEC-M-Initial corridor with design modification incorporated was selected by the Collaborative as the Preferred Alternative. In addition to meeting the seven criteria for

evaluating the practicability of alternatives listed in the NEPA/404 MOU Guidance Paper and being better or comparable to the other two alternatives in terms of impacts to aquatic and biological resources the Preferred Alternative allows the greatest wildlife connectivity and is more compatible with local existing land use plans. More specifically, the Preferred Alternative was selected over the FEC-M Alternative because it does not cross Cañada Gobernadora and it minimizes impacts on open space areas contemplated by the RMV Ranch Plan. The Preferred Alternative was selected over the FEC-W Alternative because it is more compatible with the proposed RMV development plans and the anticipated NCCP reserve design, does not impact RMV heritage sites, and it does not cross Cañada Gobernadora.

Selection of the Preferred Alternative represents a coordinated balanced approach to minimizing harm to both the natural and built environments. The A7C-FEC-M as the Preferred Alternative culminates years of analysis and evaluation, engineering refinement, inter-agency consultation and coordinated consensus. ACOE will make the final decision on the LEDPA and a determination of compliance with the Section 404 (b)(1) Guidelines during the 30-day review period for the FEIS.

The following excerpts from FSEIR Table 4.27-1 provides Benefit/Impact comparisons for three of the alternatives: the proposed toll road, the central corridor, and I-5 widening.

<u>Alignment</u>	<u>Benefits</u>	<u>Impact</u>
A7C-FEC-M I&U	<ul style="list-style-type: none"> ☐ Improvements to 13 arterial intersections. ☐ Improvements to 5 I-5 freeway mainline segments. ☐ Improvements to 2 freeway/tollway ramps. ☐ Short-term construction jobs: 17,000 jobs (I) and 21,000 jobs (U) ☐ Travel time savings: 21,000 hr/day (RMV) and 25,000 hr/day (OCP) • Additional travel route opportunities 	<ul style="list-style-type: none"> ☐ Deficiencies in 4 freeway/tollway ramps (indirect) ☐ Construction costs: \$645 million (I) and \$800 million (U) ☐ Acquisition/relocation costs: \$70 million (I) and \$73 million (U) ☐ Displaced housing units: 80.0 units (I) and 92.0 units (U) (See Table 4.4.6 of the Final EIR; the 80 and 92 units apply to the A7C-ALPV alternative, not the A7C-FEC-M alternative) ☐ Displaced persons: 256.0 persons (I) and 293.0 displaced persons (U) (See Table 4.4.6 of the Final EIR) ☐ 2 ha (6 ac) (I) and (U) of rated agricultural land. ☐ 89.16 ha (220.65 ac) (I) and 92.16 ha (227.65 ac) (U) of agricultural reserves (See Final EIR Table 4.3.3) ☐ Impacted riparian habitat: 17.19, 21 ha (I) and 19.34, 62 ha (U) ☐ Impacted plant communities: 447 ha (I) and 464 ha (U) • Impacted waters of the US: 14 km (I) and 15 km (U)

<u>Alternative</u>	<u>Benefits</u>	<u>Impacts</u>
<u>A7C-FEC-M – Initial/Preferred and A7C-FEC-M – Ultimate</u>	32 locations (20 intersections, six freeway segments, and six ramps) that experience peak-hour beneficial effects (Table ES.6-1) Additional travel/evacuation route opportunities Water quality improvements to existing I-5 runoff 18,000 to 21,000 hours of travel time savings per day (Section 3.4.4.4) 17,000 (Initial; Ultimate: 21,000) estimated design and construction jobs generated by SOCTIIP Build Alternative (Table 4.4-11)	No direct (operational) adverse peak-hour impacts to intersections and ramps. 1 I-5 ramp intersection and 5 I-5 ramps indirectly and adversely impacted in the peak hour. 42.9 ac (17.4 ha) of riparian ecosystem directly impacted (Table 4.10-15) 23.83 ac (9.64 ha) (Initial) and 24.21 ac (9.8 ha) (Ultimate) of permanent impacts to wetlands (Table 4.10-33A) 9.57 ac (3.87 ha) of rated farmland (Preferred Alternative/Refined Initial). 7 ac of rated farmland (A7C-FEC-M Ultimate) No residential or business displacements. Estimated construction costs – \$715 million.
<u>CC</u>	32 locations (20 intersections, 6 freeway segments)	1 intersection and 2 ramps with direct (operational)

Alternative	Benefits	Impacts
	<p>and 6 ramps) that experience peak-hour beneficial effects. Additional travel/evacuation route opportunities Water quality improvements to existing I-5 runoff 18,000 to 21,000 hours of travel time savings per day (Section 3.4.4.4) 31,000 (Ultimate; Initial: 23,000) estimated design and construction jobs generated by SOCTIIP Build Alternative (Initial: 23,000) (Table 4.4-11)</p>	<p>adverse peak-hour impacts to intersections and ramps. 1 I-5 ramp intersection and 4 I-5 ramps indirectly and adversely impacted in the peak hour. 53.7 ac (21.7 ha) of riparian ecosystem directly impacted (Table 4.10-15) 18.23 ac (7.38 ha) (Initial); 19.20 ac (7.77 ha) (Ultimate) permanent impacts to wetlands (Table 4.10-33A) 45 ac (18 ha) (Initial) or 55 ac (22 ha) (Ultimate) of rated agricultural land will be impacted. 208 ac (84 ha) (Initial) or 272 ac (110 ha) (Ultimate) of agricultural preserves will be impacted. 763 dus and 1,914 persons displaced – Initial (Table 4.4-12) 106 business, institutional, and nonprofit uses and 1,100 employees. 3 active agricultural operations displaced – Initial. (Table 4.4-12) 808 dus and 2,050 persons displaced – Ultimate (Table 4.4-12) 106 business, institutional, and nonprofit uses and 1,100 employees. 3 active agricultural operations displaced – Ultimate (Table 4.4-12). Divides existing communities in the Talega PC and displaces 6 community facilities – Initial and Ultimate (Table 4.4-12) Estimated Construction Costs – \$1,124 million.</p>
I-5	<p>38 locations (19 intersections, 10 freeway segments, and 9 ramps) that experience peak-hour beneficial effects Water quality improvements to existing I-5 runoff 18,000 to 21,000 hours of travel time savings per day. (Section 3.4.4.4) 43,000 estimated design and construction jobs generated by SOCTIIP Build Alternative (Table 4.4-11)</p>	<p>12 intersections and 7 ramps with direct (operational) adverse peak-hour impacts to intersections and ramps. No indirect adverse peak-hour impacts to I-5 ramps and intersections. 13.7 ac (5.5 ha) of riparian ecosystem directly impacted (Table 4.10-15) No impacts to agricultural resources. 838 dus and 1,970 persons displaced (Table 4.4-12 and Table 4.4-7) 382 business, institutional, and nonprofit uses and 4,150 employees displaced (Table 4.4-12) Displaces 7 community facilities (Table 4.4-12) Estimated construction costs - \$2,424 million.</p>

ac = acre
 CCC = California Coastal Commission
 CDFG = California Department of Fish and Game
 du = dwelling unit
 ha = hectare
 I-5 = Interstate 5
 SOCTIIP = South Orange County Transportation Infrastructure Improvement Project

CC-I&U	<ul style="list-style-type: none"> • Improvements to 11 arterial intersections. • Improvements to 5 I-5 freeway mainline segments. • Improvements to 2 freeway/tollway ramps. • Short-term construction jobs: 23,000 jobs (I) 31,000 jobs (U). • Travel time savings: 18,000 hr/day (RMV) and 26,000 hr/day (OCP). • Increased safety. • Additional travel route opportunities. 	<ul style="list-style-type: none"> • Deficiencies in 1 arterial intersection. • Deficiencies in 2 freeway tollway ramps. • Deficiencies in 3 freeway/tollway ramps (indirect). • Construction costs: \$703 million (I) and \$944 million (U). • Acquisition/relocation costs: \$419 million (I) and \$435 million (U). • Displaced housing units: 593 units (I) and 602 units (U). • Displaced persons: 1,380 persons (I) and 1,405 persons (U). • 1,100 displaced employees. • 106 displaced uses (89 commercial uses). • 18 ha (43 ac) (I) and 22 ha (53 ac) (U) of rated agricultural land.
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I-5	<ul style="list-style-type: none">• Improvements to 9 arterial intersections.• Improvements to 5 freeway/tollway ramps.• Improvements to 9 freeway (I-5) mainline segments.• 43,000 short-term construction jobs.• Travel time savings: 20,000 hr/day (RMV) and 22,000 hr/day (OCP).	<ul style="list-style-type: none">• Deficiencies in 2 arterial intersections.• Deficiencies in 4 freeway/tollway ramps.• Construction costs: \$1.331 billion.• Acquisition/relocation costs: \$1.07 billion.• 838 displaced housing units.
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Opponents' Contentions

TCA received over 7000 comments on the Draft SEIR. In comments on both the Draft SEIR and the Final SEIR, commenters strongly criticizing the objectivity of the alternatives analysis included the following non-governmental organizations (NGO's), Sierra Club, Endangered Habitats League, Natural Resources Defense Council, Sea and Sage Audubon Society, Audubon California, Surfrider Foundation, Defenders of Wildlife, and the California State Parks Foundation, as well as the California Department of Parks and Recreation and the California Attorney General's Office. In addition, the California Attorney General and the State Park and Recreation Commission have both commented on the Draft and Final EIR, and filed a lawsuit challenging the SEIR under CEQA.

The FSEIR comments from the above NGOs (Jan. 12, 2006, letter from Shute, Mihaly, & Weinberger), which contained extensive technical documentation and numerous consultant reports, stated:

The FEIR's failure to adequately describe and mitigate the environmental impacts of the preferred alternative is only one of the ways inaccurate information has been presented in a manner that is biased toward that alternative. TCA has long justified its promotion of this environmentally devastating alternative over the far more logical option of expanding capacity along the existing [sic] Interstate-5 corridor by claiming that I-5-focused alternatives would require displacement of a huge number of homes and other buildings, and are therefore economically and socially infeasible. No evidence has ever been provided to justify this claim. We now have clear evidence that shows that the number of buildings that would be displaced by one such alternative (AIP) within the critical San Clemente segment is more than 10 times lower than represented by TCA. Yet, TCA's drastic misrepresentation of displacement impacts had effectively eliminated the AIP from consideration, despite its obvious environmental and traffic benefits.

... The EIR must be revised to provide a true accounting of the impacts of the preferred alternative and include specific, binding mitigation to reduce those impacts to the fullest extent feasible. Just as importantly, in light of the new information indicating the clear viability of I-5 based alternatives, the Board should direct staff to fully consider a range of options that focuses on improving the existing I-5 corridor while minimizing displacement, and to include these alternatives in the environmental analysis. Certification of the EIR and approval of the project based on the current record would violate CEQA.

...

The result of [our consultant's] study shatter the validity of TCA's assertion that a non-Corridor alternative is infeasible and cost-prohibitive due to displacement impacts. Whereas TCA identifies 280 buildings that would purportedly need to be taken in San Clemente, KCA engineering's analysis shows that the actual number is between 23 and 27 – a reduction by more than a factor of ten. Of these, only 9 are single-family homes, compared with 125 single-family homes identified as requiring displacement by TCA – a fourteen-fold reduction.

These results not only discredit the conclusions of the relocation study with respect to San Clemente impacts, but call into question all of that study's numbers; indeed, given the constraints are far more severe in San Clemente compared to the segments to the north, TCA's displacement estimates in those segments are likely to be inflated by an even greater factor.

A supplemental letter (Jan. 18, 2006, letter from Shute, Mihaly, & Weinberger to TCA) states:

There is simply no basis for concluding that an I-5-focused alternative is infeasible. It is imperative that TCA, in conjunction with Caltrans, fully develop a modified version of the AIP alternative, provide an accurate accounting of the displacement impacts of that alternative, and consider design and engineering solutions to further minimize or avoid those impacts. TCA should also explore with the state financing solutions for such an alternative, including but not limited to toll lanes as authorized by federal law.

These comments also included, as attachments, consultant reports by Smart Mobility²⁴ (one prepared for the California State Parks Foundation entitled “A Practical, Cost Effective, and Environmentally Superior Alternative to a New Toll Road for the South Orange County Infrastructure Improvement Project” (July 2005), and a second report prepared for the Endangered Habitats League entitled “AIP Alternative Refinement for the San Clemente I-5 Interchanges” (July 2005)). These reports provide substantial evidence documenting that far less costly and less socially disrupting I-5 widening alternatives are available than described by TCA.

Also attached were comments by Conservation Biology (Aug. 4, 2004) stating:

[TCA] ...greatly understates impacts to threatened and endangered species for various alternatives. First, in quantifying only direct (i.e., grading) impacts this table ignores the actual biological effects of the alternatives on the species. Indirect effects –

–

²⁴

Smart Mobility, Inc., *A Practical, Cost Effective, and Environmentally Superior Alternative to a New Toll Road for the South Orange County Infrastructure Improvement Project*, July 2005).

especially habitat fragmentation, impacts to wildlife movement, and changes in water quality – are likely to have far greater biological impact on these species than will direct grading impacts to individuals or populations. ...

Second, using number of individuals as the “metric” for quantifying impacts to listed species is inexact, misleading, and inappropriate. For example, the table shows zero impact to Pacific pocket mouse individuals by any alternative. As detailed in our attached comments, this is a meaningless quantification, based only on the fact that consultant traps did not capture Pacific pocket mice within the limits of grading. However, a legitimate biological analysis of the project impacts reveals that any of the far eastern alignments ... will likely extirpate one and perhaps two of only four remaining Pacific pocket mouse populations. At any rate, the FEC alternatives would preclude recovery of the species under the Pacific pocket mouse Recovery Plan (USFWS 1998). Direct and indirect impacts to suitable habitat of listed species would be a more appropriate way to quantify project impacts.

These NGO’s August 6, 2004, comments on the Draft EIR stated:

The impacts that are addressed in the DEIS/R are presented in such a biased and skewed format so as to undermine efforts by the public and decision-makers to understand and assess the differences among alternatives and compare the impacts to current conditions. Tables that purport to assess and compare the impacts of each alternative merely indicate whether a resource is impacted or not, without distinguishing the extent of this impact. As one of countless examples, the DEIS/R states that each alternative would have significant and unmitigable impacts to coastal sage scrub but fails to note that impacts from the FEC-W Alternative are over 20 times that of the I-5 Alternative. DEIS/R, Table 7.11-1. Indeed, given the immense volume of materials, an accurate portrayal of the extent of impacts from each alternative in the DEIS/R's many comparative tables is critical to enable the public and decision-makers to intelligently take into account the environmental consequences of each alternative. CEQA Guidelines § 15151. In a seeming effort to obstruct such an informed evaluation of the Project, the DEIS/R fails to provide such data.

...

The DEIS/R also fails to provide a biologically meaningful assessment of fragmentation impacts. In varying degree, the FEC Alternatives would cut through what is now contiguous habitat, with the FEC-M Alignments being most severe. Rather than actually analyze fragmentation effects on species of concern, the DEIS/R merely provides the acreage of vegetation communities falling on either side of the proposed Alternative to an arbitrary political boundary. To provide meaningful and understandable information of project impacts, a revised DEIS/R must look at the continued viability of species of concern on either side of a proposed alignment, with or without functional wildlife corridors to facilitate movement.

Attached supporting comments from the Conservation Biology Institute (July 2004) include:

Fragmentation impacts are presented in such a cursory manner as to prevent reasonable evaluation of project impacts or to compare relative impacts among alternatives. This superficial treatment fails to reveal substantial differences among alternatives in the nature and degree of their impacts. In particular, the presentation obscures the fact that any of the three Far Eastern Corridor (FEC) Alternatives would have substantially greater impacts on biological resources than would the other alternatives.

...

Habitat fragmentation is perhaps the single most important class of impacts to biological resources for various corridor alignments. It is therefore surprising that the EIS/SEIR presents no meaningful factual analysis of these effects or how they compare among the various alternatives. The "analysis" presented is simply a poorly organized table of acreages of vegetation communities falling either west or east (to an arbitrary, political boundary) of each alignment. This is biologically meaningless as presented, and is organized in a way that obscures any direct or meaningful comparison of alignments. This is just one of many examples where the EIS/SEIR buries the reader in voluminous text and numbers instead of presenting the actual impacts of each alternative in a coherent manner that would facilitate meaningful comparisons among them.

...

The EIS/SEIR makes no attempt to quantify, or even fully disclose qualitatively, the nature and extent of indirect impacts of road corridors. Roads cause increased invasions by exotic weeds and other edge effects, direct mortality via road kill, disruption of natural migration or movement patterns, interference with species communication, changes in water runoff and flow patterns, and air, water, and soil pollution (Trombulak and Frissell 2000, Forman and Deblinger 2000, Jones et al. 2000, Reijnen et al. 1997).

...

The EIS/SEIR's conclusion that impacts associated with the FEC Alternatives would exceed those of the other Alternatives "in the absence of the NCCP/HCP" (a) relies on a fallacious assumption that eventual approval of an NCCP/HCP would automatically equalize the impacts of the various Alternatives, and (b) ignores the fact that implementing one of the three FEC Alternatives would conflict with NCCP/HCP planning guidelines, thereby reducing the NCCP/HCP's ability to mitigate the SOCTIIP project's adverse environmental effects. Specifically, the FEC Alternatives:

1. *Invade the largely undeveloped watershed of San Mateo Creek, including the Donna O'Neill Land Conservancy;*
2. *impact greater areas of sensitive native habitats than do other build alternatives;*
3. *encroach closely upon the Pacific pocket mouse population west of lower San Mateo Creek, precluding that population's recovery;*
4. *fragment the natural landscape considerably more than any of the remaining build alternatives; and*
5. *could precipitate the extirpation of certain sensitive species from the study region (e.g., mountain lion, American badger, golden eagle).*

In each of these respects, these Alternatives violate important NCCP reserve design principles and recommendations of the NCCP/SAMP Working Group.

...

To help remedy the EIS/SEIR's biased and deficient alternatives analysis, it would be appropriate to prepare a new matrix that compares the gross biological impacts of each SOCTIIP Alternative. Appropriate contents of the matrix would include, but may not be limited to the following, as guided by recommendations in these comments: (1) total area of grading; (2) relative degree of landscape fragmentation; (3) grading impacts to sensitive plant communities; (4) grading impacts to sensitive wildlife species; (5) total area of potential indirect effects (including "road-effect zones") for sensitive species; (6) direct and indirect impacts to "important populations," "major populations," and "key populations" of each of the Southern Orange County NCCP "planning species;" and (7) overall consistency with Southern Orange County NCCP/SAMP planning guidelines and recommendations.

The California Department of Parks and Recreation's comments on the DSEIR (Aug. 2, 2004) state that the project's impacts to SOSB "... cannot be sufficiently mitigated and should not be considered as the preferred alternative." In commenting (Jan. 5, 2006) on the FSEIR (Jan. 5, 2006), the California Attorney General also stated that the SEIR had underrepresented visual, recreation, noise, effects and overstated TCA's ability to mitigate these impacts, and was inadequate for the purposes of CEQA.

TCA's responses to all comments on the DEIR, as well as the entire Final SEIR, can be found at <http://www.thetollroads.com/home/finalseir.htm>. In its responses, TCA defends its analysis and methodology, and concludes that the proposed project is the least environmental damaging practicable alternative.

Transit Options and the Citizens Beltway Concept

In response to Commission staff questions, TCA provided the following explanations for its position on transit options and a “beltway” concept put forth by the “Fix-the-5 Working Group.” Concerning transit options, ~~TCA concluded~~the Collaborative concluded:

In summary, based on the existing and anticipated employment and residential densities in south Orange County, the existing and anticipated development patterns in [the] study area, the need to serve demand which would not be met by LRT [Light Rail Transit], and past and anticipated future LRT planning, LRT is not a feasible transportation system option in south Orange County. Therefore, an all-transit alternative assuming implementation of an LRT system in south Orange County is not evaluated in this EIS/SEIR.

The “beltway” concept would be a connecting toll road that connected the two southern termini of the Foothill North (SR241) and the San Joaquin Hills Transportation Corridor (SR73). TCA states that this alternative would not provide congestion relief on I-5 where it is needed, that it would result in considerable community impacts, and that it is the responsibility of local jurisdictions to determine the alternative’s merit for inclusion on Orange County’s Master Plan of Arterial Highways.

Wetland Avoidance Alternative

The Commission staff requested analysis of potential alternatives that would avoid wetland fill (at least with respect to coastal zone wetlands), in the form of potential feasible bridge designs that would span the creek and avoid the need for pilings in the creek. TCA responded with an analysis of a number of engineering alternatives for the bridge, including several that could span the creek. In order to span the creek, bridges would need to include suspension cables that would cause significant adverse visual effects. If the Commission were to accept the premise that the proposed alignment were the least damaging feasible alignment, the Commission would need to examine the tradeoffs inherent in comparing the wetland fill to the increased visual impact from such designs, which would necessitate determining whether a conflict existed between Coastal Act policies, and how, under Section 30007.5 (see the Conflict Resolution Section of this report), such conflict could be resolved in a manner most protective of significant coastal resources. However, as will be discussed below, because the Commission does not agree that the proposed alignment is the least environmentally damaging feasible alternative, it does not need to address this question further.

Commission Analysis

Less Damaging Alternatives

The Commission finds the above opponents’ contentions, along with their corroborating expert testimony, have provided convincing arguments that the three San Mateo Creek alternatives (i.e., the proposed project (A7C-FEC-M), and the FEC-W and FEC-M alternatives), would clearly result in significantly more environmentally damaging, and by far more irrevocably damaging, impacts to environmentally sensitive habitat, wetlands, public access and recreation,

and cultural resources. TCA's habitat comparisons have not taken into account the quality of the habitat, including severe threats (if not extinction) to the Pacific pocket mouse, severely adverse indirect effects, particularly overall habitat fragmentation effects on wildlife movement, and other modifications to a particularly valuable regional habitat mosaic (as discussed in the ESHA Section of this report), the regionally significant, higher quality, and uniqueness of the recreational (including surfing) resources as discussed in the Public Access and Recreation Section of this report), and the archaeological resources (as discussed in the Archaeological Section of this report). When the value of these resources is taken into account, the Commission finds the three eastern "FEC" alternatives to be more environmentally damaging than the remaining alternatives.

In terms of the difference between these 3 particular eastern ("FEC") alternatives, their impacts in coastal zone resources are fairly similar, although the Commission agrees with TCA that *among* these three alternatives, the proposed A7C-FEC-M is probably less damaging than the two more further east alignments (FEC-W and FEC-M), because those would result in greater fragmentation effects.

The preponderance of the available evidence leads the Commission to find that the adverse effects discussed in the ESHA, Wetlands, Public Access and Recreation, Surfing, Water Quality and Archaeological Sections of this report to the endangered Pacific pocket mouse and other listed species, from overall regional habitat fragmentation, to wetlands, to the campground in Subunit 1 and the other recreational resources discussed previously, to cultural resources, and to water quality, would result in the degradation of one of the healthiest and most intact coastal canyons and watersheds in southern California, which provides recreational and habitat benefits unparalleled in the region. The Commission further finds that the effects would be permanent, irrevocable, and, for the most part, unmitigable. The Commission believes ~~TCA's~~ [The Collaborative's](#) assertions to the contrary, as well as its assertions that non-San Mateo Creek watershed alternatives would be more environmentally damaging, are unpersuasive and undocumented. No other alternative alignment poses the threat of unmitigable and irrevocable impacts of such magnitude. These impacts simply cannot be found consistent with the applicable Coastal Act policies, and the Commission finds that the proposed project (aside from FEC-W and FEC-M) would be the *most* environmentally damaging alternative amongst the list of alternatives considered by TCA. The proposed alignment also raises disturbing questions about the security of areas considered to be set aside in perpetuity as habitat preserves, state parks, and in the case of the campground, mitigation for impacts of previously-approved development.

The Commission therefore finds that the Central Corridor (CC), Central Corridor-Avenida La Pata (CC-ALPV), Alignment 7 Corridor-Avenida La Pata (A7C-ALPV), Arterial Improvements Only (AIO), the I-5 Widening Alternative (I-5), and the Arterial Improvements Plus-Refined (AIP-R) alternative described in "An Alternative to the Proposed Foothill South Toll Road, would all be less environmentally damaging alternatives than the proposed alternative. TCA has provided evidence that any of these alternatives would improve the

region's traffic congestion problems. The Commission finds that that any of these alternatives, if carried forward to a complete level of design, with impact avoidance, minimization, and mitigation measures, would be less environmentally damaging than the proposed alternative.

Feasibility

The Coastal Act (Section 30108) defines "feasible" as: "... capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."

In reviewing ~~TCA's~~[The Collaborative's](#) "practicability" criteria for why ~~TCA~~[The Collaborative](#) rejected all but the eastern San Mateo Creek alternatives (see pages 91-93 of this report), the Commission disagrees with ~~TCA's~~[The Collaborative's](#) assertions that the Central Corridor (CC), Central Corridor-Avenida La Pata (CC-ALPV), Alignment 7 Corridor-Avenida La Pata (A7C-ALPV), Arterial Improvements Only (AIO), and the I-5 Widening Alternative (I-5) alternatives are infeasible due to cost of construction (TCA Criterion 2, page 92 of this report). The Commission does not agree that the CC, I-5 Widening, A7C-ALPV, and AIO Alternatives are infeasible due to cost, and, based on the evidence before it of a substantially lower cost I-5 alternative, as described in the "Smart Mobility" Reports, the Commission does not agree that ~~TCA's~~[The Collaborative's](#) costs estimates provide realistic cost and social disruption comparisons.

The Commission does not agree with ~~TCA's~~[The Collaborative's](#) rejection of the CC alternative for "operational and safety" reasons (TCA Criterion 3), and the Commission notes this conflicts with the SOCTIIP Collaborative's Chart (Consistency Certification, Table 1) which only appears to reject the alternative because it "requires removal of several hundred homes and businesses."

The Commission does not agree with ~~TCA's~~[The Collaborative's](#) rejection of the CC, CC-ALPV, I-5 Widening, A7C-ALPV, and AIO Alternatives for "unacceptable adverse, social, economic, and environmental impact" reasons (TCA Criterion 4), or for "serious community disruption" reasons (TCA Criterion 4), because the comparisons of these impacts, and the overweighting of community disruption do not compare the quality of resources being affected or reflect prioritization of resource values according to the resource priorities contained in the Coastal Act

Finally, the Commission does not agree with ~~TCA's~~[The Collaborative's](#) rejection of the I-5 Widening and AIO alternatives due to "logistical and technical constraints" reasons (TCA Criterion 7), for the same reasons provided for Criterion 2. The Smart Mobility Reports referenced provide ample technical, economic, and social data to show the I-5 widening is a logistically and technically feasible alternative.

The Commission further finds that project opponents have made a compelling case that I-5 widening can be implemented in a far less costly and less socially damaging manner than described by TCA, which vastly increases its feasibility compared to the proposed alternative, by reducing cost and lessening community disruption. Opponents also point out that availability of funding should not be considered a constraint and recommend that TCA explore

with the state financing solutions for such an alternative, including but not limited to a toll lane concept for use in I-5. The Commission further finds that, regardless of the cost, ~~TCA's~~The Collaborative's assumption that community disruption and higher economic cost can be accorded higher priority than extremely limited and valuable sensitive habitat, recreation, and archaeological resources is inconsistent with the resource protection priorities spelled out in the Coastal Act. The Commission therefore strongly disagrees with ~~TCA's and~~The Collaborative's dismissal as impracticable of this alternative due to excessive economic costs, and social and community disruption.

Economic costs can be recaptured by tolls, and social and community disruption is not nearly as significant as the irrevocable impact that extinction of an endangered species, loss of a unique campground and recreational experience, and other threats to significant coastal zone resources represent. Therefore, based on the priorities established in the Coastal Act, the Commission concludes that the proposed project does not represent the least environmentally damaging feasible alternative and is, therefore, inconsistent with the alternatives test of Section 30233(a) of the Coastal Act.

3. Mitigation Test

The new data provided made clear that TCA did not follow the standard jurisdictional delineation methodology that requires an assessment of vegetation, soils, and hydrology. Instead, vegetation types were recorded at 16 points on July 24, 2007.²⁵ These 16 points do not provide the data necessary to accurately delineate wetlands or assess impacts and proposed mitigation. In choosing to only assess vegetation, TCA did not complete a jurisdictional wetland determination. It is impossible to determine if an area meets the Commission's one-parameter wetland definition if two of the three parameters were not adequately assessed. This omission means that the acreage of wetlands present and the amount impacted is currently unknown.

In addition to failing to complete the wetlands delineation, TCA did not provide the following standard information normally required by the Commission:

1) Introduction

- Personnel conducting delineation - training, and experience. Someone on the delineation team must have botanical taxonomic expertise.
- Dates field work conducted

2) Site Description:

- Location.
- Size - acreage and dimensions.
- General site description-- including topography, geology, soils, hydrology, and vegetation communities.

25

Glen Lukos Associates, *Foothill Transportation Corridor-South, Orange County, California*, (Hereafter "Wetlands Letter"), Letter to TCA, August 31, 2007 (received on September 4, 2007) at 3.

- Hydrology of the site (how water gets on and off the site), including significant features such as water bodies, culverts, swales, ditches, etc. Also describe significant hydrological features on property adjacent to the project site.

3) Sampling Methods:

- Wetland delineation methodology used (routine, comprehensive, etc.).
- When feasible for difficult sites, after the first few rains of the season, visit the site shortly after significant rainfall and map all inundated areas. Return and remap inundated areas after 7 days. On both occasions, assess shallow soil saturation in potential wetlands.
- Rationale for the sampling method used.
- Provide the rationale for changes to standard methods.

4) Results and Conclusions

- Summarize results of vegetation, soil, and hydrology sampling.
- Describe the characteristics, location, and size (acreage and dimensions) of each wetland area.
- Give size of each wetland separately, as well as the total.
- Describe the surface features used to map the wetland boundaries.

5) Site Map(s)

- Topographic map (or maps) of the project site, preferably at a 1:24,000 scale, showing 5- to 10-foot contours.
- Indicate property and project area boundaries.

6) Wetland Map

- An appropriately large-scale map (or maps) of the project site showing delineated wetland areas and any areas with a preponderance of wetland indicator species (whether or not delineated), with enough detail to identify hydrological and landscape features.
- Vegetation communities. These should be mapped, and any area with a preponderance of wetland indicator species should be delineated with a polygon.
- Wetland or vegetation boundaries that are straight lines should be explained. Such features suggest arbitrary anthropogenic limits.

7) Site Photos

- Ground-level photos documenting surface features (e.g. plant community changes) used to map the wetland boundaries.
- Ground-level photos of each wetland.

- Aerial photos of project site, if available, with important features identified (wetlands, waterbodies, project boundaries, etc). Oblique aerial photos are especially helpful in providing orientation.
- Photo log including date, location, and photographer.

8) Field Data Forms

- Completed wetland delineation data sheets showing the data collected for hydrology, soils, and vegetation for each sampling site.
- Data sheets must be legible and completely filled out.

The Commission also requires that areas proposed as mitigation sites also undergo a jurisdictional wetlands delineation. TCA also failed to delineate the proposed mitigation sites.²⁶ If the mitigation sites are already wetlands under Coastal Act definitions, then the extent they would mitigate impacts from the proposed toll road has been overstated.

Another concern is the distinction made between temporary and permanent wetland impacts. TCA defined permanent impacts as those areas where an actual physical structure will be built. Temporary impacts are defined as all other effects during construction, such as grading and the staging of construction equipment. The Commission inquired with TCA about the length of time anticipated for construction. TCA believes the total construction duration within the coastal zone will last approximately three years. For the wetlands impacted by the connector ramps, construction will be performed in a period of 12-months or less. No time estimate was provided for wetlands impacted by other means.²⁷ Mitigation is scheduled to occur within one growing year after construction is complete.²⁸ This means that it will be about a year, or more likely longer, before replanting begins and an additional year, or more likely longer, to establish mitigation for some of the wetlands. For the remaining wetlands, the length of time impacted is unknown. The Commission has generally considered “temporary” impacts lasting one year or more to be considered permanent impacts, particularly when those effects include compaction of soils.

For background purposes, notwithstanding the above concerns, TCA provided the following information pertaining to habitat types, acres impacted, and proposed mitigation.

Habitat Types and Species Present

TCA identified the following wetland habitat types within the coastal zone: southern arroyo willow forest, mule fat scrub, vernal pools, and coastal freshwater marsh. Impacts to wetlands are projected to occur in three areas: San Mateo Creek, San Mateo Marsh, and San Onofre Creek.

²⁶ Personal communication between Commission staff and Glen Lukos Associates, on September 11 and September 17, 2007.

²⁷ TCA response to Commission staff questions via email on September 7, 2007.

²⁸ See Footnote 4.

Species observed in these three wetland areas include:²⁹ mule fat (*Baccharis salicifolia*), narrow-leaved willow (*Salix exigua*), arroyo willow (*Salix lasiolepis*), yellow willow (*Salix lucida*), cattail (*Typha domingensis*), spike rush (*Eleocharis acicularis*), bulrush (*Scirpus americanus*), sedge (*Cyperus* sp.), saltgrass (*Distichlis spicata*), celery (*Apium graveolens*), cudweed (*Gnathaliium luteo-album*), white alder (*Alnus rhombifolia*), horsetail (*Equisetum* sp.), rabbitfoot grass (*Polypogon monspeliensis*), giant nettle (*Urtica dioica*), bur-reed (*Sparganium eurycarpum*), red-rooted umbrella sedge (*Cyperus erythrorhizos*), straw colored umbrella sedge (*Cyperus strigosus*), California bulrush (*Scirpus californicus*), watercress (*Rorippa nasturtium-aquaticum*), yellow waterweed (*Ludwigia peploides*), water speedwell (*Veronica anagallis-aquatica*), southern cattail (*Typha domingensis*), common monkey flower (*Mimulus guttatus*), and western sycamore (*Platanus racemosa*).

Acres Impacted

TCA estimates there will be 0.16 acres of permanent impacts to southern arroyo willow forest and 7.70 acres of temporary impacts to southern arroyo willow forest and coastal freshwater marsh (Exhibit 23). Permanent and temporary impacts will occur in San Mateo Creek, San Mateo Marsh,³⁰ and San Onofre Creek.

San Mateo Creek

Permanent impacts from four bridge supports will total 0.006 acres of wetland fill. Temporary impacts from bridge construction total 5.75 acres.

San Mateo Marsh

Permanent impacts from grading for Tobi's Road realignment total 0.147 acres of wetland fill. Temporary impacts from Tobi's Road realignment total 0.89 acres.

San Onofre Creek

Permanent impacts from bridge bents will total 0.005 acres of wetland fill. Temporary impacts from bridge construction total 1.05 acres.

Mitigation

Permanent impacts to wetlands will be mitigated at a 6.25:1 ratio and will entail the creation of 1.0 acre of southern willow woodland. This newly created acre of willow will be located within the coastal zone, directly adjacent to an extended detention basin and the proposed toll road (Exhibit 26).³¹ It would not connect with either the San Mateo Marsh wetlands or the San Mateo Creek wetlands and would essentially function as a one-acre island of wetland.³² There does not appear to be a buffer between the mitigated land and the detention basin or the proposed toll road, leaving it exposed to indirect impacts from the highway, polluted runoff,

²⁹ See *Wetlands Letter* at 8-9.

³⁰ See *Wetlands Letter* at 10-11.

³¹ Earthworks Restoration Inc., Glen Lukos Associates, BonTerra Consulting, *Conceptual Habitat Mitigation and Monitoring Plan, South Orange County Transportation Infrastructure Improvement Project (SOCTIIP) Orange and San Diego Counties, California*, Prepared for TCA, August 31, 2007.

³² See Footnote 4.

and edge effects. As mentioned above, this area has not undergone a wetland delineation or vegetation mapping. These factors make it impossible to assess if this would be a suitable mitigation site for the permanent wetlands impacts, or whether it is already a wetland.

A larger inland mitigation site has also been proposed by TCA. In addition to not having performed a jurisdictional wetlands delineation or vegetation mapping at this site, it is located outside of the coastal zone, approximately 12 to 16 miles inland in an entirely separate watershed. TCA is proposing the creation and/or restoration of 7.31 acres of wet meadow, 3.06 acres of mule fat scrub, and 4.66 acres of southern willow woodland near Chiquita Creek in the San Juan watershed. The mitigation will take place in 4 separate locations and will not function as one continuous mitigation

³³ site. Although the lack of a wetlands delineation and vegetation mapping makes it impossible to assess if this would be a suitable mitigation site for the permanent wetlands impacts, the location of this proposed mitigation is too far from the coastal zone to mitigate coastal zone wetland fill impacts.

Section 30233(a) Conclusion To conclude, the Commission finds that the proposed toll road: (1) is not an allowable use under Section 30233(a)(4) and does not qualify under any of the other allowable uses in Section 30233(a); and (2) is not the least environmentally damaging feasible alternative. The Commission therefore finds the proposed toll road inconsistent with Section 30233(a). In addition, the Commission lacks sufficient information to determine whether it meets the third (mitigation) test of Section 30233(a), because TCA has not provided adequate wetland delineations.

Section 30233(c) Conclusion TCA is required to show that the filling of wetlands within the coastal zone maintains or enhances the functional capacity of the wetlands and estuaries in the impacted area. TCA did not analyze Section 30233(c) in its consistency certification or perform a functional capacity analysis to show how the filling of wetlands in the coastal zone will maintain or enhance the functional capacity there. Rather, in its recently submitted wetlands letter, TCA stated that “Jurisdictional totals strictly represent the surface area of each feature and do not include an assessment of the relative quality of each feature.”³⁴

The Commission therefore finds that it lacks sufficient information to enable it to determine whether the proposed toll road would be consistent with Section 30233(c).

4. Conclusion The Commission concludes that the proposed toll road is inconsistent with the first two tests of § 30233(a) of the Coastal Act (i.e., the allowable use and alternatives tests), and, further, that the Commission lacks sufficient information to enable it to determine whether the proposed toll road would be consistent with the third test of Section 30233(a) (the mitigation test) and with

³³ See *Mitigation Plan*.

³⁴ See *Wetlands Letter* at 4.

the functional capacity test of § 30233(c). The Commission therefore concludes that the proposed toll road is inconsistent with the Coastal Act's wetland policy.

C. Public Access, Recreation, and Public Views

Coastal Act § 30210 provides:

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Coastal Act § 30211 provides:

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Coastal Act § 30212 provides, in part:

(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) Adequate access exists nearby, or, (3) Agriculture would be adversely affected.

Coastal Act § 30213 provides, in part:

Lower cost visitor and recreational facilities shall be protected, encouraged and, where feasible, provided. Developments providing public recreational opportunities are preferred.

Coastal Act § 30214 provides:

(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:

- (1) Topographic and geologic site characteristics.*
- (2) The capacity of the site to sustain use and at what level of intensity.*
- (3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.*

- (4) *The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.*

Coastal Act §30220 provides:

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

Coastal Act §30240 provides, in part:

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Coastal Act §30251 provides:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the local government shall be subordinate to the character of its setting.

Public Access and Recreation Resources in the Project Area

The primary public access and recreation resources located within the coastal portion of the project area fall within the three subunits of San Onofre State Beach. San Onofre State Beach was created in 1971 by a Presidential Executive Order that resulted in the California

Department of Parks and Recreation (CDPR) obtaining a lease³⁵ from the United States Navy for approximately 2950 acres of Marine Corps Base Camp Pendleton on the border of the City of San Clemente and San Diego County and both the coastal and inland sides of the I-5 freeway. San Onofre State Beach (SOSB) received over 2.4 million visitors in fiscal year 2005/2006³⁶ and has consistently ranked among the top five

³⁵ Details regarding the terms and provisions of this lease in regard to the granting of rights-of-way and easements will be discussed in the impact assessment portion of this subsection.

³⁶ Based on data provided in the California Department of Parks and Recreation Statistical Report for Fiscal Year 2005/2006.

most-visited State Parks in California. The park generates nearly \$2.8 million in user fees per year and provides the public with a wide range of opportunities for recreation and coastal access.

As previously described, the majority of the 16 mile route of the preferred toll road alignment proposed by the Transportation Corridor Agency (TCA) lies outside of the coastal zone. As indicated on the map provided in Exhibit 15, however, the proposed route enters the coastal zone in northern San Diego County within San Onofre State Beach and ~~several~~ 1.7 miles of new ~~construction and additions~~ improvements to I-5 are proposed to occur within the coastal zone. Close to the southern border of both Orange County and the City of San Clemente, this southernmost portion of the proposed toll road alignment passes through or in close proximity to a variety of important coastal zone recreation areas and public beach access points. Coastal recreation areas within or directly adjacent to the project footprint that would potentially be affected by the construction and/or operation of the proposed project include the Cristianitos and Trestles Beach subunits of San Onofre State Beach (also known as subunits 1 and 2), the San Onofre Recreation Beach portion of Marine Corps Base Camp Pendleton as well as the Trestles Wetlands Natural Preserve. These beaches and coastal areas provide the general public and military personnel with a variety of recreation and coastal access opportunities including beachcombing, sunbathing, swimming, surfing, camping, hiking, bicycling, horseback riding and wildlife and ocean viewing. The following sections will provide a description of the recreational resources provided by these areas, a brief discussion of their local, regional, national, and international significance, as well as an analysis of the potential impacts to these resources resulting from the proposed alignment of the toll road and the noise, land form and land use alterations, air quality degradation and viewshed changes associated with the construction and operational aspects of the proposed project.

Cristianitos Subunit – San Onofre State Beach Subunit 1

The Cristianitos or Subunit 1 portion of San Onofre State Beach (SOSB) is located on the inland side of the I-5 freeway and encompasses 1182.7 acres of land both within and outside of the coastal zone. This area contains the San Mateo Campground, a 161 site campground, a 110 car capacity day-use beach parking area, an outdoor education center which seats approximately 110 people, as well as several miles of trails and bikeways, including the 1.5 mile long Panhe Trail that connects the campground to the beaches and two coastal subunits of SOSB, and a portion of the Upper Trestles Trail that connects the Trestles day-use parking area to Trestles beach. This subunit represents the largest undeveloped coastal canyon available for recreational use south of Crystal Cove State Park in Orange County (approximately 20 miles to the north).

The Cristianitos subunit of San Onofre State Beach remained largely undeveloped and inaccessible to the public during the first several decades of the park's existence due to California Department of Parks and Recreation (CDPR) budget limitations that precluded the construction of visitor serving facilities. This situation began to change in 1981 however, when Southern California Edison, San Diego Gas & Electric, the City of

Anaheim and the City of Riverside (applicants) applied to the Coastal Commission for a permit amendment to the San Onofre Nuclear Generating Station's (SONGS) original coastal development permit (permit number 183-73). The implementation of this amendment (permit amendment number 6-81-330-A) required that 2.2 acres of dry sand beach seaward of the generating station be fenced to the mean high tide line and completely closed to all forms of public access. To mitigate this loss of public access and recreation opportunities, the Commission adopted a permit condition that required the applicants' fulfillment of certain mitigation measures. The condition language (included as Exhibit 27 (Special Condition H of permit 6-81-330-A) required that the applicants deposit \$3 million into an account and that funds from that account would be payable only to CDPR for the purpose of improving the inland parcel of San Onofre State Beach – the Cristianitos subunit. The condition language also specified that “The funds shall be applied in a manner which will result in creation and opening for public use of a public recreational facility having approximately 200 improved campsites and linked to the beach by a hiking trail” and further that these funds be dispersed “only for the purpose of securing a public coastal access or recreational benefit which will serve the population affected by the loss of access at the [SONGS] project site and which will adequately mitigate for the loss of access at San Onofre.”

The adopted findings from the staff report for permit number 6-81-330-A provided additional details about the mitigation measure and state that according to plans developed by CDPR for the Cristianitos subunit of SOSB, the “\$3-million will cover the cost of all site preparation, improvement of the access road (Cristianitos Road), connection to the San Clemente wastewater treatment facility, construction of 200 campsites, lavatories and showers, and a hiking trail to the beach...”. Although litigation (*Carstens v. California Coastal Commission, et al.*) delayed the payment of these mitigation funds to CDPR until 1988, the opening, development and improvement of the Cristianitos subunit of SOSB began soon thereafter and was completed in 1991. The funds provided to CDPR through the SONGS mitigation arrangement were instrumental in developing the Cristianitos subunit by funding the construction of the 161 campsite San Mateo Campground and its adjoining 110 person capacity educational center, parking lot, restroom and shower facilities, day use areas and several miles of multi-use trails (including the 1.5 mile Panhe Trail that connects the San Mateo Campground to the coastal subunits of SOSB and Trestles Beach).

The permit amendment (6-81-330-A) findings supporting the adoption of the SONGS mitigation measure that allowed the development and opening of the Cristianitos subunit of SOSB clearly specify that this area and its associated campground and trails are intended to serve as public access and recreation resources for the coastal zone. As the staff report states:

Conditions of the amended permit require the Applicants to contribute \$3-million to secure a public coastal recreational benefit...

The report also states:

There is a great demand for additional camping facilities in the area. Development of new facilities is restricted because of the 15-mile long expanse of Camp Pendleton to the south. During the warm months, campgrounds in the area must turn away tens of thousands of persons. The Commission expects the new facility at parcel 1 [San Mateo Campground] to significantly increase and enhance public access to the beach segments of the [San Onofre] State Beach. [emphasis added]

Based on visitor use information collected by CDPR over the past decade, the Commission's expectations of enhanced public beach access and coastal recreation opportunities provided through the development of the Cristianitos subunit of SOSB have been successfully met. Development of the Cristianitos subunit has resulted in enhanced coastal recreation and access opportunities at SOSB, increased the number of visitors to nearby coastal areas, and provided low cost visitor and recreational facilities in an area where such facilities are in short supply and high demand. This subunit, although located primarily outside of the coastal zone, facilitates a variety of coastal access, recreation and low cost visitor serving opportunities.

Based on the California Department of Parks and Recreation Statistical Report for Fiscal Year 2005/2006, the San Mateo Campground provides nearly half of the campsites available in San Onofre State Beach and roughly 13% of the total number of state park campsites available in all of coastal Orange and San Diego Counties (161 of the 333 sites available in SOSB and 161 of the 1233 sites available throughout the eight state parks that provide coastal camping in Orange and San Diego Counties, respectively). As one of a limited number of state park coastal campgrounds in southern California, San Mateo Campground represents a substantial proportion of the region's low cost coastal accommodation resources. As stated by CDPR in the August 1997 *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach*:

the affordability of this coastal resource for middle and lower income visitors makes it even more important... As coastal areas in the region continue to become more affluent, the value of this park's resources and affordable recreation opportunities to those of low and moderate income means will also continue to increase.

According to a resolution adopted by the California Parks and Recreation Commission in November of 2005, San Mateo Campground is typically booked to capacity at least 6 months in advance, year-round, and receives substantially more overnight use than either of the San Onofre State Beach campgrounds located in the southern portion of the park, adjacent to the San Onofre Nuclear Generating Station and the I-5 freeway. CDPR data suggests that the annual number of campground users during fiscal year 2006-2007 was

approximately 108,446 and anecdotal evidence has suggested that many of these users choose to stay at the San Mateo Campground because of its affordability, peaceful and serene natural setting and its proximity to the Panhe Trail which provides easy access to the beach, ocean, and world renowned surf breaks located within the coastal subunits of San Onofre State Beach. Accordingly, the 1.5 mile long Panhe Trail is used on a daily basis by dozens to hundreds of visitors seeking coastal access. As stated by CDPR in the August 1997 *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach*, “There is a strong sense of ownership and emotional connection by the users [of the San Mateo Campground], especially the surfing community...[The] coastal trail access walk is considered part of the Trestles Beach surfing experience.”

Trestles Beach Subunit – San Onofre State Beach Subunit 2

The Trestles Beach subunit of San Onofre State Beach is located entirely within the coastal zone on the coastal side of the I-5 freeway and encompasses approximately 213 acres immediately south of the interchange between Cristianitos Road and the I-5 freeway. This subunit is largely undeveloped but contains several beach access and multi-use recreation trails. These trails include: (1) the final one-half mile of the Panhe Trail between I-5 and Trestles Beach; (2) 1.5 miles of the California Coastal Trail that follows the old Highway 101 route parallel to I-5; (3) the half-mile long San Onofre Creek Trail from Basilone Road to Trestles Beach (see Exhibit 28 for the locations of the trails in SOSB Trestles Beach subunit); (4) the 0.75 mile long Lower Trestles Trail from the California Coastal Trail/Old Highway 101 to Lower Trestles Beach; and (5) the final half-mile of the Upper Trestles Trail from the Trestles day-use parking lot in the Cristianitos subunit to Upper Trestles Beach.

This subunit also contains the 82 acre Trestles Wetlands Natural Preserve, an area surrounding the mouth of the San Mateo Creek that was given a special status designation in 1984 to help enhance and protect its biological resources. The Panhe Trail and Upper Trestles Trail join to pass through this wetland preserve and passage along the combined Class I trail has been characterized as a vital part of the experience of surfing at Trestles. As stated by CDPR in the August 1997 *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach* in reference to the Upper Trestles Trail from the day use parking area along Cristianitos Road to Upper Trestles Beach:

The unique coastal conditions at Trestles provide a world renowned surfing experience that cannot be found anywhere else. The long approach walk from a highly urbanized area to the beach through a relatively unspoiled wetlands area provides a sense of transition not experienced at other surfing beaches.

In addition to these terrestrial recreation resources and beach access trails, the Trestles subunit of SOSB also includes a variety of the west coast’s most popular world class surf breaks including Upper Trestles, Lower Trestles, Cottons Point and Church’s. These resources will be discussed in detail in the subsequent section devoted to surfing resources in the project area, Section III - D.

The miles of wide, sandy beaches along the coastal stretch of the Trestles subunit also contribute significantly to this area's recreational resources and are a popular destination for beachgoers, swimmers and spectators wanting to enjoy the spectacle of high-performance surfing.

Green Beach – Marine Corps Base Camp Pendleton San Onofre Recreation Beach

Alternately referred to as both Green Beach and the Marine Corps Camp Pendleton San Onofre Recreation Beach, this coastal portion of Marine Corps Base Camp Pendleton is located between the Trestles Beach and San Onofre Surfer's Beach subunits of SOSB. The recreation beach consists of a 57 acre regional park used exclusively by military personnel and their families and guests. The recreation beach includes camping facilities, rental cottages, a clubhouse, lodging facilities, RV camping sites, a concession stand, lifeguard towers, picnic areas, restrooms, beach showers and overnight and day use parking. The Commission notes, however, that this is not a public facility.

Proposed Activities

As described previously in the Project Description, Section I–A, the majority of the proposed project will occur outside of the coastal zone. However, the terminus of the proposed toll road, including its intersection with the existing I-5 freeway would be located within the coastal zone. TCA has estimated the total length of the proposed project within the coastal zone to be ~~2.5~~2 miles (Exhibit 29). Activities associated with the proposed construction, placement and operation of the toll road and related expansion of I-5 have the potential to affect coastal access and recreation. In the documents titled, *Focused Summary of Environmental Impacts in the Coastal Zone* and *Coastal Consistency Certification and Analysis for the Foothill Transportation Corridor-South*, TCA summarizes the project elements within the coastal zone as follows:

- construction and placement of a 3,910 foot long elevated bridge structure with 14 column supports that crosses I-5 approximately 28 feet above the I-5 grade before crossing the San Mateo Creek and passing under the Basilone Road Overcrossing to provide southbound connection between the toll road and I-5;
- construction and placement of a 3,860 foot long elevated bridge structure with 15 column supports that rises to a height of approximately 20 feet above the I-5 grade over San Mateo Creek before passing under the Basilone Road Overcrossing to provide a northbound connection between the toll road and I-5;
- realignment and reconstruction of the Basilone Road Overcrossing at I-5 along with the four Basilone Road ramps to and from I-5, as well as a portion of Basilone Road.
- use of cut-and-fill grading and retaining walls south of the San Mateo Bridge abutments where the southbound and northbound connector ramps parallel I-5 and pass under Basilone Road to San Onofre Creek;
- widening of approximately 4,000 feet of I-5 south of Basilone Road;

- construction and placement of a 800 foot long and 8 foot high sound wall south of Basilone Road and adjacent to the San Onofre Child Development Center on Marine Corps Base Camp Pendleton;
- widening of the two I-5 bridges over San Onofre Creek;
- construction and placement of a 3,400 foot long and 14 foot high sound wall on the south side of I-5, inland from the military recreation facilities at Green Beach;
- construction and placement of a 1,350 foot long and 16 foot high sound wall east of the San Mateo Point housing area on Marine Corps Base Camp Pendleton west of I-5;
- construction of several thousand feet of 15 to 35 foot high retaining walls along the toll road route;
- reconstruction of a sidewalk at the Basilone Overcrossing;
- construction of a 41 acre stormwater extended detention basin adjacent to San Mateo Creek;
- construction of a 62 acre stormwater extended detention basin adjacent to San Onofre Creek;
- reconstruction and replacement of the San Onofre Gate to provide entry to Marine Corps Base Camp Pendleton; and
- construction of a widened military access road adjacent to San Onofre Creek and under the south span of the existing San Mateo Creek/I-5 Bridge.

In addition to those previously described aspects of the proposed project located within the coastal zone, TCA has also proposed substantial construction activities in close proximity to those portions of the Cristianitos subunit of SOSB that were developed as mitigation for the placement of the San Onofre Nuclear Generating Station. Specifically, TCA has proposed:

- bisecting the Cristianitos subunit of San Onofre State Beach with the toll road and constructing and routing it within several hundred feet of the existing San Mateo Campground;
- constructing an approximately 4,000 foot long by 14 foot high sound wall along portions of the toll road that are adjacent to the campground;
- removing and re-routing over one mile of the Panhe Trail between the San Mateo Campground and the coast (including about 1,500 feet within the coastal zone);
- removing and re-aligning nearly one mile of the existing Cristianitos Road (of which approximately the first 1000 feet would be within the coastal zone);
- constructing an 18 inch high by 5,900 foot long concrete block “mouse barrier wall” topped with a chain link fence along the western side of the proposed toll road (approximately 1,600 feet of which would be within the coastal zone);
- constructing a 400 foot long overcrossing for the newly aligned Cristianitos Road to pass over the proposed toll road;
- constructing an 8 foot wide sidewalk along the northbound side of the re-aligned Cristianitos Road to accommodate the re-aligned Panhe Trail (approximately 1000 feet of which would be within the coastal zone);

- constructing an onramp to allow access from Cristianitos Road to the toll road;
and
- removing and replacing utility poles along Cristianitos Road and near the San Mateo Campground.

Potential Effects of Project Activities

As stated in TCA's December 2003 *South Orange County Transportation Infrastructure Improvement Project Recreation Resources Final Technical Report*, the activities listed above have the potential to adversely affect recreation and coastal access resources in the project area in a variety of ways. (Note: because the following excerpt includes a discussion of aspects of the proposed project located outside of the coastal zone, those resource areas that exist within the coastal zone portion of the project area have been underlined):

...the [proposed toll road] will result in the temporary use and permanent acquisitions of property from the proposed San Juan Creek Regional Park, Rancho Mission Viejo Land Conservancy, Donna O'Neill Land Conservancy, SOSB Cristianitos Subunit 1, and SOSB Trestles Subunit 2. ...the use of property from these recreation resources will result in adverse effects on amenities at these resources through the removal of open space and recreation improvements and facilities... Based on the types of amenities removed by the temporary use and permanent acquisition of property at these resources, the [proposed toll road] will result in an adverse impact on these resources [including SOSB Cristianitos Subunit 1, and SOSB Trestles Subunit 2]... The [proposed toll road] will fragment SOSB Cristianitos Subunit 1...resulting in a trail from the City of San Clemente being on the west side of the corridor and San Mateo Campground being on the east side. The corridor disturbance and right of way limits will result in the removal of the RV tank pumping station and several fire roads in the north part of SOSB Cristianitos Subunit 1... In summary, the fragmentation impacts of the [proposed toll road] will be adverse on [SOSB Subunit 1]...

The [proposed toll road] will have noise impacts related to construction and operations. As shown, adverse noise impacts due to operation of the [proposed toll road] will occur at Tesoro High School, SOSB Cristianitos Subunit 1 and MCB Camp Pendleton San Onofre Recreation Beach... Also shown..., adverse construction noise impacts of the [proposed toll road] will occur at the following resources: Tesoro High School, Talega Community Park, Pacific Golf Club, Vista Bahia Stadium Park, San Clemente Municipal Golf Course, proposed South San Clemente Neighborhood Park (east), SOSB Cristianitos Subunit 1, SOSB Trestles Subunit 2, MCB Camp Pendleton San Onofre Recreation Beach and SOSB Surfer Beach Subunit 3. These impacts indicate expected noise levels greater than 67 dBA (Leq) at these resources.

The [proposed toll road] will not adversely affect access to and from recreation resources in the vicinity of the alignment as shown...with the exception of SOSB Cristianitos Subunit 1. Permanent access is provided in the design and right-of-way for the [proposed toll road]. However, there may be temporary access impacts during construction of [the proposed toll road]...

Operation of the [proposed toll road] will not result in substantial long-term local air quality impacts, based on the findings of the Air Quality Technical Report... During construction of [the proposed toll road], some short-term dust and construction emissions may result in temporary adverse impacts on adjacent uses, including the recreation uses. Those impacts would be substantially mitigated based on mitigation measures provided in the Air Quality Technical Report. However, resources within 150 ft of the centerline could experience substantial adverse short term air quality impacts, even with mitigation, during construction. As shown..., the [proposed toll road] could result in short term adverse air quality impacts during construction on proposed San Juan Creek Regional Park, proposed San Juan Creek Trail Extension, Rancho Mission Viejo Land Conservancy, The Donna O'Neill Land Conservancy, proposed Cristianitos Trail, SOSB Cristianitos Subunit 1 and SOSB Trestles Subunit 2.

As shown..., the [proposed toll road] will result in adverse changes in views from the following resources: proposed San Juan Creek Regional Park, Rancho Mission Viejo Land Conservancy, SOSB Cristianitos Subunit 1, proposed San Juan Creek Trail Extension, proposed Cristianitos Trail and proposed Prima Deshecha Trail. [The proposed toll road] will result in changes in views from the following resources: Tesoro High School Sports Fields, General Thomas R. Riley Wilderness Park, Caspers Regional Park, Talega Community Park, Rancho San Clemente Ridgeline Trail, Pacific Golf Club, SOSB Trestles Subunit 2, SOSB Surfer Subunit 3, and MCB San Onofre Recreation Beach. The change in views from these resources is not considered to be adverse because the views from these resources will not be substantially changed or these resources are not considered to be sensitive to changes in the viewshed.

As TCA's analysis suggests, the construction and operational aspects of the proposed project with the potential to affect recreation and coastal access resources within the coastal zone can be divided into categories: land acquisition, noise, and visual. For organizational purposes, the following discussion and analysis will make use of these categories and build on the preliminary analysis provided by TCA above.

Temporary and Permanent Land Acquisition

Based on information provided by TCA in the December 2003 *South Orange County Transportation Infrastructure Improvement Project Recreation Resources Final Technical Report*, the proposed toll road would require the acquisition of approximately 27% of the total area contained within the Cristianitos subunit of SOSB (40.8 acres of

temporary occupation and 290 acres of permanent acquisition) and approximately 9.6 acres within the Trestles Beach subunit of SOSB (1.0 acres of temporary acquisition and 8.6 acres of permanent acquisition). Although the most of the approximately 330.8 acres of SOSB that will be temporarily and permanently acquired by TCA would be outside of the coastal zone, these lands include the permanent acquisition of 36.3 acres of SOSB subunits 1 and 2 within the coastal zone on the inland and coastal sides of I-5 (26.7 acres of subunit 1 and 9.6 acres of subunit 2, respectively) and the temporary occupation and use of an additional 100 acres of SOSB and Marine Corps Base Camp Pendleton within the coastal zone during the three year construction phase of the proposed project.

The California Department of Parks and Recreation (CDPR) has held a lease from the U.S. Department of the Navy for all but 90 acres of the 2028.8 acres of land currently occupied by San Onofre State Beach since 1971. Unless renewed, this lease is set to expire in August of 2021. Because CDPR is not the actual owner of most of the property within SOSB, the granting of easements and rights-of-way across this property is subject to the terms and provisions of the existing lease agreement between the property owner – the U.S. Department of the Navy and the lessee – California Department of Parks and Recreation. As described by CDPR in the August 1997 *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach*, the granting of rights of way for the use of a portion of San Onofre State Beach is governed by Section C of the general provisions of lease entered into by the Department of the Navy and California State Parks. Section C (Subjection to Existing and Future Easements and Rights of Way) reads, in part:

This lease is subject to all outstanding easements and rights of way for location of any type of facility over, across, in and upon the leased property, or any portion thereof, and to the right of the government, after consultation with lessee as to location, to grant such additional easements and rights of way over, across, in and upon the leased property as it shall determine to be in the public interest; provided, that any such additional easement or right of way shall be located so as not to unreasonably interfere with the use of lessee's improvements erected on the leased property; and provided, further, that any such additional easement or right of way shall be conditioned on the assumption by the grantee thereof of liability to lessee for such damages as lessee shall suffer for property rendered unusable on account of grantee's exercise of its rights thereunder.

In TCA's *Consistency Certification and Analysis for Foothill Transportation Corridor – South*, TCA has interpreted the above lease agreement to mean that:

This lease is specifically subject to the reserved right of the United States to grant additional easements and rights-of-way over the leased property. Thus, in implementing the authority to lease, CDPR agreed that the United States could grant a right-of-way to a third party. Congress has adopted legislation

authorizing the [Department of the Navy] to grant to the TCA an easement within this portion of MCB Camp Pendleton. Therefore, construction of [the proposed toll road] is consistent with the property rights associated with SOSB.

The above statement suggests that TCA does not consider the placement and operation of the proposed toll road to unreasonably interfere with the use of the SOSB and the recreation facilities contained within the Cristianitos and Trestles Beach subunits. However, this position has been challenged by statements from the Attorney General of the State of California, the California State Park and Recreation Commission and the staff of the California Department of Parks and Recreation. In a letter dated January 5, 2006, to TCA and the Federal Highway Administration, the Attorney General states that:

The Attorney General remains convinced that any toll road to be built down the length of the inland portion of San Onofre State Beach, a California State Park, will significantly undermine and interfere with the State's fundamental purpose of protecting the park land, and will adversely affect the hundreds of thousands of Californians who visit the park each year for recreational purposes. Indeed, the park is known for Trestles, a world famous surfing site that is used for international competitions, as well as for its large number of camping spots with beach access. The noise pollution and visual blight caused by a busy super highway running through the park destroys its natural setting. While the toll road will not physically remove any of the 161 inland campsites, it will make them undesirable for their intended purpose, the quiet enjoyment of being away from the hustle and bustle of urbanized Southern California. San Onofre State Beach is one of the few remaining open spaces available to the general public along the coast in an area that is undergoing rapid development, including the nearby massive Rancho Mission Viejo project recently approved by the County of Orange.

Similarly, in Resolution 66-2005, "Opposing a Proposed Tollroad Alignment and Request for Action to Protect San Onofre State Beach," adopted by the California State Park and Recreation Commission on November 18, 2005, the Park Commission found that:

...the loss of over 320 acres or 27% of this portion of San Onofre State Beach for a toll road right-of-way would result in the park's fragmentation, adversely affecting the remaining acreage in the park, including the potential for additional recreational opportunities, such as hiking, equestrian use and camping; and... all the sites in the popular year-round San Mateo Campground are reserved six months in advance and receive more overnight use than any other of San Onofre State Beach's two campgrounds and would be severely impacted by the noise, vibration and visual intrusion of a major roadway if it were built.

Furthermore, in the August 1997 *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach*, developed by a San Onofre Mitigation Assessment Team of CDPR staff members and consultants under contract by TCA that included the Chief Ranger and a Resource Ecologist from the Orange Coast District, a Landscape Architect from CDPR's Planning, Acquisition and Environmental Design Division, an Archeologist and Park and Recreation Specialist from CDPR's Resource Management Division, a State Park Land Officer from CDPR's Southern Service Center and a consultant environmental acoustics specialist, the following determination was made in regards to the proposed toll road's potential to interfere with existing uses of SOSB:

Currently, San Onofre State Beach is a rare large Southern California scenic coastal-canyon park with high environmental values, recreation use and potential for expanded recreational opportunities. Substantial impairment of these resources will result from implementation of the [proposed toll road alternative]; that of converting [the Cristianitos subunit of SOSB] to a strip highway corridor with scant cultural, natural, aesthetic and recreational usefulness to the State Park System. Opportunities for on-site mitigation necessary to the public for the loss of this resource are limited by the property's fragmentation resulting from project development and environmental constraints. Following review, a team of park and resource professionals recommend that if [the Cristianitos subunit of SOSB] is used for the Foothill Transportation Corridor-South, the majority of the inland portion of San Onofre State Beach be relinquished to the underlying property holder...

³⁷
As currently proposed, the CP alignment will take 24.5% of [the Cristianitos subunit of SOSB], with an additional 5.18% to be directly impacted during the construction phase. In the opinion of CDPR, the fragmentation of [the Cristianitos subunit of SOSB] by the proposed highway corridor will severely restrict the use of the property for recreation purposes, as well as significantly and irrevocable alter its environmental setting, that of San Mateo Campground, and other recreational opportunities provided for in the unit's General Plan. The linear nature and split elevation of the arterial and any retaining walls, soundwalls and their landscaping will reduce the site's attractiveness to the public, as well as being a wildlife barrier and a management obstacle. These unnatural and discordant visual elements will intrude upon previously open vistas, high volume noise will impose on normal recreation activities, day activities at the campground as well as night quiet, and the amphitheater campfire area will be forever altered and rendered unusable.... In summary, the irrevocable alteration of the setting of [the Cristianitos subunit of SOSB], and the elevated "flyway" at Basilone Road intersection to portions of [the Trestles Beach subunit of SOSB], significantly reduce their value as parkland. Potential

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With respect to the recreation resources of SOSB, the currently proposed toll road route does not substantially differ from the CP alignment referred to and analyzed by CDPR in this discussion.

activities such as environmental and equestrian camping may no longer be feasible uses...

[The San Onofre Mitigation Assessment Team] *concluded that the CP alignment will result in a take of the functional use of the majority of [the Cristianitos subunit of SOSB] and may have significant direct or indirect impacts to park wetland, access and visual resources of [the Trestles Beach subunit].*

The California Department of Parks and Recreation continues to support these statements through analysis conducted more recently. Specifically, the August 2004 letter from the director of CDPR to TCA states that:

Specifically, the campground and nature trails will become unusable for State Beach purposes with the [proposed toll road] alignments. State Park staff has investigated the potential for re-creating these recreation opportunities elsewhere and our knowledge of the region leads us to conclude that losses to the existing unit cannot be adequately mitigated.

In addition, the January 10, 2006, letter from the director of CDPR to TCA states that:

Given that San Onofre State Beach represents the last large coastal open space recreational and habitat opportunity in Southern California, California State Parks has made it consistently clear since 1983 that an alignment through this park will have major impacts and that an alternative alignment needs to be selected.

The specific analysis included with this letter concludes that due to unavoidable impacts associated with the acquisition of park property:

If a toll road alignment through SOSB is selected, California State Parks believes that with the exception of the support parking for the trail to Trestles, all of the Cristianitos Subunit #1 must be abandoned to the lessor due to the loss of values which make it of park quality and loss of revenue...

Despite this assertion by CDPR that the Cristianitos subunit of SOSB must be abandoned if it is to be used as a toll road corridor and the claims included above regarding the significance and effects associated with the acquisition of land proposed by TCA, TCA continues to contend that the environmental analysis conducted and documented in the EIS/SEIR does not support the conclusions made by the Attorney General, the California State Park and Recreation Commission and the California Department of Parks and Recreation. This position is elaborated further in TCA's response to the statements of the Attorney General included above:

Section 4.25 [of the EIS/SEIR] acknowledges that the [proposed toll road] alignment in SOSB would result in adverse noise, visual and short-term air quality impacts on SOSB, even with mitigation measures included in Section 4.25...

The mitigation for the acquisition of property from SOSB does not propose "...providing suitable replacement property." The compensation for acquisition of property from any recreation resource, including SOSB, will be identified in consultation with the owner/operators as defined in mitigation measures R-3 (permanent acquisition) and R-4 (temporary acquisition) on page 4.25-30 of the Draft EIS/SEIR³⁸. The compensation for property acquisition may include a wide range of actions, including payment or replacement for any improvements that are impaired by the project. Under the terms of the state parks lease for SOSB, there is no obligation to provide replacement lands.

TCA also responded to the CDPR conclusion regarding the take of SOSB's functional use:

The conclusion of the referenced report "that the majority of the inland portion of SOSB be relinquished to the underlying property owner [the Department of the Navy] and substantial mitigation in the form of real property, cash and recreational related development be required from the developer and dedicated to the California Department of Parks and Recreation prior to commencement of construction" is not supported by the environmental analysis conducted and documented in the Draft EIS/SEIR.

Consistent with NEPA and CEQA, the [Federal Highway Administration] and the TCA would mitigate direct and indirect impacts to SOSB. There is substantial mitigation in the Draft EIS/SEIR, related to direct and potential indirect impacts of the [proposed toll road] on SOSB, based on the [proposed toll road] alignments and existing conditions at SOSB. The impacts identified in the environmental documentation do not support a complete and total relinquishment of SOSB Cristianitos Subunit 1.

For example, impacts to property will be mitigated based on mitigation measures R-1, R-2, R-3, R-4 and R-5 in the Draft EIS/SEIR. Specifically, as stated in mitigation measure R-2:

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Mitigation measures R-3 and R-4 contain much of the same language and read as follows: "Consistent with the requirements of the Uniform Relocation Assistance and Real Properties Acquisition Policies Act of 1970, the TCA or implementing agency/agencies will negotiate with the owner/operator whose recreation facilities will be permanently acquired [or temporarily occupied] to determine appropriate action and/or compensation to mitigate for the permanent acquisition [or temporary occupancy]."

“Measure R-2: Consultation with Owners/Operators of Recreation Resources. In conjunction with measures R-3 and R-4 (compliance with the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970), the TCA or implementing agency/agencies will consult with the affected property owner/operator of recreation resources temporarily used or permanently acquired by a build Alternative. The purposes of this consultation will be to:

- Identify and implement opportunities to protect recreation resources in place.*
- Identify and implement opportunities to replace lost recreation facilities within the existing recreation property.*
- Combine compensation and protection/modification of affected recreation resources to comply with the Uniform Relocation Assistance Act and Real Property Acquisition Act and minimize adverse impacts on recreation resources.”*

Mitigation for potential noise, air quality and visual impacts are also provided in the Draft EIS/SEIR to address potential adverse project impacts related to SOSB.

The CDPR will have the opportunity during negotiations, under the Uniform Act, to work with the TCA to refine the mitigation measures in the Final EIS/SEIR for the selected Alternative related to adverse impacts to SOSB. At that time, if the CDPR has feasible mitigation that it believes should be implemented, in addition to or to replace Draft EIS/SEIR mitigation measures, the discussion of those measures can be incorporated in those negotiations.

The mitigation negotiations referenced above have not occurred and additional details regarding the quantity, quality and suitability of mitigation measures that may potentially be agreed on by CDPR and TCA are therefore not available at this time. As stated above, the mitigation proposal put forward by CDPR in the August 1997, *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach* – “substantial mitigation in the form of real property, cash and recreational related development be required from the developer and dedicated to the California Department of Parks and Recreation prior to commencement of construction,” appears to have been rejected by TCA based on a disagreement regarding the degree to which SOSB subunits 1 and 2 would be adversely affected by the construction and operation of the proposed toll road and the corresponding acquisition of park property. Furthermore, CDPR, in the January 10, 2006, letter to TCA, contends that:

Unfortunately, based on our experience and our knowledge of the region, California State Parks must conclude that not only can mitigation not be completed on-site due to the project itself, but that there is no longer adequate openspace coastal property to replace that which would be lost at SOSB. That was not the case in 1997, [ten years ago], when several sites were recommended to TCA for consideration – an opportunity in which they neglected to invest.

Based on the absence of final and complete details regarding the form that potential mitigation for the proposed temporary and permanent acquisition of SOSB land within the coastal zone will take, as well as the potential lack of adequate and available mitigation areas, the Commission is unable to analyze the adequacy of the mitigation measures proposed by TCA. However, the Commission agrees with the CDPR that the adverse effects of the land acquisition associated with the proposed project would be significant and that this aspect of the project appears to be inconsistent with the recreational resource protection policies of the Coastal Act.

Recreation Resources within Temporarily and Permanently Occupied Land

In addition to approximately one quarter of the total land area of the Cristianitos subunit of SOSB, the specific recreation resources that exist within the coastal zone portion of the land proposed to be permanently and temporarily occupied by TCA include³⁹ :

- approximately 2400 feet of the Panhe Trail that provides beach access between San Mateo Campground and Trestles Beach;
- approximately 1600 feet of the Upper Trestles Trail that connects the Trestles Beach day-use parking area off of Cristianitos Road to Trestles Beach; and
- approximately one mile of the California Coastal Trail along the old Highway 101 route.

As detailed in the subsequent section on surfing resources, in addition to serving as a popular walking, jogging and bicycle route and providing a vital link between several beach access trails, the paved California Coastal Trail along the old Highway 101 route provides occasional special event overflow parking during the nine surf contests that are held at Trestles Beach each year. At all other times, the one-mile section of the California Coastal Trail/old Highway 101 route between the existing Cristianitos Road/I-5 overcrossing and the existing Basilone Road/I-5 overcrossing is closed to vehicle entry and transit (with the exception of State Parks vehicles used for public safety patrol, maintenance and resource protection).

Regarding the proposed occupation and acquisition of land currently used by the three trails listed above, TCA maintains in the March 23, 2007 *Consistency Certification and Analysis for Foothill Transportation Corridor-South* that:

During construction of the project, public safety of pedestrians using recreational and beach access trails in the vicinity of the project will be protected from construction of the project through temporary access detours and minimal trail closures. However, beach access will always be protected, even during temporary closures.

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Approximate distances are based on the revised general layout plans provided by TCA in the August 2007 document, *Foothill Transportation Corridor – South (FTC-S) Roadway Description & Related Design Features in the Coastal Zone* and, where appropriate, include the proposed construction area surrounding soundwall number SW1181 that was not included in the general project footprint.

In the August 2007 document, *Foothill Transportation Corridor – South (FTC-S) Roadway Description & Related Design Features in the Coastal Zone*, TCA states that:

[Secondary] *trail access from the San Mateo Campground [and primary access from the Trestles Beach day-use parking area] to the beach currently crosses over the Cristianitos Road overcrossing and then proceeds on the south side of I-5 down [the old Highway 101 route] to the beach trail. This trail [the Upper Trestles Trail] will remain open throughout construction.*

[Primary] *trail access from the campground to the beach also exists on the north side of I-5, crossing under the San Mateo Creek Bridge. This trail [the Panhe Trail] will be temporarily closed to accommodate the construction and...will be relocated along the northbound side of Cristianitos Road in the form of an 8-foot sidewalk placed behind temporary concrete barrier (K-rail). Near the south end...the concrete sidewalk will again match up with the existing [Upper Trestles Trail] all the way to Trestles Beach. At no time during the construction of this project shall the paved Cristianitos/Old PCH⁴⁰ trail be closed.*

Panhe Trail

The Panhe Trail is the primary access route between the San Mateo Campground and Trestles Beach. The trail is approximately 1.5 miles in length and except for passing under I-5 and a roughly 1600 foot section that passes adjacent to the existing Cristianitos Road, it remains within undeveloped open space for most of its length. Although specific construction timelines have yet to be provided by TCA, the proposed temporary closure of the section of the Panhe Trail that exists on the inland side of I-5 and provides a link between the San Mateo Campground and the combined Panhe Trail/Upper Trestles Trail on the coastal side of I-5 is anticipated to last as long as three years. Considering the extensive amount of construction, fill and grading proposed for the area currently occupied by this trail (as shown in Exhibit 28), including the placement of over 7,500 feet of elevated bridge structures, as well as the time required to construct substantial portions of the re-routed Cristianitos Road and its adjacent eight foot wide sidewalk that is proposed to serve as the route for the re-aligned Panhe Trail, the estimate of several years appears to be appropriately conservative. In addition, in a September 7, 2007, response to Commission staff questions, TCA revealed that, “the total construction duration within the coastal zone will last approximately three years to complete.” During this construction period it is unclear as to the manner in which access between the San Mateo Campground and Trestles Beach would be maintained. The current proposal (visually represented in Exhibit 28) shows both the existing and re-aligned trail segments to be

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The trail referred to by TCA in this statement is previously described in this staff report as the combined Panhe Trail/Upper Trestles Trail and refers to the final 1700 feet of this trail that passes through the Trestles Wetland Natural Preserve between Trestles Beach and the California Coastal Trail/old highway 101 route.

well within the project's active construction area. In describing the proposed re-alignment of Cristianitos Road and the proposed methods that will be used to maintain vehicular access along this road during construction, TCA states:

To the east of the Cristianitos Road/I-5 interchange, portions of Cristianitos Road within and outside the Coastal Zone will be reconstructed to accommodate the construction of the [proposed toll road]. During construction, Cristianitos Road will be kept open to allow access to the campground and to Camp Pendleton. There will be staging required and a temporary Cristianitos detour will be constructed. Traffic will be switched to the temporary roadway while the permanent Cristianitos Road is constructed. We anticipate there will be brief periods of traffic disruption when traffic is switched to and from the temporary road.

Presumably, Panhe Trail access will be maintained through the nearly one mile of the construction zone during construction along the Cristianitos Road detour route. This assumption is supported by recent information from TCA, provided in a September 7, 2007, response to Commission staff comments, that states "the trail between I-5 and the San Mateo Campground will be detoured along the temporary Cristianitos Road" and that "the path will vary from 5 to 8 feet wide as space permits with a temporary concrete barrier separating it from traffic." Due to the location of this trail within the proposed construction area, TCA anticipates that "pedestrian traffic would only be interrupted for a few minutes at a time as temporary or new paths are tied in [to avoid active construction areas]." Although access between San Mateo Campground and the beach along the Panhe Trail will not be completely closed during the construction phase of the proposed project, the anticipated temporary closures of the trail as well as its passage through the proposed construction area may discourage some individuals from using it during the three year construction phase of the proposed project. No alternate trails exist or are planned to be developed between San Mateo Campground and the coast that would provide coastal access during construction that would be similar to the natural experience provided by the existing Panhe Trail. In addition, upon completion of project activities, TCA has proposed to re-align the existing Panhe Trail so that it "will run along the new Cristianitos Road, over [the toll road] and then back to its original path either under I-5 (at the San Mateo Creek) or over I-5 on the existing Cristianitos Road." As demonstrated in Exhibit 28, this re-aligned Panhe Trail would pass adjacent to, above, or below the proposed toll road for its entire length between the San Mateo Campground and I-5, representing a substantial degradation in the type and character of pedestrian experience compared to the existing situation.

Based on the three years of anticipated temporary access restrictions to be placed on the use of the Panhe Trail and the potential discouragement that users may face due to the trail's location within the proposed construction zone, as well as the permanent loss of the natural setting and character of the pedestrian experience of using the Panhe Trail, the

Commission finds that the proposed re-alignment of the Panhe Trail would significantly adversely affect the quality of the coastal access and recreation opportunities currently provided by this trail.

Upper Trestles Trail

As described previously, the Upper Trestles Trail begins at the Trestles Beach day-use parking area on the inland side of I-5 within the coastal zone near the existing Cristianitos Road/I-5 overcrossing. From this point the trail crosses I-5 on the overcrossing and continues on the coastal side of I-5 along the paved route of old Highway 101 for approximately 1400 feet before joining with the Panhe Trail and leaving the old Highway 101 route. The combined trail then passes through the Trestles Wetland Natural Preserve and ends at Trestles Beach. Joining the 110 space parking lot to Trestles Beach, the Upper Trestles Trail is one of the primary access trails for surfers and beachgoers in SOSB.

Although the majority of this trail lies outside of the proposed project footprint, TCA is proposing to construct a 1350 foot long by 16 foot high soundwall ~~along the portion of this trail that runs along the old Highway 101 route above the trail (not adjacent or along the trail) adjacent to the Camp Pendleton officers housing area.~~ Therefore Tthe construction of this soundwall ~~may will not~~ conflict with its use as a recreational and beach access resource, ~~and although~~ TCA has committed to maintaining access on this trail throughout the construction of the proposed project, details regarding the manner in which access will be maintained during the construction of the proposed soundwall have not been provided, making an analysis of the feasibility and comprehensiveness of these protocols difficult. Accordingly, the extent to which the proposed project may adversely affect the coastal access and recreation resources provided by the Upper Trestles Trail is uncertain, and the Commission is unable, at this time, to determine the consistency of this alternative with the relevant Coastal Act policies.

California Coastal Trail

The portion of the California Coastal Trail within the project area begins at the Cristianitos Road/I-5 overcrossing and follows the old Highway 101 route parallel to I-5 through the entire Trestles Beach subunit of San Onofre State Beach. As described above, this paved trail is a popular resource for walkers, joggers and bicyclists and provides a link and access to the Panhe Trail, Upper Trestles Trail and Lower Trestles Trail beach access routes. Due to its close proximity to the beach and the Upper and Lower Trestles beach access trails, the Coastal Trail also provides special event parking during surf contests.

Several aspects of the proposed project have the potential to affect the use of the Coastal Trail. In addition to the concerns raised above for the portion of the Coastal Trail that is co-located along the Upper Trestles Trail, as shown in Exhibit 28, nearly one mile of the California Coastal Trail and the majority of its length in the Trestles Beach subunit of SOSB is within the project's disturbance area (specifically, the entire stretch of trail between San Mateo Creek and San Onofre Creek). As noted by TCA in response to

concerns raised by Commission staff about the use of this trail during construction, the construction and staging of the southbound connection between the toll road and I-5 is expected to adversely affect the California Coastal Trail:

Temporary access roads and equipment/material staging areas will also be required immediately adjacent to the southwest side of the SR-241 southbound connector and the northeast side of the northbound connector during the construction phase of these structures. These access strips will parallel the proposed bridges and extend approximately 40 feet from the drip line. These areas [include the Coastal Trail and] will be utilized for the 24-month period it is anticipated for construction of the connector structures.

Of the staging/access areas mentioned above, only the one associated with construction of the SR-241 southbound connector will result in temporary impacts to publicly accessible parking areas, roads, bikeways or trails. It is anticipated that a portion of Old Highway 101 will be temporarily used at select locations during construction for access and construction materials staging areas. As indicated in the comment, Old Highway 101 is utilized for parking during special events such as surf contests. As these events are planned well in advance, the TCA will coordinate with the event sponsors and State Parks to reduce impacts on access and parking. During the period these events are occurring, every effort will be made to avoid the area and make access and parking similar to what presently exists.

Although TCA does not elaborate on the anticipated effects to this recreational and coastal access resource, beyond the conclusion that there will be “temporary impacts to publicly accessible parking areas, roads, bikeways or trails,” the statement that the areas including the Coastal Trail will be “utilized for the 24-month period it is anticipated for construction of the connector structures” suggests that effects to this trail may be lengthy. Additionally, TCA’s statement that “every effort will be made to avoid the area and make access and parking similar to what presently exists” is an unclear commitment. It therefore appears that a substantial portion of the Coastal Trail may be adversely affected through the placement of equipment, materials, safety zones and staging areas and that the ingress and egress of equipment, materials and personnel may represent a substantial change in the trail’s present use. The use of the Coastal Trail by TCA may limit its availability to recreation users and those using it to reach coastal access points, and will certainly affect the quality of the trail use experience during its use for construction and staging activities. Furthermore, the current proposal also includes the development of an alternate military access road to MCB Green Beach. As shown on Exhibit 28, this access road would enter the Coastal Trail at San Mateo Creek and follow it to at least the Basilone Road overcrossing area. ~~The placement of t~~This access road appears is limited to the area adjacent to the south abutments of the I-5 bridge and does not ~~overlap with roughly two-thirds any portion~~ of the Coastal Trail’s length through the Trestles Beach subunit. ~~Although details regarding the frequency and type of use anticipated for t~~This access road

~~have not been provided by TCA~~ will be used only intermittently by MCB Camp Pendleton. ~~the placement of a vehicular access road along a section of the California Coastal Trail that is currently closed to vehicle traffic has the potential to~~ and will not preclude or degrade the quality of the existing recreational uses. Currently, Camp Pendleton is not precluded from using any portion of the California Coastal Trail, as Camp Pendleton owns the property.

Conclusion

In addition to the general acquisition and occupancy of SOSB land that would limit the future development of recreational infrastructure and facilities and potentially cause the California Department of Parks and Recreation to abandon the San Mateo Campground and Cristianitos subunit of SOSB, the proposed project ~~may also~~ will not restrict and limit existing recreational and coastal access uses of these lands. As described above, the Commission finds that the temporary and permanent use of land currently dedicated to beach access and recreation trails is in conflict with the public access and recreation policies of the Coastal Act that specifically provide for the protection and enhancement of these recreation and access resources. The Commission therefore finds the proposed project inconsistent with the public access and recreation policies (Sections 30210-30214, 30220, and 30240(b)) of the Coastal Act.

Noise

Encompassing several miles of road and highway construction, grading and fill of ~~tens of millions of~~ 1.4 million cubic yards of soil, placement of nearly two miles of elevated road structures, and a variety of associated retaining walls, support structures, soundwalls, and over-and-under-crossings, the proposed project would require the use of substantial amounts of large mechanized equipment over large areas on a continuous basis for three years. During much of this construction phase, a significant amount of noise will be generated, well above existing levels. It has been well established that the propagation of loud noise interferes with the enjoyment and well being of those individuals exposed to it. The adverse affect of elevated levels of noise on recreational pursuits has similarly been established. Accordingly, several comprehensive noise analyses have been conducted throughout the project area to quantify the anticipated sounds levels during various phases of the project, establish existing sound levels and delineate those areas most likely to be adversely affected by the construction and operation of the proposed toll road. The following discussion will describe the results of those studies in the context of coastal recreation resources.

Noise Criteria for Construction and Operation Noise

Typically, short-term noise levels from construction activities are measured against the applicable local municipality's noise ordinance to assess whether there are any noise effects. Construction activities that comply with the applicable noise ordinance are considered to result in no adverse short-term impacts while construction activities that result in noise levels that exceed the noise ordinance are considered adverse. The proposed toll road passes through the coastal zone in San Onofre State Beach and Marine Corps Base Camp Pendleton, in unincorporated San Diego County. However the San Diego County Municipal Code is not applicable to Marine Corps Base Camp Pendleton

and does not contain standards that apply to campgrounds. The California Department of Transportation (Caltrans) and the Federal Highway Administration require potential noise effects from construction activities to be assessed but do not provide any criteria for determination of impacts. However, the Federal Highway Administration has adopted noise abatement criteria for highway construction projects. These criteria have been adopted by Caltrans and are divided into five categories based on land use. The most applicable categories are included below:

Activity Category: A Hourly A-weighted Noise Level dBA L_{eq} : 57 Exterior Description: lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its function

Activity Category: B Hourly A-weighted Noise Level dBA L_{eq} : 67 Exterior Description: picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals

In addition, even if the predicted noise level does not approach or exceed the noise abatement criteria, traffic noise effects can occur when the ‘with project’ noise level substantially exceeds the existing noise levels. Caltrans has established a substantial increase to be a 12 dBA increase in the peak-hour L_{eq} noise level.

As stated by TCA in the EIS/FSEIR:

The FHWA/Caltrans reserve the use of Activity Category A “lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its function” and its 57 dBA $L_{eq}(h)$ Noise Abatement Criteria for very few and specialized circumstances. The FHWA and Caltrans do not consider the campground to fit within this category.

The applicability of Activity Category B, as described above, to San Onofre State Beach has been a matter of disagreement between TCA and several California State agencies, including the Department of Justice and the Department of Parks and Recreation. In comments raised on the project’s Draft Environmental Impact Statement both agencies state that the San Onofre State Beach should be considered as an Activity Category A area, subject to consideration with the lower of the two Noise Abatement Criteria.

Regardless of which Noise Abatement Criteria is selected however, San Onofre State Beach would experience adverse effects due to the proposed project’s construction and operational noise. These adverse effects are considered in TCA’s December 2003 *South Orange County Transportation Infrastructure Improvement Project Recreation Resources Final Technical Report*, which states that, “adverse noise impacts due to operation of the [proposed toll road] will occur at Tesoro High School, SOSB Cristianitos Subunit 1 and MCB Camp Pendleton San Onofre Recreation Beach” and that:

adverse construction noise impacts of the [proposed toll road] will occur at the following resources: Tesoro High School, Talega Community Park, Vista Bahia Stadium Park, San Clemente Municipal Golf Course, proposed San Clemente Neighborhood Park (east), SOSB Cristianitos Subunit 1, SOSB Trestles Subunit 2, MCB Camp Pendleton San Onofre Recreation Beach and SOSB Surfer Beach Subunit 3. These impacts indicate expected noise levels greater than 67 dBA (Leq) at these resources. [underline added]

These anticipated operational noise effects indicate the difference between existing noise levels within SOSB Cristianitos subunit 1 (including the San Mateo Campground) of 47 dBA and projected peak hour noise levels of 58 dBA (which represents human perception of an approximate doubling of sound levels and an order of magnitude increase in absolute sound levels), despite the proposed construction of sound walls. As noted above, the adverse impacts that TCA anticipates due to construction noise would affect recreation resources within all three of the SOSB subunits. The principal causes of construction noise would be due to pile driving and the use of heavy construction equipment (graders, earthmovers, trucks, etc.) which are anticipated to result in sound levels of up to 65 decibels up to 2,800 feet away from the centerline of the proposed toll road (for reference, speech interference typically begins at 65 decibels). As stated previously, due to the amount and complexity of proposed construction within the coastal zone – including the construction of ~~multiple~~ two elevated “flyovers,” bridge structures, onramps, connectors and offramps – elevated levels of construction noise would be experienced on the majority of recreational trails within the Cristianitos and Trestles Beach subunits of SOSB for as long as three years. Recreational use of these trail areas is often specifically oriented towards achieving a natural experience and the intrusion of substantial levels of noise from human activities may substantially interfere or degrade that experience.

San Mateo Campground

Elevated construction and operational noise levels would also result in adverse effects to the recreational and low cost accommodation resources of the San Mateo Campground. The proposed toll road would be sited within approximately 200 feet of the easternmost campsites at the San Mateo Campground and within approximately ~~190-220~~ feet of the realigned Cristianitos Road (Cristianitos Road is currently 250 feet from the campground). This portion of the proposed toll road would be elevated approximately 30 feet above the existing grade which would require the placement of a substantial amount of fill material and the use of transport trucks, graders and scrapers for an extended period of time. Although specific time estimates for this stage of construction have not been provided by TCA, the technical report titled, *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project*, dated December 2003, estimates that groups of 15 to 30 heavy graders would require approximately 2 to 3 months to operate on a length of corridor less than one-half mile in length. It is therefore conservatively assumed that heavy grading would occur adjacent to the San Mateo Campground for between 2 and 6 months. However, it is

likely that once the roadway adjacent to the campground has been graded and completed it may continue to be used for graders, scrapers and trucks that are accessing and working on subsequent sections of the toll road. This continued use of graders and heavy equipment in close proximity of the campground would substantially extend the length of time that elevated construction noise would be experienced at the campground.

In addition, upon completion of grading activities it is assumed that construction of the actual roadbed would commence. Although heavy grading is described in the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* (noise assessment) as resulting in the highest average noise levels of all construction activities due to the constant noise generated by the graders over extended periods of time, the use of dozers, loaders, trucks, pavers, and cranes during roadbed and general construction would also generate substantial amounts of elevated noise. Furthermore, no pile driving operations are ~~also~~ proposed to occur within close proximity to the San Mateo Campground ~~to facilitate the placement of pier structures and supports for the proposed wildlife undercrossing located approximately 900 feet from the nearest campsites at the north end of the San Mateo Campground and the elevated realigned Cristianitos Road overcrossing of the toll road as no pile driving is proposed for the wildlife undercrossing or the Cristianitos Road overcrossing.~~ Pile driving activities are described in the noise assessment as being “responsible for very high peak or impact noise levels” approaching 105 decibels. The noise assessment also goes on to note that “for most bridges, including wildlife crossings, there are two abutments and two piers. Therefore, pile driving for the typical pier lasts roughly 4 to 6 weeks.” The use of pile driving for both the wildlife crossing and the elevated portion of Cristianitos Road is therefore expected to take at least twice this long. Overall, due to the magnitude and complexity of proposed grading, roadbed, detention basin and wildlife undercrossing construction operations, it is conservatively assumed that construction activities would occur for at least one year in the area within close proximity to the San Mateo Campground.

During these activities, the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* has estimated that:

- sound levels would reach approximately 100 A-weighted decibels within 50 feet of pile driving and 75 decibels within 900 feet of pile driving (during the 2-3 months of pile driving required for the wildlife under crossing and Cristianitos Road over crossing);
- sound levels would reach levels greater than 70 A-weighted decibels within 550 feet of heavy grading (during the 2-6 months of heavy grading); and
- sound levels would reach 60 A-weighted decibels during general construction activities (conservatively estimated to take an additional 6 months).

Given the proximity of the proposed wildlife crossing, detention basins, toll road and realigned Cristianitos Road to the San Mateo Campground, within 200 feet (as demonstrated in Exhibit 30) in places, a significant portion of San Mateo Campground would experience sound levels upwards of 70 decibels for between 2 and 6 months and

sound levels upwards of 60 decibels for an additional 6 months during construction of the proposed toll road. These anticipated sound levels represent an increase of between 13 and 23 decibels over the existing sound levels of 47 decibels measured at several locations within the campground. Due to the logarithmic nature of the decibel measurement system, this increase is more than one to two orders of magnitude louder (10 to 100 times louder), and in human perception terms, a more than doubling or quadrupling existing sound levels. Such a dramatic increase in sound levels in an area in which quiet and serenity are held in especially high regard would substantially alter the existing auditory environment of the campground and surrounding areas and would undoubtedly interfere with the existing use of this area. It is very likely that the use of San Mateo Campground during the construction phase of the project would be substantially diminished and its ability to function as a coastal recreation and low cost coastal accommodation resource would be degraded.

In addition to the adverse noise effects on the campground resulting from the construction of the proposed toll road, the operation of the toll road would also substantially alter the existing auditory environment at the campground. As noted above, the existing sound level at the campground has been measured on several different occasions at several different locations and has been determined to be 47 decibels on average. As specified in the noise analysis, with construction of the 16 foot high by 4000 foot long soundwall between the proposed toll road and the San Mateo Campground, sound levels within the campground have been estimated at 58 decibels during periods of peak use of the toll road. This increase of 11 decibels represents an approximate doubling of perceived sound levels, which would substantially alter the existing condition of the campground. Considering that many of the current and historic users of the campground have specifically identified the “relative quiet and seclusion” it offers as important traits,⁴¹ this increase in sound levels is likely to substantially interfere with the present recreational use of the campground. It is especially likely that those campground users desiring to sleep in thinly insulated tents would be especially affected by the noise produced during the operation of the proposed toll road. Elevated sound levels for those individuals sleeping outside could interfere with sleep and therefore discourage tent campers from using the campground.

It is extremely difficult to predict or estimate the number of campground users that would be discouraged from using the San Mateo Campground as a result of the presence of the toll road and its associated noise; however, a comparison of the different campgrounds within SOSB may provide some indication of the willingness of campers to tolerate the experience of camping in close proximity to an active freeway. Along those lines, it should be noted that SOSB includes an additional campground located in close proximity to I-5 that despite containing 10% more campsites than the San Mateo Campground, receives substantially fewer users. Specifically, the Bluffs Campground, adjacent to I-5

⁴¹ Based on testimony provided at the November 3, 2005 California State Parks and Recreation Commission hearing.

in SOSB subunit 4, hosted 60,079 overnight visitors between July of 2004 and July of 2005 while the San Mateo Campground hosted 43% more overnight visitors during the same period, 105,427.⁴² Although this difference may be attributed to a variety of factors, [such as the fact that campgrounds in SOSB subunit 4 are closed for part of the year](#), it can be assumed that the quieter, more natural setting of the San Mateo Campground was an important contributor.

Finally, as described previously, CDPR has asserted on several occasions that if the toll road is routed through the Cristianitos subunit of SOSB, as proposed, CDPR would [consider](#) abandoning this portion of the park and relinquish its lease to the underlying landowner, the Department of the Navy. This statement by CDPR apparently indicates that the San Mateo Campground would be closed if the proposed project is to be built and that the entire 161 site capacity San Mateo Campground would be lost from SOSB and the park system in perpetuity. This complete loss of the campground and its recreation and accommodation resources would represent a substantial diminishment of the overall coastal recreation and visitor serving potential of the park.

Despite the location of the campground outside of the coastal zone, the fact that this campground contains important coastal recreation and low cost coastal accommodation resources that would be substantially degraded or completely lost due to the proposed development constitutes a significantly adverse and unmitigable effect on coastal zone recreational resources.

Panhe Trail

As described above, proposed construction within the coastal zone portion of the project area would result in the complete displacement and realignment of the Panhe Trail for most of its length between the San Mateo Campground and I-5. This portion of the construction process would take approximately three years and in addition to the adverse recreation and access impacts due to the temporary loss and realignment of this trail, the lengthy construction process carried out in close proximity to the Panhe Trail would result in highly elevated and potentially unsafe sound levels for those pedestrians attempting to continue using the trail during the three year construction phase. During construction, the Panhe Trail would be relocated and would pass directly through the proposed toll road construction area, likely passing within a dozen or several dozen feet of active construction equipment including graders, trucks, pile drivers, dozers, scrapers and cranes. As described in relation to the San Mateo Campground above, the use of this equipment results in highly elevated noise levels, however, due to the fact that the Panhe Trail would actually be routed through the construction zone *during construction*, it is anticipated that trail users would be subjected to much higher sound levels than campground users.

Specifically, the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* (noise analysis) states that “pile driving operations can have peak noise levels of 90 to 105 dBA at 15 meters (50 feet) with 100 dBA being

⁴² As indicated in Fiscal Year 2004-2005 use figures for SOSB.

typical.” As shown in Exhibit 28 and described by TCA, the realigned Panhe Trail would pass directly adjacent to the realigned Cristianitos Road over crossing, an area in which pile driving activities would not occur ~~for between eight and twelve weeks because no pile driving is proposed at the Cristianitos Road overcrossing (which will be supported by cast in drilled steel pipes), thereby placing trail users within less than 50 feet of pile driving activities and subjecting them to sound levels in excess of 100 decibels and possibly as high as 105 decibels.~~ The Panhe Trail would also pass within close proximity to portions of the two elevated toll road “flyway” structures, each one of which would require at least six months of pile driving to complete.

The Centers for Disease Control and the National Institute of Occupational Safety and Health has found that exposure to sound levels between 103 and 106 decibels for less than five minutes may result in permanent hearing loss and damage to the human ear.⁴³ Depending on the location and number of simultaneous pile driving activities and the speed with which a given trail user is moving, it is not unreasonable to assume that a trail user would be within the 100 to 105 decibel range for five minutes or more.

Considering these potentially dangerous sound levels, it would seem appropriate for TCA to locate the temporary Panhe Trail well beyond the 50 foot 100 decibel sound contour. However, the realigned Panhe Trail is already located at the outer edge of proposed project’s disturbance limits. Unless the project is amended to substantially expand these disturbance limits into sensitive habitat (potentially resulting in additional adverse affects to sensitive species) and re-route the Panhe Trail a greater distance from the construction areas, it appears that the Panhe Trail would remain within close proximity to pile driving and other heavy construction activities during the extensive pile driving and construction phase of the proposed project.

TCA has not submitted information ~~to suggest showing the location of the rerouted that the Panhe Trail, which~~ would be located a sufficient distance from construction activities to ensure that it can be safely used by pedestrians during construction. Due to the risk of hearing loss or impairment by using the trail, it can be assumed that the presence of construction activities, including pile driving, within close proximity to the proposed trail alignment would result in a de-facto closure of this coastal access trail during the approximately one year pile driving portion of the proposed construction phase. This trail closure would completely isolate all users of the San Mateo Campground (except those willing to drive a vehicle) from the coastal subunits of SOSB, as well as from Trestles and San Onofre Beaches.

In addition, although the use of graders, trucks, and other heavy equipment would not result in sound levels as high as those produced during pile driving activities, these activities would also produce substantially elevated sound levels and are proposed to occur within close proximity to the Panhe Trail for the majority of its length between the San Mateo Campground and the beginning of the Upper Trestles Trail. The use of this

⁴³ National Institute of Occupational Safety and Health, Publication No. 98-126, June 1998.

http://www.cdc.gov/niosh/topics/noise/about/np/noisemeter_flash/soundMeter_flash.html

trail during the several year construction phase of the proposed project would therefore subject recreational users and those desiring to access the coast from San Mateo Campground to sound levels that are substantially higher than existing levels and would likely approach over 90⁴⁴ decibels. While not presenting the same hearing loss risks as pile driving, these sound levels would significantly degrade the recreational experience of using the Panhe Trail and would likely discourage the use of this recreational and coastal access resource during construction of the proposed project.

Although not discussed or analyzed by TCA in the project EIS or consistency certification, the proposed demolition of nearly one mile of Cristianitos Road may also result in substantially elevated sound levels. The timing and techniques employed during demolition activities would influence the amount, duration and level of noise produced and the proximity of the temporary Panhe Trail to these activities would affect the significance and magnitude of potential impacts to recreational users of the trail. Without additional information it is difficult to adequately assess these noise impacts.

Noise levels on the realigned Panhe Trail during the operational phase of the proposed project would also be elevated above existing levels. However, the noise analysis provided by TCA does not include existing or anticipated sound levels for any portion of the Panhe Trail or adjacent areas. For much of its length the realigned Panhe Trail would be located along the realigned Cristianitos Road and/or between Cristianitos Road and the proposed toll road. Based on existing sound levels in close proximity to the I-5 freeway provided in the noise analysis, it can reasonably be assumed that sound levels on the Panhe Trail between the San Mateo Campground and I-5 would approach 70 decibels during peak traffic flow on the proposed toll road. As described for grading and general construction activities above, although these noise levels would not pose a danger to recreational users of the Panhe Trail or specifically preclude the use of this trail by recreational users, because these sound levels likely represent a substantial increase above existing sound levels along the Panhe Trail the Commission finds that the quality of the recreational experience of using this trail would be diminished.

San Onofre State Beach Subunits 2 and 3

As described in TCA's December 2003 *South Orange County Transportation Infrastructure Improvement Project Recreation Resources Final Technical Report*, adverse noise impacts are also anticipated within the coastal zone on portions of San Onofre State Beach subunits 2 and 3 – the Trestles Beach and San Onofre Beach subunits. Elevated sound levels would be experienced within the Trestles Beach subunit on portions of the Upper Trestles Trail, the California Coastal Trail and the Panhe Trail during both construction and operation of the proposed toll road. Increased sound levels would be experienced within the day use parking area of the San Onofre Beach subunit during both construction and operation of the proposed toll road as well.

⁴⁴

Based on information provided in the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* heavy grading operations would produce sound levels of 90 dBA at a distance of 50 feet.

Existing sound levels in each of these locations are anticipated to increase by approximately five decibels from roughly 66 decibels to approximately 71 decibels, four decibels above the Noise Abatement Criteria identified by Caltrans and the Federal Highway Administration. This increase will introduce additional freeway and vehicle noise upon recreational and coastal access trails and areas that already experience noise from these sources. Although the introduction of additional vehicle and freeway noise upon these coastal access and recreation trails will slightly degrade the recreational use of these resources, because of the proximity to the existing I-5 freeway and the existing noise produced by this freeway, the marginal increase produced by the toll road would not be expected to substantially degrade or limit the recreational use of these resources.

Construction activities may produce a more severe degradation of the recreational use of these areas, however. The proposed one year of pile driving that would be required for the two proposed toll road “flyover” structures (six months for each one) would produce highly elevated noise levels that would likely be experienced on portions of the Coastal Trail and Upper Trestles Trail portions of SOSB subunit 2. In addition, the activities proposed for the Basilone Road overcrossing, the nearby access road undercrossing, and the San Onofre Creek Bridge widening would also require extensive pile driving activities. Although TCA has not provided an estimate of the amount of time required for this phase of construction, the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* states that “based on the experience with the San Joaquin Hills Transportation Corridor, pile driving usually lasts about 1 to 1 ½ weeks per pier or abutment. For most bridges, including wildlife crossings, there are two abutments and two piers.” This information suggests that the pile driving associated with the proposed undercrossing, overcrossing and bridge widening would require three to four months to complete. The noise produced during these activities has the potential to substantially increase existing sound levels at beach portions of SOSB subunits 2 and 3 and may therefore degrade or interfere with the recreational use of these beach areas for a prolonged period of time.

TCA has not conducted an analysis of construction related noise impacts and therefore no modeling information is available to aid in determining the exact sound levels that would be experienced on these beaches during pile driving. However, the nearest of these beaches, near the mouth of San Onofre Creek, is within approximately 800 feet of the San Onofre Creek Bridge widening project area, and the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* states that pile driving noise can reach levels of 75 decibels at a distance of 900 feet. Extrapolating this information, the Commission assumes that this beach portion of SOSB subunit 2 would experience sound levels upwards of 75 decibels for between one and several months during pile driving activities. Existing sound levels for this portion of beach have not been provided by TCA. Nearby sound monitoring conducted within a beach portion of SOSB subunit 3 recorded average levels of about 66 decibels. Due to the logarithmic nature of the decibel scale, this potential increase of 9 decibels – from 66 to 75 decibels –

during construction represents close to a perceived doubling of sound levels. The Commission finds that such sound levels, especially when produced in concussive intervals by a pile driver, would substantially degrade the recreational opportunities and experiences provided by the beach at which they are received. Similar sound levels may also be experienced by beaches within SOSB subunit 3 during construction.

Mitigation

TCA has not provided the Commission staff with an analysis of the magnitude and extent of construction related noise impacts, beyond the simple description of activities and the noise levels that they can reasonably be expected to produce that is included in the *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project* referenced repeatedly above. In the project EIS TCA contends that “the potential for noise related construction impacts is not refined at this time because detailed construction phasing and programs for the individual build Alternatives have not been fully developed.” However, TCA has proposed several mitigation measures to address anticipated construction related adverse noise impacts. As detailed below, TCA has also committed to several measures to offset or minimize operational noise impacts. Noise related mitigation measures are included and discussed below:

Measure N-1. Local Control of Construction Hours. ...Any project construction activities planned between 7:00 PM and 7:00 AM on MCB Camp Pendleton will require approval from the TCA in consultation with the Commanding General of Camp Pendleton. For any portion of this project that may be constructed on MCB Camp Pendleton in San Diego County (outside the area of jurisdiction of the Orange County Noise Ordinance or outside the area of jurisdiction of San Clemente's Noise Ordinance), approval of the planned hours of construction, including any need to perform nighttime pile driving, will rest solely with the Commanding General of Camp Pendleton. [only the applicable portions of this measure are included above]

It is the understanding of the Commission that it is neither the duty nor obligation of the Commanding General of Camp Pendleton to consider or reduce potential construction related noise impacts on the recreational use of SOSB. Accordingly, providing the Commanding General of Camp Pendleton with approval authority of construction hours and nighttime pile driving activities would not ensure that adverse impacts to recreational resources within SOSB as a result of project related noise would be avoided or minimized. Therefore, this measure may not provide any direct mitigation to the noise related adverse impacts to the recreation resources discussed above.

Measure N-2. Construction Equipment. During construction activities, the construction contractor will ensure that the construction vehicles and equipment shall be maintained properly in tune as required by local ordinances.

Additionally, each internal combustion engine used on the job shall be equipped with a “residential” or “hospital” grade muffler.

The degree to which this measure would reduce noise levels produced by construction equipment is not clearly defined. Furthermore, as discussed above, the primary noise impacts associated with the proposed project would result from the action of pile driving and heavy grading and not necessarily from the engines of the equipment conducting these activities. Therefore, it is unclear how much, if any, sound reduction can reasonably be expected from this mitigation measure.

Measure N-3. Schools Adjacent to Construction Zone. Prior to construction activities in the vicinity of any school, the construction contractor shall be responsible for developing an agreement with Capistrano Unified School District, Camp Pendleton and private school operators as appropriate, that would mitigate construction noise levels in classrooms and playfields at the affected schools to an agreed to construction noise performance standard. Each agreement shall be completed prior to the initiation of any grading on construction within 600 m (2,000 ft) of the school grounds. Examples of noise mitigation options include construction of temporary soundwalls, and limitation of some of the noisiest construction activities to periods when the schools are closed (e.g., the summer for the two public schools).

Although this measure may provide a reduction in noise levels for school facilities it does not include recreational or park facilities and would therefore not minimize or offset noise impacts to these resources. It should be noted that the only school-type facility located within the coastal zone portion of the project area is the San Onofre Child Development Center, located on MCB Camp Pendleton directly adjacent to the proposed Basilone Road overcrossing, the proposed access road undercrossing, the proposed Camp Pendleton San Onofre Gate, the proposed toll road northbound connector to I-5 and the proposed San Onofre Creek Bridge widening. The proposed construction of these areas would require extensive pile driving and general construction. As described in the mitigation measure above, “some of the noisiest construction activities” in these areas would be limited to periods when schools are closed – presumably during the evening, weekend and summer periods. The concentration of noisy construction and pile driving activities during these periods, also periods of peak recreational beach use, may result in adverse recreational impacts to those recreational users within the southern end of Trestles subunit of SOSB.

Measure N-4. Haul Routes. Prior to construction activities, the construction contractor shall establish haul routes that avoid passing through or adjacent to residential and school areas to the extent feasible. In general, truck routes should be directed away from residential areas and onto the I-5 to minimize the construction truck intrusion. If haul routes must pass through residential areas,

haul route traffic should be limited to daytime hours (7 AM to 8 PM). The haul routes will be developed in conjunction with the applicable local jurisdictions.

This measure is directed specifically at residential areas and schools and presumably does not apply to the public access and recreation resources within SOSB, including the San Mateo Campground. This measure therefore provides no guarantee to positive noise impact reduction for recreational and coastal access resources within SOSB.

Measure N-6. Noise Complaint Officer. Prior to construction activities, the construction contractor shall identify a Noise Complaint Officer and establish a Noise Complaint hotline. The Noise Complaint Hotline shall be able to receive calls on a 24 hour basis. Any complaints regarding construction shall be forwarded to the Noise Complaint Officer. The Noise Complaint Officer shall record the general description of the complaint, the time the offending noise occurred and the location of the complaint. The Officer shall attempt to measure the noise that generated the complaint within the following 24 hours. If the noise levels exceed those allowed during nighttime construction activities under the local Noise Ordinance, or activities are occurring that are inconsistent with the noise mitigation measures, then the construction contractor shall be responsible for correcting those problems within the following 48 hours. The noise levels measured and any corrective actions shall be recorded with the original complaint form.

Because there is apparently no applicable local noise ordinance for activities proposed to occur within the SOSB leasehold of MCB Camp Pendleton, it is unclear if this mitigation measure would be relevant for the portion of the project area within the coastal zone. In addition, the potential effectiveness of this measure appears fairly uncertain due to the fact that activities that would generate complaints may not continue long enough to enable the noise officer to measure them. Apparently, if noises occur, generate complaints, and the noise officer is not able to measure them than no corrective measures would be taken. The effectiveness of this measure to reduce noise impacts to recreational and coastal access resources remains unproven and uncertain.

Measure N-7. Final Noise Analysis. During final design of the selected Alternative, the TCA or the implementing agency/agencies will prepare a final noise analysis based on the detailed and finalized design developed during final design for the selected Alternative. Feasibility considerations for each sound barrier must meet FHWA/Caltrans criteria including a minimum of 5 dB of noise reduction at the impacted receiver. Additional feasibility considerations are (1) topography, (2) access requirements for driveways, ramps, etc; (3) the presence of cross streets, (4) other noise sources in the area and (5) safety considerations. The TCA or the implementing agency/agencies will finalize noise mitigation requirements for the selected Alternative and coordinate design with the local agency. As appropriate, the Final Noise Assessment Technical Report and the

sound barrier/berm height recommended in the Final Noise Assessment Technical Report will serve as a guideline in determining the final barrier height requirements. Other pertinent information from the Final Noise Assessment Technical Report will be incorporated into final design as appropriate. The Final Noise Assessment Technical Report will provide specific recommendations that will then be incorporated into the Construction documentation (i.e., final design) for building purposes.

Although the implementation of this measure may reduce and minimize project related noise impacts, the Final Noise Analysis has not been developed and has therefore not been provided to Commission staff for review. Therefore it is difficult to accurately assess the potential for this measure to provide a substantive reduction in project related noise impacts.

Measure N-8. Long-Term Noise Impacts. During construction, the TCA or the implementing agency/agencies shall implement permanent sound barriers, including walls, berms or combinations of walls and berms. The sound barrier and/or supplemental berm must provide a minimum of 5 dB of noise reduction at the impacted receiver as refined during final design. The locations of these proposed sound barrier/berms are shown on Figures by Alternative in Appendix K. The construction contractor will be responsible for constructing the sound barrier/berm for the selected Alternative and as refined during final design. The design and specifications of the sound walls, shown on Figures 5.2-79 through 5.2-82 (Appendix H of the EIS/SEIR), on MCB Camp Pendleton shall be approved by the Commanding General of Camp Pendleton.

The placement of sound barriers and sound walls has been described by TCA in the project EIS and consistency certification and much of the analysis of the proposed project's operational noise impacts rely on the placement of soundwalls to reduce the sound levels at sensitive receptor sites, such as the San Mateo Campground. The placement of soundwalls, while anticipated to reduce the level of vehicle and traffic noise produced by the toll road in certain areas, would not provide a positive sound reduction during construction activities. This mitigation measure would therefore not reduce or offset the adverse affects of project construction noise described above. Furthermore, as described in the document titled, *Noise Assessment for South Orange County Transportation Infrastructure Improvement Project*, even with the addition of a 16 foot high by 4000 foot long soundwall along the portion of the toll road route that is adjacent to the San Mateo Campground, this coastal accommodation and recreation area would still experience sound levels that would be perceived as roughly twice as loud as existing sound levels. These "mitigated" sound levels would still be high enough to interfere with sleep and recreational enjoyment of this camping facility.

Commitment NC-1. Determination of Reasonableness. During final design, the TCA or the implementing agency/agencies shall determine the reasonableness of

soundwall/berm placement and consider the life cycle of the sound barrier, the potential environmental impact of the mitigation, opinions of impacted residents, input from the public and local agencies, and social, economic and environmental factors consistent with the FHWA/Caltrans feasibility criteria.

Commitment NC-2. Soundwall/Floodplain. During final design, if the TCA or the implementing agency/agencies locates a soundwall/berm in a floodplain, the TCA or the implementing agency/agencies shall prepare an evaluation of the effects of the soundwall on the floodplain in accordance with appropriate guidelines and design manuals. The design and location will be determined to ensure there is no exceedance of the one foot elevation of the base floodplain. Early recognition and analysis of potential problem areas will be made to determine if wall openings or staggered wall openings are viable for those barriers.

Because TCA has not completed its analysis of whether the proposed sound walls can be constructed consistent with floodplain requirements, the Commission cannot even be assured they will be fully implemented.

Conclusion

The adverse effects of project related construction and operational noise on the coastal recreation and access resources within the project area would be substantial. Such effects may include the de-facto closure of the coastal access Panhe Trail, the abandonment or severely limited use of the San Mateo Campground, and the interference and degradation of the recreational use of SOSB subunits 2 and 3 – Trestles Beach and San Onofre Beach. The Commission therefore finds that the elevated and prolonged sound levels resulting from the proposed project would result in substantial reductions in the availability of public access and the severe degradation of the quality of the coastal recreation and access resources at SOSB. The Commission therefore finds the proposed project inconsistent with the public access and recreation policies (Sections 30210-30214, 30220, and 30240(b)) of the Coastal Act.

Public Views

Because the Coastal Act's policy regarding consideration and protection of the scenic and visual qualities of coastal areas supports the quality and quantity of the recreational use of those areas, the proposed project's potential effects on the existing viewsheds and visual characteristics of the coastal zone portion of the project area will be considered in this section.

The existing condition of the project area is defined primarily by two features, the existing I-5 freeway corridor and the undeveloped natural areas and open space of San Mateo Canyon and San Onofre State Beach. As one of the few remaining rural coastal canyons within the southern California region, San Mateo Canyon (including the Cristianitos and Trestles Beach subunits of SOSB) is characterized by an abundance of views of natural coastal and upland areas that are largely devoid of human development –

a condition that is singularly unique throughout the region. In particular, the views and visual qualities surrounding the San Mateo Campground, Trestles Beach and the Panhe, Upper Trestles and Coastal Trails are valued throughout the region due to the amount, quality and diversity of ecological communities that are represented in these areas as well as the large panoramic views of the Pacific Ocean and San Mateo Canyon's large rural and natural landscapes. As described by CDPR in the August 1997, *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach*, the high visual quality of this region is considered to be one of the key assets of San Onofre State Beach and contribute substantially to its "spirit of place."

The proposed construction and placement of an additional ~~6~~-four lane (two in each direction) elevated freeway in this area would represent a substantial transformation of this existing condition.

In the visual impact analysis conducted by TCA as part of the proposed project's environmental review, a variety of Key Observation Points were selected to demonstrate the proposed toll road's effect on the existing viewshed. In addition, in the August 1997 *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach* produced by CDPR, additional visual simulations were produced. These projections and simulations are provided as Exhibit 31. As these simulations demonstrate, the presence of the proposed toll road would substantially degrade the scenic and visual qualities of a variety of the coastal areas within the coastal zone portion of the project area, ~~as well as those of several of the coastal recreation resources located outside of the coastal zone within the Cristianitos subunit of SOSB.~~

Panhe Trail

The Panhe Trail provides coastal access between Trestles Beach and the San Mateo Campground and passes primarily through relatively intact open space outside of the immediate vicinity of roads or buildings for approximately ~~80~~76% of the one and a half mile length. Views along this trail include rare coastal sage scrub plant and animal communities, undeveloped hillsides, riparian areas, and San Mateo Creek and culminate in the open sandy areas of Trestles Beach. Although ~~a portion~~18% of this route parallels Cristianitos Road ~~for a short distance~~ and ~~6~~% passes beneath the I-5 bridge over San Mateo Creek, it nonetheless provides a visual experience of how this coastal canyon appeared historically – a unique quality in the highly developed coastal areas of southern California. Use of this trail and the natural setting that surrounds it has been described as an important aspect of the overall experience of surfing at the world famous surf breaks of Upper and Lower Trestles.

The proposed project includes plans to re-route nearly the entire length of this trail on the inland side of I-5, first by diverting it along the temporarily re-aligned Cristianitos Road through the construction area of the proposed toll road during the approximately three year construction phase of the project, and then along the permanently realigned

Cristianitos Road and adjacent to or below the proposed toll road during the operational phase of the proposed project. Each of these proposed routes for the Panhe Trail would significantly degrade the visual experience of using this trail.

As described above, existing views along the inland portion of the Panhe Trail primarily include open natural areas and intact habitat. Unique among the trails that exist within SOSB, the Panhe Trail provides users with the opportunity to pass within and through nearly the full range of ecosystems and natural communities represented within SOSB, including dry upland, coastal sage scrub, riparian, coastal and sandy beach areas. By providing a trail link between the inland and coastal subunits of SOSB, the Panhe Trail allows users to fully experience the visual and natural transition between these subunits and the habitats that characterize them. Although TCA has not provided Commission staff with any visual simulations or analyses depicting the proposed realignment of the Panhe Trail compared to the existing alignment, based on the trail location representation demonstrated in Exhibit 28 as well as engineering schematics it is clear that the proposed trail alignment would be dominated by views of the proposed toll road. Indeed, by passing on each side, above and below the proposed toll road, the realigned Panhe Trail would include views of the toll road from nearly every possible angle. The realigned Panhe Trail would remain adjacent to and within immediate view of the toll road for its entire inland extent. The Panhe Trail would pass to the east of the toll road after departing the San Mateo Campground, join with the realigned Cristianitos Road to begin the climb to the toll road's elevated road bed, pass over the toll road along the proposed Cristianitos Road overcrossing, continue along the realigned Cristianitos Road and between Cristianitos Road and the toll road on the west side, and finally follow below the elevated toll road before passing below I-5. On the coastal side of I-5 the Panhe Trail would resume its original, unaltered route to the coast.

While traversing above, below and between the toll road, views along the Panhe Trail would not be characterized by natural landscapes and scenic coastal areas but would instead be comprised of a close up examination of freeway engineering and reinforced concrete construction. This radical change in the Panhe Trail's alignment and the dominating presence of the toll road would transform what was once a scenic coastal viewshed into a highly engineered, developed and altered landscape.

Use of the Panhe Trail during the three year construction phase of the proposed project would subject park visitors to an even more radically altered and degraded viewshed. The proposed project involves the use of ~~hundreds~~ approximately 10 to 20 ~~of~~ pieces of heavy equipment within the coastal zone at any one time, massive amounts of vegetation clearing, grading and landform alteration. The construction area within the project's disturbance limits would be especially degraded during construction and views would be dominated by ongoing activities, staging areas, and cleared, deformed land. The proposed route of the Panhe Trail during construction would be located directly within these disturbance limits, adjacent to the temporarily realigned Cristianitos Road and in close proximity to the demolition of the existing Cristianitos

Road and the construction of the toll road and the realigned Cristianitos Road, resulting in adverse affects to the previous scenic coastal views provided by this trail during construction.

California Coastal Trail and Upper Trestles Trail

Within the coastal zone, the visual character of the majority of the California Coastal Trail segment that passes through the Trestles Beach subunit of SOSB would be permanently altered (including that portion of the Coastal Trail that is combined with the Upper Trestles Trail). Although this trail currently parallels the I-5 freeway corridor, views of the existing freeway are limited by the relative elevation of the trail and freeway, the presence of vegetation and visual screening and the small buffer area between the trail and freeway. Currently, the California Coastal Trail is below the grade of I-5 for most of its length through the project area and aside from occasional views of large trucks in the southbound “slow” lane, the freeway’s presence is not always visible. This situation would be substantially changed by the presence of the southbound connector of the proposed toll road, however. This elevated structure, passing up approximately 20 feet above the existing I-5 freeway, will occupy a substantial portion of the vegetated buffer area between I-5 and the Coastal Trail and will be readily visible from the Coastal Trail for the majority of its length between Cristianitos Road and Basilone Road. Although TCA has yet to provide Commission staff with visual simulations of the toll road from the Coastal Trail, engineering schematics and simulated views from nearby observation points suggest that the toll road would substantially intrude upon the viewshed of the Coastal Trail and alter the visual character of this area from one dominated by natural views and open space to one dominated by an elevated freeway structure.

Trestles Beach

Similarly, inland views from ~~much a small portion~~ of the Trestles Beach subunit would also be altered by the presence of the proposed toll road. While the existing elevation of the I-5 freeway does not make it visible from the beach and ocean, as shown in Exhibits 32, ~~because~~ Although the proposed toll road would be elevated up to 20 feet above the existing I-5 freeway for much of the length of the connection between these two freeways, the proposed toll road would not be visible from the ~~ocean and beach~~ as a result of existing topography and vegetation, and as depicted in the additional view simulations provided by TCA. The proposed toll road would therefore minimally alter the character of the San Mateo Valley – as seen from the beach and ocean looking inland – from one with almost no evidence of human development to one in which the proposed freeway would be ~~clearly~~ visible from only select areas very close to the existing I-5 as it horizontally bisects San Onofre State Beach above the canopy of existing vegetation.

San Mateo Campground

Although located outside of the coastal zone, the placement of the proposed toll road, its associated 4,000 foot long by 16 foot high soundwall, and the realigned Cristianitos Road adjacent to and within approximately 200 feet of the San Mateo Campground would severely alter the visual character of this area and would have the potential to adversely affect the campground’s ability to function as a coastal recreation and low cost visitor

serving resource. As demonstrated in Exhibit 31, the existing views from the campground and outdoor education center are dominated by the 403 foot tall Pocket Mouse Hill and adjacent undeveloped hillsides that comprise the border between the County of San Diego and the City of San Clemente. As described by CDPR in a January 10, 2006, comment letter to TCA:

San Mateo Campground sits in an undeveloped coastal canyon along San Mateo Creek. Interstate-5 is approximately 0.7 miles (3700 feet) south of the campground and barely visible to campground patrons. This location provides for a quiet and relatively isolated camping experience in one of the few remaining large coastal open space recreation areas in Southern California.

The proposed toll road and its associated development would substantially alter the visual character of the campground and surrounding areas. The proposed toll road would be raised high above the grade of the existing Cristianitos Road on a small hillside of fill material and would be bordered on the campground side by the 4000 foot long by 16 foot high soundwall that has been proposed to reduce anticipated traffic noise levels. As shown in Exhibit 31, the campground's visual backdrop would be altered from one of open natural landscapes to one dominated by the toll road, soundwall and realigned Cristianitos Road. TCA confirms that this change would significantly degrade the visual character of the campground:

...the project will obscure most of the hill which is the dominant component of the existing conditions view. The intactness of this view will change... because the road embankment is so close to the campground that it will become a prominent feature in the view instead of the hill and the retaining wall and guard rail will contribute urban features to the view which is currently largely undeveloped. The unity of the visual elements will change... because the plane of the fill slopes and straight lines of the edge of the retaining wall and the edge of the toll road surface will substantially interrupt the existing curvilinear patterns of the view. The overall visual rating would change from moderately high (rated 5) to moderately low ($3 + 3 + 3 = 9$, $9/3 = 3$). This change of two rating points in visual quality would be a substantial adverse impact on the sensitive viewers in SOSB, especially at the Campground.

This “substantial adverse impact” that TCA describes ~~can reasonably~~ could potentially be expected to reduce the popularity and overall use of the San Mateo Campground and therefore has the potential to adversely affect the coastal recreation resources and services provided by both the campground and SOSB as a whole. CDPR has stressed this point in a number of written comment letters and reports to TCA over the past decade. The most recent of these correspondences, dated January 10, 2006, describes both the anticipated visual effects of the proposed project on the San Mateo Campground as well as the consequences of these visual alterations on the use and function of the campground and park:

...locating a multi-lane, limited access highway within a few hundred feet of a secluded campground will so destroy the recreational value of the campground and sense of place as to render it valueless. Moreover, the impacts of fragmentation on Cristianitos Subunit #1, fragmentation recognized by the FSEIR, will likely result in the necessity of abandonment of the subunit as a component of the California State Parks system. There is no substantial evidence in the record to suggest otherwise...

It appears that the nearest campsite to the toll road will be within 200 feet... Construction of the project will include a 16 foot soundwall. Between the soundwall and the campground, the re-routed Cristianitos Road will be as close as 190 feet to the nearest campsite.

This will irrevocably destroy the sense of place and camping experience at San Mateo Campground. It calls into question the viability of the campground and, indeed, the viability of the entire subunit. The linear nature and split elevation of the arterial, its cut-banks, fills, retaining walls, soundwalls and their landscaping will reduce the site's attractiveness to the public, as well as creating a potential wildlife barrier and park management obstacle. This configuration decreases the recreational value to the public by introducing totally unnatural and discordant visual elements intruding upon previously open vistas, eliminating natural trail corridors, and other recreational opportunities and excludes potential park activities such as environmental and equestrian camping.

This letter also goes on to note that based on testimony of San Mateo Campground users presented at the November 3, 2005, California State Parks and Recreation Commission hearing:

People who use San Mateo Campground do so because of its relative quiet and seclusion. They do not go camping to be next to a multi-lane highway and have their views truncated by a 16' high soundwall.

Overall, due to the incompatibility of the proposed project's anticipated visual and landform alterations with the existing use of the San Mateo Campground and the requirements of the campground's users, CDPR states, "California State Parks staff, based on its experience in operating and managing parks, believes that result of these impacts will be the eventual loss of San Mateo Campground." CDPR further asserts:

If a toll road alignment through SOSB is selected, California State Parks believes that with the exception of the support parking for the trail to Trestles, all of Cristianitos Subunit #1 must be abandoned to the lessor due to the loss of values which make it of park quality and loss of revenue (for which TCA asserts it owes no compensation).

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Although it would not physically displace significant campground elements or sites, the proposed project would alter the visual qualities and characteristics of the area surrounding the San Mateo Campground to such a degree as to result in the loss of the area's recreational value and the degradation of the entire park. As TCA acknowledges in the project EIS:

The alignment through [SOSB] would conflict with the policies and goals of SOSB. As described in Section 4.18.1, the SOSB General Plan identifies scenic resources including geomorphic features and vegetation to be of great importance and it is SOSB policy to protect these resources from all degrading and undesirable intrusions. The removal of vegetation, including sage scrub, and the cut and fill alterations of the landform in SOSB would conflict with this policy. Partial view blockages would occur for westbound drivers on Cristianitos Road in SOSB. The alignment through [SOSB] would conflict with the SOSB General Plan policies and goals. The blockage of views from Cristianitos Road in SOSB would conflict with this policy. Therefore, implementation of the project along [SOSB] would have a substantial adverse impact related to adopted SOSB policies and plans.

I-5 Scenic Highway Corridor

The 21 mile stretch of I-5 from the City of Oceanside city limits north to the Orange County line (including all portions of I-5 in the project area) has been recognized by the Scenic Highway Element of the San Diego County General Plan as a priority for scenic highway designation. [However, as a military installation on federal land, MCB Camp Pendleton is not subject to County policies and regulations.](#) This priority status was given in recognition of the high visual quality of the area traversed by the route and in consideration of one or more of the following selection criteria:

- *Routes traversing and providing access to major recreation, scenic or historic resources;*
- *Routes traversing lands under the jurisdiction of public agencies;*
- *Routes supported by significant local community interest;*
- *Routes offering unique opportunities for the protection and enhancement of scenic recreational and historical resources.*

The scenic highway designation is intended to “preserve and protect scenic highway corridors from change that would diminish the aesthetic value of adjacent lands” and “protect and enhance the County’s “scenic, historic, and recreational resources” within the viewshed of all scenic highway corridors” by limiting and minimizing projects or activities that would result in adverse effects to visual resources. In the recently

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Both TCA and CDPR anticipate that the proposed toll road alignment would necessitate the removal of a maintenance yard and pump station.

completed *Guidelines for Determining Significance – Visual Resources*, the County of San Diego has determined that:

Typical adverse effects on visual resources in the unincorporated portion of the County may be caused by any of the following, or others, either temporarily or permanently:

- *Altered landforms (i.e., cutting down hills and mesa tops, filling in canyons, encroaching on steep slopes, creating extensive cut or fill slopes, flattening of any topographic feature);*
- *Incompatible design features;*
- *Incompatible uses;*
- *Noise and retaining walls;*
- *Vegetation clearing;*
- *Insensitive siting; and/or*
- *Grading that does not modify landform to a noticeable level once it is vegetated (i.e., remedial grading [cut and fill] beyond pads to be revegetated with native plants).*

Construction and operation of the proposed project would involve the majority or all of the activities described above and would substantially alter the character and quality of existing views from I-5 [throughout the project area at the location where the project connects to I-5 on MCB Camp Pendleton](#). TCA acknowledges the priority scenic highway designation of I-5 in the project area as well as the proposed project's potential to adversely affect views from I-5 in the project EIS:

The County of San Diego has designated I-5 from the City of Oceanside city limits north to the Orange County border as a Scenic Route. The County identifies any physical change which will substantially affect the viewshed of a designated scenic highway to have a significant visual effect on the highway. Implementation of the connector ramps that cross I-5 will introduce a long elevated structure to the views of the densely vegetated San Mateo Creek area and the agricultural fields north of I-5. The connector ramps will be in the foreground view of motorists and would substantially and adversely change the viewshed to the northeast. The southern part of the connector ramps will also obstruct ocean views for motorists on I-5. Therefore, implementation of the project along the south part of [the project area] would have a substantial adverse impact related to adopted policies and plans of San Diego County.

As described above, the proposed project would obstruct ocean, riparian and open space views along a priority scenic highway corridor and introduce incompatible visual elements to the viewshed throughout the project area. Although TCA has not provided Commission staff with visual simulations of the altered views from I-5 during the construction and operational phases of the proposed project, the analysis provide above as well as schematic renderings of the toll road suggest that those portions of I-5 in the project area would experience adverse visual impacts.

Night Lighting

In the project EIS, TCA describes the operational lighting requirements of the proposed toll road by stating that:

There will be light and glare impacts associated with the [proposed toll road] and these impacts will occur under all the build Alternatives. For the corridor Alternatives, toll collection plazas and their lanes and ramps will be continuously lit. The mainline corridor will not be continuously lit...These new sources or new locations of light have the potential to spill onto adjacent land uses. These light and glare impacts would be substantially adverse prior to mitigation.

Although TCA identifies spillover light as a source of substantially adverse effects in and around the lighted portions of the toll road route, there are no proposed toll collection plazas located within the coastal zone portion of the project area and, as stated above, the toll road itself would not be continuously lit during operation. [For safety reasons and in compliance with Caltrans safety standards, the connector ramps and interchanges will be lit.](#) The proposed toll road would ~~therefore not~~ require lighting within the coastal zone [at the north-to-north connector and the south-to-south connector, and at the Cristianitos and Basilone interchanges.](#) While it is likely that spillover light would result from the use of vehicles on the proposed toll road, visual simulations or descriptions of this potential source of spillover light have not been provided by TCA. Analysis of the extent and magnitude of this potential adverse affect is therefore extremely difficult. In addition, the use of construction lighting during the approximately three years of proposed construction within the coastal zone was not included in the analysis provided by TCA in the project EIS or the consistency certification. Several of the construction phases of the proposed project will require the use of substantial amounts of lighting on a continuous basis during the nighttime hours. The presence of this lighting in an area otherwise characterized by its rural setting and lack of development (including lighting) would result in a substantial change in the existing visual condition. The continuous or periodic use of this lighting for as long as several years would result in adverse effects to the visual resources in the project area by substantially altering what would otherwise be an area of little or no illumination. The magnitude of this adverse impact is difficult to determine however, due to the lack of information provided by TCA in regards to night lighting during construction.

Construction

In addition to the recognized and anticipated adverse effects to visual resources throughout the project area as a result of the final build-out of the proposed toll road, the lengthy construction phase of the project is anticipated to result in a variety of impacts to visual resources as well. Many of these activities and the impacts associated with them are described in the recreation section above in additional detail. The use of staging areas and construction sites as well as the clearing of vegetation, construction of access roads, grading and fill of up to 45 million cubic yards of soil, and the production of substantial amount of dust for approximately three years would substantially degrade the existing visual condition of the 138 acres of the project area located within the coastal zone. The disturbance and construction activities within this area would affect those recreational

users of the Cristianitos subunit of SOSB most severely by dramatically increasing the amount of cleared land and transforming an area previously characterized by its rural natural setting into a beehive of heavy construction activities. In addition, as described previously, the use of the California Coastal Trail for staging and construction equipment access would also adversely affect the visual resources of the Trestles Beach subunit of SOSB by greatly increasing the amount of construction equipment and cleared vegetation in an area otherwise defined by its natural features and access trails. Furthermore, although the actual construction phase of the proposed project is anticipated to last approximately three years, it is likely that several more years will elapse before the process of re-vegetation overcomes the amount of cleared and denuded soil within the project's disturbance limits. During that period of re-growth, the disturbed area within the project footprint would continue to bear the visual scars of construction and the visual resources of this area would remain in a degraded state. Overall, due to the length of time required for construction to be completed and its effects to be concealed, four to five years conservatively, the Commission finds that although regarded as temporary by TCA, the effects of construction of the visual resources of the coastal zone portion of the project area would be substantially adverse.

Landform Alteration and Alternatives

The proposed project would require ~~several~~⁴⁶ 1.4 million cubic yards of cut and fill material within the 138 acres of land within the coastal zone portion of project footprint. This material would be required to elevate the toll road through the Cristianitos subunit of SOSB and provide a level, elevated plane on which to place the roadbed. Additional cut and fill would also be required to carve the proposed route through the hills and valleys that characterize the eastern edge of the San Mateo Canyon as well as to provide the leveling and smoothing of adjacent landforms as described in mitigation measure AS-1, below. As required under Coastal Act Section 30251, "permitted development shall be sited and designed to...minimize the alteration of natural land forms." Of the 15 alternative toll road routes for which TCA has provided project-wide landform alteration information, the proposed project would require more cut material than all but three other alternatives, more fill material than all but four other alternatives and more remedial fill material than all but seven other alternatives. Given the fact that the proposed alternative would require more cut, fill and remedial fill than two-thirds of the other alternative toll road routes analyzed by TCA it is clear that the proposed project was not selected because it was sited and designed to minimize the alteration of natural land forms.

Mitigation

As a result of the permanent adverse impacts to visual resources identified in the project EIS, TCA has proposed several strategies to minimize or avoid these impacts. TCA has

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TCA provided Coastal Staff with a detailed project description entitled *Roadway Description and Related Design Features in the Coastal Zone* on March 23, 2007, which included detailed cut and fill numbers for the project within the coastal zone on p. 5. Although the exact quantity of cut and fill required within the coastal zone portion of the project has not been provided to Commission staff by TCA, the project wide use of over 58 million cubic yards of cut and fill (including remedial fill) suggests that the coastal zone portion would contribute at least several million cubic yards. Although overly simplified, project wide data provided by TCA suggests an average

~~of 3.6 million cubic yards of cut/fill per mile of the proposed toll road alignment.~~

determined that “No mitigation measures are necessary for short term visual impacts” and therefore has not proposed or committed to any mitigation strategies to minimize or offset the adverse visual impacts that may occur during the three year construction phase of the proposed project. The relevant proposed mitigation measures are presented and discussed individually below:

Measure AS-1. Adjacent landforms affected by the build Alternatives shall be re-contoured to a 2:1 slope or as determined appropriate through geotechnical investigation to provide a smooth and gradual transition between modified landforms and existing grade and to minimize the appearance of manufactured grading. Use of crib-type retaining walls in place of slopes shall be minimized, except where necessary to provide greater landform diversity, reduce fill slopes, minimize long, flat slope surfaces or potentially salvage rock outcroppings. In areas where sensitive habitat is not prevalent, the top and toe of the slope edges shall be rounded to reduce the angular effects of manufactured grading. The top of slopes where the surface breaks the horizon or ridgeline shall be undulated to avoid a straight edge along the skyline. For slopes greater than 20 m (65.6 feet), terrace drains shall be used to break up slope surfaces.

The TCA or the implementing agency/agencies shall prepare Aesthetic Design Guidelines for the project, similar to the guidelines for the San Joaquin Hills Transportation Corridor and the Foothill/Eastern Transportation Corridor. It is not possible to provide these guidelines at this stage of the project. The guidelines will be developed during final design of a preferred alternative. The Design Guidelines shall specifically address grading, berm design, slopes, benches and the incorporation of sound and retaining walls. These Guidelines will be used in conjunction with the Landscape Design Guidelines described in measure AS-2 to minimize the visual impacts of the build Alternatives.

Although this mitigation measure has the potential to reduce the massive amount of landform alteration required for TCA to implement the proposed project over the long-term, over the short-term (3-5 years) the visual resources of the project area would experience a substantially adverse impact due to the amount of vegetation clearance and grading implied in this measure. In addition, the proposed Aesthetic Design Guidelines referenced above have yet to be developed by TCA or provided to Commission staff for review. The lack of these guidelines makes a thorough assessment of the reasonable potential for this measure to succeed in reducing the visual impacts of the proposed project very difficult. In addition, although this measure may succeed in masking the landform alteration required to install the toll road, because it is largely incompatible with the existing and surrounding setting the presence of the toll road itself would continue to adversely affect the visual quality of the area it occupies. This measure includes no provisions that would reduce the adverse impacts to the San Mateo Campground, Panhe Trail and Trestles Beach described above.

Measure AS-2. The TCA or the implementing agency/agencies shall prepare Landscape Design Guidelines that will specify plant species that will either be seeded or planted on all exposed areas such that these areas will blend with the surrounding vegetated areas. Native vegetation shall be placed in appropriate locations and densities to fit into the natural setting. Landscaping with varied height and species diversity shall be used and material selection, location of native plant materials and sculptured grading shall emulate the adjacent natural setting. Terrace drains shall be screened with periodic placement of native plant materials in a random manner to help blend these drainage facilities into the slope and not unintentionally emphasize these facilities. The Landscape Design Guidelines will include the locations of the shrubs and/or vining species, where appropriate, at the base of soundwalls to blend these structures as much as possible with the surrounding areas. All landscaping treatments and materials shall be consistent with the Landscape Design Guidelines.

Similar to the above measure, this mitigation strategy has not been developed in sufficient detail to allow a thorough analysis. The palette of native vegetation to be used has not been provided to Commission staff for review and it is therefore not possible to determine how well these plants will integrate with the existing vegetation community and the amount of cover they will provide for the extensive areas of cleared soil that will result from this project. In addition, much of the area that would be occupied by the proposed toll road currently supports native plant communities, such as coastal sage scrub, that are rare, sensitive and susceptible to disturbance. It is uncertain whether or not these types of vegetation could be successfully propagated on the heavily disturbed soils that would result from the construction of the proposed project. Furthermore, as with mitigation measure AS-1 above, even if this measure were successfully implemented, the presence of the toll road would continue to adversely affect the visual and aesthetic resources of the project area.

Measure AS-4. In conjunction with operation of the corridor Alternatives, light shall be applied as effectively as possible by the TCA, minimizing both the glare of any light source and the spillover of light onto areas outside of the corridor right-of-way. The vertical or horizontal illuminance from roadway lighting sources shall not illuminate any surface outside of the right-of-way greater than 1/10 of the road's average horizontal illuminance. On the segment of a build Alternative through the Conservancy, there shall be no illumination of any surface in the Conservancy outside the right-of-way of the SOCTIIP Alternative.

Mitigation measure AS-3 was developed for several of the project alternatives that were not proposed as part of the current project and will therefore not be discussed. The above measure, AS-4 provides strategies to minimize the amount and extent of spillover lighting resulting from the proposed toll road. ~~As discussed in the above section dedicated to night lighting, this measure would also not be directly applicable to the~~

~~proposed project due to the fact that there is no lighting proposed for the portion of the toll road within the coastal zone.~~

Conclusion

For the reasons described above, the Commission finds that the proposed siting of the proposed toll road would add to the coastal public view shed a permanent feature that is not visually compatible with the surrounding area, that less damaging alternatives are available that would significantly reduce scenic view impacts, that the project does not minimize alteration of natural landforms, that the project has not been sited and designed to protect views to and along the ocean and scenic coastal areas, and that the project is inconsistent with the Coastal Act's scenic public view protection policy (Section 30251). Moreover, due to the close link between the visual and recreational policies at SOSB and Trestles, these inconsistencies exacerbate the additional inconsistencies with the public access and recreation policies of the Coastal Act discussed above.

D. Recreation- Surfing.

Section 30220 of the Coastal Act provides:

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

Section 30213 provides:

Lower cost visitor and recreational facilities shall be protected, encouraged, and where feasible, provided. Developments providing public recreational opportunities are preferred.

Surfing is the primary water oriented recreational activity in the vicinity of the proposed toll road. The Commission notes that surfing at Trestles is a low cost recreational activity. Compared to other recreational activities such as fishing, boating, or scuba diving, surfing is a much more economically feasible option for both visitors and residents. Most other recreational activities require the purchase or renting of expensive equipment and a specific time frame in which the recreation can take place. Surfing is free, requires minimal equipment, and its time frame is dependent only on the presence of waves suited for an individual's skill level. Many people surf multiple times a day or spend the whole day at the beach and surf. Surfing at Trestles is the epitome of a low-cost coastal recreational resource which is accorded high protection under Sections 30220 and 30213 the Coastal Act.

Setting

Trestles Beach, located at the mouth of the San Mateo Creek in San Onofre State Beach (SOSB) is world renowned for its consistent, near perfect waves. It provides one of the best groups of year-round surfing waves in Southern California, an area that supports one of the greatest concentrations of surfers in the world. Lower Trestles is one of ten surf breaks worldwide chosen for the Association of Surfing Professionals Men's World Tour, and is the only one from the continental United States.⁴⁷

Trestles is also considered exceptional due to the relatively natural state of its surrounding environment. There is a relatively low amount of urban and agricultural development and associated hydromodification upstream of the estuaries as compared to the surrounding region. Although there is little available data regarding water quality at the lower San Onofre and San Mateo Creek and lagoon areas, the small amount of known data for this area indicates water quality is good.⁴⁸

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See Association of Surfing Professionals, *Foster's ASP World Tour Schedule*, <http://www.aspworldeatour.com/2007/schedule.asp?rView=w&rRat=mwct&rNav=Men&rYear=2007&rTitulo=WCT> (last visited on September 18, 2007).

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John Robertus, Executive Officer, California Regional Water Quality Control Board, San Diego Region, *Foothill Transportation Corridor- South (State Route 241)*, Letter to California Coastal Commission, June 27, 2007.

Trestles' coastal setting is virtually unparalleled in Southern California because all of the other major surf breaks in the region are in urban settings and cities. San Onofre State Beach is located on one of the last remaining undeveloped stretches of coastline south of Point Conception accessible to the public. To reach Trestles, surfers typically park at a public lot inland of Interstate 5 and hike, skate, or bike about 0.5 miles to the main trail that traverses an additional 0.5 miles through SOSB. This long approach walk from a highly urbanized area to the beach through the relatively unspoiled San Mateo Creek Wetlands Natural Preserve provides a transition not experienced at other surfing beaches. It affords opportunities for wildlife viewing, exposure to native vegetation and open space, and quiet self-reflection.⁴⁹ These opportunities are a rare experience for any surfer or beachgoer in Southern California, and therefore are highly valued. Surfline, a popular website for surfers, offers this description of Trestles:⁵⁰

At the edge of Orange County's suburbia nightmare lies the Trestles experience -- one-and-a-half miles of God's country. No metered parking. No Ruby's Diner at the end of the pier. No blackballs, closeouts, volleyball nets or "Baywatch" sets -- simply put, Trestles is one of those destinations that just about any devoted surfer finds hard to resist. What makes it so irresistible? Obviously, the 100-yard lefts and rights -- which make even the most mundane surfer feel like Kelly Slater -- has something to do with it. But the complete Trestles experience offers so much more than a few tail-drifting off-the-lips. If you time it right, you can catch a bobcat or deer darting through the spindly brush and oak trees, looking for dinner or a drink in the nearby San Mateo Creek....

Trestles is a fresh breath of air within the folds of the suffocating Orange Curtain.

Recent poll results of the American surfing community also reflect that Trestles is a favorite surf break. More than 25% of respondents, when asked which surf break they would like to have in their own backyard, placed Trestles ahead of well known legendary breaks in Hawai'i and Indonesia.⁵¹ Trestles is such a vital surfing experience that for many, it is the paragon of surfing destinations and each visit is a pilgrimage.⁵²

Trestles stretches about 1.5 miles and consists of four primary and several secondary surf breaks. The primary breaks are known locally as Cottons, Uppers, Lower, and Church, from north to south respectively (Exhibit 29). The coastline near Trestles bends sharply to the east,

⁴⁹ See California State Parks, *San Onofre State Beach*, http://www.parks.ca.gov/?page_id=647 (last visited on September 18, 2007).

⁵⁰ See Surfline, *Lower Trestles*, http://www.surfline.com/reports/report_travel.cfm?id=4740, (last visited on September 18, 2007).

⁵¹ See Surf rider Foundation, *Trestles Surf*, <http://www.surfrider.org/savetrestles/surf.asp>, (last visited on September 18, 2007).

⁵² California Department of Parks and Recreation, *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach*, August 1997 at 2.

therefore the beach faces south-southwest. Wave form and structure are not well understood, but a consensus exists that swell direction, bathymetric structure, and sediment transport play the key roles.

Wave Formation

As mentioned above, swell direction, bathymetric structure, and sediment transport play the key roles in wave formation. The proposed toll road is not expected to influence the incoming swell at Trestles. This may not be true for the bathymetric structure and sediment transport, however.

At the mouth of San Mateo Creek, large cobbles form a fan-shaped delta on the seafloor that extends from just north of Cottons to south of Uppers. A second fan-shaped cobble delta is found off of Lowers. The composite delta structure likely assumed its overall shape at the last glacial maximum, some 18,000 years ago, when sea level was approximately some 300 feet lower than it is today. The inland extent of the cobble delta is generally at the location of the modern day Mean Low Water, suggesting continued additions of cobble to the delta since its initial development. Oral accounts from surfers dating back to the 1950s indicate that the continuous presence of these cobbles is an important component of the high quality wave formation.⁵³ The exact role that these cobble deltas play in creating Trestles' surf conditions is not known, although the Commission, TCA's technical experts, and the opponents of the proposed toll road (opponents) all concur that the cobble substrate is an important component of the wave formation at Trestles. A general consensus exists that disturbance of the cobble deltas can be expected to change the wave formation. Where disagreement occurs between TCA and opponents is over the potential of the proposed toll road to disturb the cobbles and/or cobble delivery, and therefore potentially alter the high quality wave formation. This disagreement is discussed below in the section devoted to 'Impacts.'

The other component that can influence wave formation is sediment transport. Geologists study littoral cells, or portions of the coast within which sediment is circulated, to understand how sediment moves in and out of an area of the beach. Each cell contains a complete cycle of sedimentation including sources, transport paths, and sinks, and the circulation of sediment can be tracked by a careful inventory of the sediment budget involved in these processes. Trestles is part of the Oceanside littoral cell, which extends from Dana Point to La Jolla Point. Specifically, Trestles is in the northernmost sub-cell of the Oceanside littoral cell, defined as from Dana Point to San Mateo Point. Sediment is added to the cell via San Juan Creek, San Mateo Creek, and bluff erosion. Sediment is moved through the cell via longshore transport,

53

Philip Williams & Associates, Ltd. *Final Report: Potential Toll Road Impacts on San Mateo Creek Watershed Processes, Mouth Morphology and Trestles Surfing Area*, Prepared for the Surfrider Foundation, January 2006.

which is the movement of sediment parallel to the shore rise, in this case primarily to the south. Over time, the beach at Trestles has both widened and narrowed depending on the sediment budget.⁵⁵

The volume and characteristics of sediment delivered and removed from a surf break influences the type of wave that forms. During large storm events, the volume of water discharged from San Mateo Creek is large enough to breach the sand spit that normally exists between the creek and the ocean. When this happens, sediment from the sand spit and from the creek is carried into the ocean. According to personal accounts by surfers, the surplus sediment never covers the cobbles because the wave energy in the surf zone prevents it from remaining there. Rather, the sediment forms temporary sandbars that extend southward from the mouth of the creek. The sandbars enhance certain types of waves that are favored by some surfers. The sandbars eventually wash away and normally do not reform until the next large storm event provides a new supply of sand.⁵⁶ The sandbar dynamic is an example of how a change in the amount or type of sediment can influence the wave formation. There is disagreement between TCA and opponents over the potential of the proposed toll road to alter the sediment coming into the northernmost sub-cell, and therefore potentially alter the high quality wave formation. This issue is also discussed below in the section entitled "Impacts."

History of Surfing

Surfing came to San Onofre in 1934 when surfers from Corona Del Mar, displaced by the Newport Harbor jetty expansion, sought a new home. On surfboards made of heavy planks, they rode the multiple breaks along a several hundred yard stretch at San Onofre to the south of Trestles, occasionally ranging north as far as Church. The gently rolling waves, ability to camp close by, and the beauty of the cliffs, together provided an aesthetic previously unknown. San Onofre quickly became an epicenter of surfing due to this aesthetic and the consistency of the surf.⁵⁷

By the late 1940s, overnight camping was no longer possible due to the restrictions imposed by the area's new owners, the Camp Pendleton Marine Corps. Surfers began to spend more downtime in San Clemente and camped at Calafia Beach (called "the hole"), which is the current location of San Clemente State Park. Innovations in the design of surfboards in the early 1950s allowed surfing to spread to the more critical breaks at Uppers and Lower, where waves are faster and require more maneuverable surfboards. Trestles became a surf mecca, drawing surfers from all over the state to its shores. The creation of SOSB in the early 1970s brought highly publicized surf contests to Trestles, which served to raise its profile even

⁵⁴ Id.

⁵⁵ Transportation Corridor Agencies, South Orange County Transportation Infrastructure Improvement Project (SOCTIIP): *Final Subsequent Environmental Impact Report (December 2005) (hereafter "FSEIR")*, Skelly Engineering Review of Sediment Transport Study, Vol. VI, Attachment 11.

⁵⁶ See Footnote 8.

⁵⁷ Personal communication between Commission staff and Steve Pezman, publisher of the *Surfer's Journal*, on August 24, 2007.

further, and Trestles began to be known around the world as one of California's best waves. Surfing is now a multi-billion dollar industry and California is one the most important centers of that industry. Trestles serves as one of the image engines for that industry.⁵⁸

Number of Users

Over one million surfers are estimated to surf once a week or more throughout the year in California, with occasional or seasonal surfers perhaps tripling that total. The number of surfers that travel to Trestles each year has steadily increased since record keeping began in the early 1990s. Over 367,000 visitors came to Trestles in 2006, the vast majority of which came to surf. Trestles is projected to host 400,000 visitors/surfers in 2007.⁵⁹

Hundreds of surfers flock to Trestles daily. There are typically between four and five turn-overs (from pre-dawn to dark) in the population at each break during the day, with surfers arriving and leaving so that at any given time there are about 150 surfers in the water at Trestles during the summer. On winter swell angles there are more surf breaks at peak quality from which to choose and Trestles hosts about two-thirds of the normal summer crowd.⁶⁰

Trestles is distinctive because it has a variety of breaks and different types of waves that are consistently available to surfers of all ages and abilities year round. Trestles is one of only a handful of surf breaks in southern California that provide top quality summer waves. These attributes of Trestles helped establish surfing as a recreation, a lifestyle, a culture, and a part of Southern California's identity.⁶¹

Economic Value

Trestles is a source of local pride, as well as income, for the residents of San Clemente. The city's identity is inextricably linked to the development and culture of surfing. On its website, the San Clemente Chamber of Commerce lists "Surfing Legacy" as one of five defining features that describe the city. This Surfing Legacy lists local surf breaks, including Trestles, and makes the following statements about San Clemente: (1) it is a premiere surfing destination, (2) it is the surfing media capitol of the entire world because it houses all of the leading industry publications, (3) it has a large concentration of surfboard shapers, manufacturers, and famous surfers, and (4) its only high school has won six of the last seven National Scholastic Surfing Association (NSSA) Championships.⁶²

Recent research indicates the annual economic impact to the City of San Clemente from surfers visiting Trestles is in the range of \$8 million per year to \$13 million per year. This range does not include the secondary impacts, including multiplier impacts, on sales, income, and

⁵⁸ Id.

⁵⁹ Personal communication between Commission staff and Steve Long, South Sector Superintendent Orange Coast District, California Department of Parks and Recreation, on September 5, 2007.

⁶⁰ Id.

⁶¹ See Footnote 11.

⁶² See San Clemente Chamber of Commerce, *San Clemente, Surfing Legacy*, <http://www.scchamber.com/HTML/city/sanclemente.htm> (last visited on September 18, 2007).

employment. This research, a web-based survey instrument that analyzed 973 surveys collected in 2006, characterized the demographics, visitation patterns and expenditures of surfers who visit Trestles. Some other important findings include:⁶³

- Over 83% of the surfers surveyed came from cities outside of San Clemente.
- Trestles Beach attracts surfers from all counties in Southern California.
- Surfers who visit Trestles most frequently come from other “surf towns” including cities in north San Diego County, South Bay Los Angeles, Huntington Beach, and San Diego.
- The data collected reveals that Trestles surfers exhibit demographic characteristics that are comparable to San Clemente and California beach goers. Surfers visiting Trestles average 35.6 years of age, are well educated (42% of respondents have a minimum of a college degree), work full time (76% of respondents work full time), and earn a high wage (41% earn \$80,000 or more in individual income).

Trestles hosts both professional and amateur surf contests every year. The largest and most well known contest held is the Association of Surfing Professionals’ (ASP) World Tour, which occurs every September. This year, from September 9-15, Trestles was stop number six on the ten stop Men’s Division World Tour for the top 45 competitive surfers in the world. This \$3.6 million production lasts for five days and spawns 15,000 spectators that gather at Trestles, and an additional 1 million viewers that watch the live camera feed online. SOSB charges the ASP a permit fee that constitutes a significant portion of its annual operating budget. Spillover effects benefit local businesses of San Clemente as well. All of the hotels sell out and the other commercial establishments do a brisk business.⁶⁴

Other major surf contests held at Trestles include: an ASP World Qualifying Event, the Body Glove Surfboat, held every April; and the NSSA National Championship, the championship of the highest profile amateur competitive surfing association in the United States, held every June. Six other minor surf contests also occur during the remainder of the year. All of these contests also generate much needed revenue for the SOSB through permit and parking fees. Without this additional income, the SOSB would not be able to operate as it currently does.⁶⁵

Impacts

As indicated above, two things qualify Trestles as a world-class surf break: its consistent high quality waves and its aesthetic. The high quality waves are derived from the incoming swell, the cobbles, and sediment—of which only the cobbles and sediment may be impacted by the proposed toll road. The aesthetic, as it applies to Trestles, is its clean water and natural setting. Expert opinions that examine these attributes in further detail are reviewed below.

⁶³ Chad Nelsen, Doctoral Candidate, UCLA Environmental Science and Engineering Program, *The Economic Impact of Surfers Visiting Trestles to the City of San Clemente*, Memo to the California Coastal Commission, September 12, 2007.

⁶⁴ See Footnote 13.

⁶⁵ Id.

The following section contains a discussion of several studies commissioned by TCA pertaining to the importance of cobbles and sediment transport to the quality of the Trestles surf break, TCA's assessment of the importance of water quality and natural setting at Trestles and a study commissioned by the Surfrider Foundation (Surfrider) that assesses impacts to the San Mateo watershed and reviews TCA's studies.

The Cobbles

Very few studies are available that examine the link between the cobbles and wave formation. However, documents submitted by both TCA and Surfrider indicate a very strong causal link between the cobbles and the waves. TCA acknowledges that impacts to the cobbles would result in impacts to the surfing resources, "It is recognized that the cobbles on the shoreline at Trestles are the foundation of the surf break."⁶⁶

TCA commissioned a basic study to determine the source of the cobbles.⁶⁷ Based on field observations, the cobbles were determined to be comprised of metavolcanic and metasedimentary rock, with lesser amounts of granitic rock. Although cobbles are found throughout the watershed, the primary source is considered to be the metavolcanic, metasedimentary, and granitic bedrock underlying the eastern portions of the San Mateo Creek watershed. Over time, this bedrock weathers mechanically and fragments are carried downstream through various tributaries, into the San Mateo Creek, and out into the Pacific Ocean. The cobbles move downstream during high flow events and TCA estimates it takes a 50-year storm event to move the cobbles from the lower part of the San Mateo Creek towards the delta in the ocean. Experts believe that this is both an historic and active process.

TCA contends that because the alignment of the proposed toll road is in the far western portion of the San Mateo Creek watershed, cobbles from the eastern portion of the watershed will continue to be able to flow down their tributaries and into San Mateo Creek. TCA believes that the delivery of the cobbles to the shoreline will not be affected, and therefore the proposed toll road will have no long term impacts or cumulative impacts on the surfing resources.⁶⁸

Sediment Transport

As reviewed above, the amount of sediment in a given littoral cell influences wave formation. At Trestles, this is seen regularly when San Mateo Creek breaches the sand barrier during large storm events, resulting in sandbar formation and discernible changes to the waves by surfers. Again, a paucity of data exist regarding how sediment is transported specifically in San Mateo Creek.

⁶⁶ Robert Crisman, Engineering Geologist and David Skelly, Civil Engineer, GeoSoils, Inc., *Preliminary Clast (Cobble Fraction) Provenance Study, Lower San Mateo Creek, in Conjunction with the South Orange County Transportation Project, Orange County, California*. Letter Report to TCA, May 30, 2007.

⁶⁷ Id.

⁶⁸ David Skelly, Civil Engineer, GeoSoils, Inc., *Additional Discussion of Surfing Resources in the Vicinity of San Mateo Creek and Potential Impacts of the Proposed Toll Road, Orange County, California*. Letter Report to TCA, May 30, 2007.

TCA commissioned a study to estimate the impacts from the toll road to the current sediment transport rate. This study cited previous research that determined San Mateo Creek to be a transport capacity-controlled creek. A creek is “transport capacity-controlled” when there is more sediment delivered to the stream than can be moved by it under current conditions. Such a stream will be accumulating sediment in its channel, bars, and floodplain. A hydraulic study was performed to assess changes that would result from placing bridge supports in the main channel of San Mateo Creek. This study allowed for small increases in runoff based on the anticipation that increases in impermeable surfaces will be mostly balanced by Best Management Practices (BMPs), resulting in hydraulic conditions very similar to the existing conditions. The hydraulic model indicates that the proposed toll road and associated BMPs will cause only very slight changes to the average peak discharges for the 2-year, the 10-year and the 100-year storm events throughout the lower portion of San Mateo Creek. The creek was subdivided into 12 separate reaches and the changes in peak discharge vary from reach to reach. *Table 2.1* from this study shows the changes to peak discharge for the 2-year, 10-year and 100-year storm events, averaged over the 12 reaches.⁶⁹

Table 2.1: San Mateo Creek Summary of Peak Discharges (from *Sediment Continuity Analysis*)

Return Period	Existing Peak Discharge	With Project Peak Discharge	Difference
2-year	406	411	1
10-year	6,999	7025	0
100-year	47,312	47,356	0

The reach-by-reach results from the hydraulic model were used to estimate changes to sediment transport. The sediment transport analysis examined the creek channel sediments in the range of sand ~~and gravel~~, with diameters less than 1.5 mm. The analysis did not examine cobble transport and did not address existing or “with project” cobble transport rates. Cobble movement is not normally addressed by the standard sediment transport models and this study correctly notes that a multiple grain-size sediment transport function should be used. ⁷⁰ Despite this recommendation, only one sediment gradation curve was used to model sediment transport.

The results of the sediment transport analysis indicated that on average, there are only slight changes between the existing conditions and the conditions with the proposed toll road. The changes for the 2-year, 10-year and 100-year storm events, averaged over the 12 reaches, were 1.6%, 0.25%, and -0.75% respectively. Some reaches might have significant differences; for example, during the 100-year flood event, there could be as much as a 9% decrease in the

⁶⁹ Paul Bopp, P.E., *Sediment Continuity Analysis Lower San Mateo Creek, South Orange County Transportation Infrastructure Improvement Project*, Prepared for TCA, September 2004.

⁷⁰ Id.

volume of sediment transport through Reach 3 (upstream of the San Mateo Creek crossing). But, overall, the change in sediment transport is expected to be very slight.⁷¹

The model results show only very slight changes to sediment transport for San Mateo Creek, in part, because only 0.3% of the San Mateo watershed is estimated to be altered. This very small alteration creates insignificant changes to the hydrology and hydraulics of the channel, which translates into an insignificant change to the sediment transport. The study also determines the cumulative impacts to be insignificant, again because changes to the hydraulics were insignificant. As the creek is transport capacity- controlled, insignificant changes in sediment transport mean that there will be insignificant changes in the amount of sediment delivered to Trestles beach. TCA therefore contends there will be insignificant impacts to sediment transport and delivery to Trestles.⁷²

TCA also commissioned a review of the sediment transport study. This review concluded that wave formation is not sensitive to very small changes in sediments delivered either alongshore or from the San Mateo Creek, and that the proposed toll road will have an insignificant impact on the transport of sediment to the shoreline and thus no effect on the quality of the surf at Trestles Beach.⁷³

Clean Water

In addition to the importance of cobbles and sediment transport, TCA also describes that at Trestles, clean water contributes to making the surf break world-class.⁷⁴ TCA did not provide baseline information regarding the current water quality at Trestles. However, TCA believes the proposed toll road will improve water quality because it will incorporate Best Management Practices (BMPs) and treat additional runoff from I-5.⁷⁵ On September 17, 2007, TCA submitted its most recent Runoff Management Plan (dated July 26, 2007) to the Commission staff. As will be discussed in the Water Quality section of this report, the Commission has questioned the benefits and adequacy of this plan.

Natural Setting

TCA also contends that the natural setting is an important component of the value and quality of surf at Trestles. As described above, Trestles, and the trails leading to it, exists in a relatively natural setting. The previous section of this report, entitled Public Access and Recreation, discusses the proposed toll road's adverse impacts to the trail connecting San Mateo Campground (part of SOSB) with the beach and to the viewshed of surfers looking back at the landscape. TCA did not assess impacts to these resources within the context of the natural setting of Trestles.

⁷¹ Id.

⁷² Id.

⁷³ See Footnote 9.

⁷⁴ See Footnote 22.

⁷⁵ Transportation Corridor Agencies, *Coastal Consistency Certification and Analysis for the Foothill Transportation Corridor-South (FTC-S), Marine Corps Base Camp Pendleton, California*, March 23, 2007 (hereafter "*Consistency Application*") at 33.

Surfers use two primary trails to get to Trestles, the Panhe Trail and the Upper Trestles Trail. A portion of the Panhe Trail, which provides access from the San Mateo Campground, is proposed to be removed and re-located. This is a dirt trail that passes adjacent to the existing Cristianitos Road for a brief stretch but is otherwise surrounded by open space. It will no longer be possible to walk from the campgrounds to the beach along a relatively undeveloped stretch of land. A new trail will be built to mitigate this loss, but it will be a paved sidewalk trail adjacent to the re-aligned Cristianitos Road and the proposed toll road. It will rise approximately 30 feet in the air to cross over the proposed toll road. During the three years of construction projected to take place, a temporary trail will run parallel to the temporarily aligned Cristianitos Road. Use of this temporary trail would be periodically interrupted for a few minutes at a time as temporary or new paths are tied in. The Upper Trestles Trail, which provides access from a public parking lot, will not be affected and will continue to be accessible.⁷⁶ TCA's impact analysis was limited to ensuring that coastal access will be provided throughout the construction and operation of the proposed toll road. As discussed in the Public Access and Recreation section, TCA significantly downplayed the adverse effects to recreational quality from the lengthy and highly intrusive construction impacts, as well as the permanent degradation of the aesthetics from the changes to the trail alignment, and TCA ignored the value of the natural setting as an integral part of surfers' recreational experience.

TCA assessed impacts to the viewshed experienced by surfers in the water as they view the landscape, and determined these effects adverse but less than substantial. TCA maintains that the changes in views from the surfing resource will not be substantially changed or that these resources are not considered to be sensitive to changes in the viewshed.⁷⁷ This issue is also addressed in the Public Access and Recreation Section of this report, where it discusses changes to visual and other qualities of the recreational experience at SOSB.

Surfrider Foundation Study

TCA's cobble and sediment transport studies chose to compare potential impacts of a 2 mile study area in the lower San Mateo Creek within the context of the entire San Mateo Creek watershed of 139 square miles. By contrast, the Surfrider study defined 20 sub-watersheds within the San Mateo Creek watershed that the proposed toll road will pass through (*note: Surfrider/PWA did not perform either a sediment transport study or a hydrological study, rather they looked at the relative impervious area addition to various sub-watershed areas*). The percentage of each sub-watershed occupied by the proposed toll road and the percentage that would become impermeable was calculated. These percentages, they argue, are a far more accurate depiction of potential impacts to the watershed downstream of the crossing of San Mateo Creek (the 2 mile study area) than that submitted by TCA. Of the 20 sub-watersheds, one-quarter will have 50% or more of their watershed occupied by the proposed toll road with a corresponding increase in impermeability. Some of the 20 sub-watersheds will receive little impact, while two will be 100% occupied. Studies have shown that an increase of 10% in the

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TCA response to Commission staff questions via email on September 7, 2007.

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LSA, Foothill Transportation Corridor South, *Focused Summary of Environmental Impacts in the Coastal Zone*, March 2007 at 2.13-23.

impermeability of a sub-watershed will cause severe degradation to aquatic resources from erosion ⁷⁸ when unmitigated. The eight sub-watersheds closest to the mouth of San Mateo Creek will, on average, have 40% of their watersheds impacted. ⁷⁹

The Surfrider study also discusses how increases in disturbance to and impermeability of sub-watersheds upstream creates channel erosion and degradation downstream. ~~Although TCA has proposed traditional erosion control measures, this study points out that these measures have not worked well historically in this area. However, TCA has included erosion control mitigation measures in its plans. There is no evidence to suggest that erosion control mitigation measures will not work well or will be inadequate. Therefore~~ the ensuing erosion will not increase the amount of sediment in San Mateo Creek. ~~Were no mitigation measures proposed,~~ the result, the study predicts, will not be an alteration of the *amount* of sediment transported (because the San Mateo Creek is transport capacity-controlled), but rather an alteration of the *grain size* of sediment transported. Based on the geologic characteristics of the lower watershed and the areas where erosion will be concentrated, project-related erosion will-would increase the amount of medium- and fine-sized grain sediment from the watershed and deposit more than currently exists into the stream channel were no mitigation measures proposed. When there is more medium- and fine-sized grain sediment in the creek, the transport of larger-sized sediment (such as gravel and cobbles) tends to decrease, and a greater proportion of medium and fine-sized grain sediment is transported down the creek. This change to a smaller grain size of sediment, while not affecting the overall amount of sediment delivered, has the potential to reduce the delivery of cobbles to Trestles. ⁸⁰ However, because there is no evidence (such as numerical modeling) that erosion control measures proposed as part of the project would not be adequate, the conclusion of the PWA report is unsubstantiated.

Lastly, the Surfrider study disputes the notion that the proposed toll road will have less of an impact because the mouth of San Mateo Creek is not open to the ocean year round. The study points out that San Mateo Creek would not be expected to be open to the ocean more than occasionally anyway. It connects with the ocean episodically, as do many of California's creeks and streams. Since this is its normal status, that doesn't reduce impacts in any appreciable way. Also, if more medium- and fine-sized grain sediment is delivered to the ocean as a result of the proposed toll road, it will have impacts for a longer period than just the few days the creek is open to the ocean as it is re-worked by waves and changes the shoreline and/or mouth morphology. ⁸¹

In summary, the Surfrider study agrees with TCA that the cobbles are the foundation of the surf break, and that impacts to the cobbles will impact the waves. But it does assert the impacts to the surfing resources may be far greater than TCA's studies convey. By examining impacts to the lower portions of the San Mateo Creek watershed, rather than the entire watershed (as TCA did), the impacts are seen as much more severe and significant (note: TCA did discuss potential impacts and mitigation at a subwatershed scale in the most recent RMP, which neither the Coastal Commission nor Surfrider/PWA has reviewed). By examining impacts from a change in grain size characteristics of sediment being transported, rather than just the total amount of sediment (as TCA did), a potential for cobble delivery to be

⁷⁸ Bob Battalio, P.E., Philip Williams & Associates, Ltd., *Final Report: Potential Toll Road Impacts on San Mateo*

Creek Watershed Processes, Mouth Morphology and Trestles Surfing Area (Hereafter "Potential Toll Road Impacts", Prepared for the Surfrider Foundation, January 11, 2006.

⁷⁹ Bob Battalio, Professional Engineer, Philip Williams & Associates, Ltd., *Orange County Toll Road- Comments on Skelly Reports*, Letter to Mark Rouscher, Surfrider Foundation, August 31, 2007.

⁸⁰ *See Potential Toll Road Impacts.*

⁸¹ *See Footnote 29.*

impeded is made apparent. Given the unique and highly valued resource that is Trestles, this study recommends careful and more complete study prior to moving forward with the proposed toll road.⁸²

Mitigation

While TCA maintains that changes in hydrology will result in negligible changes in sediment transport and no impact on cobble transport, TCA proposes mitigation measures as an additional assurance that surfing resources will not be adversely affected.⁸³ Mitigation measures proposed for recreational impacts include measures related to noise, air quality, visual quality, and transportation.⁸⁴ The adequacy of these measures is also discussed in the Public Access and Recreation Section of this report.

Opponents' Contentions

TCA received comments from the following four groups on its *Draft Environmental Impact Statement/Supplemental Environmental Impact Report* ("DEIS/SEIR") and *Final Supplemental Environmental Impact Report* ("FSIR") pertaining to impacts to surfing resources. In general, these commenters believe that TCA's assessment of the surfing resources and potential impacts is inadequate.

California Department of Parks and Recreation:

Comments to TCA regarding the Final SEIR dated January 10, 2006:⁸⁵

The analysis of the variation in shoreline changes (from TCA's studies) is not tied to surf or bottom conditions. The sediment production of the San Mateo Creek watershed can be predicted to greatly increase following construction of the proposed project. The substrate is very subject to erosion, since it is made up entirely of sediments and the FSEIR's assurances that application of BMPs to limit erosion will be effective simply cannot be justified. Cuts and fills required for a 126 foot wide roadway, plus interchanges, culverts, sediment detention basins, intermittent and perennial stream crossings will have real and persistent impacts on the largely intact San Mateo Creek watershed. California State Parks has received similar assurances that new highway construction will be able to control erosion in the past. At a Northern California State Park, and despite current Regional Water Quality Control Board requirements, tons of sediment from a newly constructed Caltrans multi-lane roadway swamped the park's drainages, requiring the construction of 27 emergency sediment control basins within

⁸² See *Potential Toll Road Impacts*.

⁸³ See *Consistency Application* at 26.

⁸⁴ See *FSEIR* at Vol. II, 4.25-147.

⁸⁵ Ruth Coleman, Director, California Department of Parks and Recreation, *Subject: South Orange County Transportation Infrastructure Improvement Project Draft Final Subsequent Environmental Impact Report*, Letter to TCA, January 10, 2006.

the park to contain a portion of the eroding materials. Similarly, a fill constructed by TCA (to the same standards as proposed for the toll road) in upper Deer Canyon failed, depositing hundreds of cubic yards into watersheds of Crystal Cove State Park.

When watersheds are impacted by anthropogenic factors, even small quantitative changes can have dramatic qualitative effects on the runoff, style of mass wasting, and consequent modification of flow regimes.

Contrary to TCA's report by Skelly that contends most of the sediments that feed the delta are delivered under conditions that have recurrence intervals greater than 10 years, most sediments are transported at bankfull stage- the one to two year maximum event.

Not addressed in TCA's reports is the potential reason for the relatively persistent delta deposits associated with the Trestles surf spots. One reason for the persistence might be the relatively pristine, undeveloped nature of San Mateo and San Onofre watersheds, compared to the intensely developed watershed to the north. With development of the watershed, the sediment delivery may reduce (from paving), increase (from disruption of the landscape and surface erosion), or change in character.

The concluding sentences (of TCA's report by Skelly) are unsubstantiated: 'The SOCTIIP will have an insignificant impact on the transport of sediment to the shoreline. The SOCTIIP will have no measurable impact on surfing resources.' The argument is based exclusively on the purported limited change in sediment transport from the hydraulic models, and on the short documented history of surfing popularity at Trestles. The FSEIR fails to assure the public and California State Parks that the world-class surf break at Trestles will not be adversely impacted.

Shute, Mihaly, and Weinberger:

Comments to TCA regarding the Final SEIR dated January 12, 2006:⁸⁶

The FEIR erroneously concludes that the toll road will have less than significant effects on wave formation at Trestles Beach. The Skelly Reports make unsupported assumptions, fail to account for potential impacts to the surf, and use incomplete data.

In particular, the Skelly Reports inappropriately focus solely on the volume of the sediment that results from the toll road without accounting for the composition of the sediment which has crucial impacts to the resulting surf formation. The reports assume that because the creek is transport limited, that introduction of additional sediment will not increase sediment delivery. However, increasing sediment to transport-limited

⁸⁶ William White and Kevin Bundy, Shute, Mihaly & Weinberger LLP, *Comments on Final SEIR and Related Findings for the SOCTIIP Project*, Letter to TCA, January 12, 2006.

streams alters the composition of the sediments transported, increasing fine sediment delivery and causing increased deposition of coarser sediment. Thus, construction of the toll road may reduce the coarse sediment delivery (and potentially cobbles) to Trestles Beach, even in transport-limited conditions, and thereby impact wave and surfing conditions.

SWAPE:

Comments to TCA regarding the Draft EIS/SEIR dated July 28, 2004:⁸⁷

Because the watershed is currently undeveloped, the supply of sediment in San Mateo Creek is in a fragile, natural equilibrium, one that is subject to potential disturbance from the construction of extended sediment basins (EDBs) proposed for this project. The EDBs are specifically designed to allow sediment and particulates to settle out of suspension and to be removed from the supply that nourishes the coast. Removal of sediment for the hydrologic system will also increase the capacity of the streams to locally scour and incise their channels, resulting in disequilibrium conditions. Aliso Creek is an Orange County example of disequilibrium conditions where streams have incised and scoured their channels to depths in excess of twenty feet. To mitigate these conditions in Aliso Creek, streambeds and stream banks have to be armored and drops in streambed elevation are engineered structures.

The Runoff Management Plan states: "Periodic sediment removal to ensure 0.5 meter depth threshold" is necessary for maintenance. This will remove sediment from the stream systems. The Runoff Management Plan therefore acknowledges that the EDBs will act as a sink, removing sediment from the supply needed to sustain coastal beaches and surfing resources.

Surfrider Foundation:

Comments to TCA regarding the Draft EIS/SEIR dated 2004:⁸⁸

Created as part of the mitigation efforts for the San Onofre Nuclear Power Plant, the SOSB campground is one of the few campgrounds on the California coast within walking distance of the ocean.

The DEIR includes NO mention of the many walking and biking rails that traverse the SOSB and San Mateo campground, despite alignments that would run directly over existing beach access paths. Specific temporary and permanent impacts to access to the Trestles beach and SOSB must be described.

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Matt Hagemann, Soil Water Air Protection Enterprise, *Comments on the Environmental Impact Statement/Subsequent Environmental Impact Report for the South Orange County Transportation Infrastructure Improvement Project*, Letter to TCA from SWAPE, July 28, 2004.

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Christopher Evans, Executive Director, and Mark Cousineau, Chair, Orange County Chapter, Surfrider Foundation, *Comments on DEIR/EIS for the South Orange County Transportation Infrastructure Improvement Project*, Letter to TCA, 2004.

Commission Analysis

Section 30220 requires that surfing at Trestles be protected because it cannot be provided at inland water areas. The question before the Commission is: Can TCA guarantee that surfing at Trestles will be protected if the toll road is built? This question is analyzed in the context of the two characteristics that qualify Trestles as a world-class surf break: (1) its consistent high quality waves, and (2) its aesthetic. This is followed by an analysis of additional considerations.

High Quality Wave Formation

As noted earlier, the general consensus is that the cobbles play a major role in the formation of surfing waves at Trestles. The Commission's geologist concurs with TCA's hypothesis that the primary source of cobbles is the eastern San Mateo watershed and that cobbles will continue to be able to move down the watershed towards San Mateo Creek during large storm events. But detailed information on the cobble delivery system is critical to any determination relating to impacts on surfing. For example, the ability of the cobbles to successfully descend through the lower portions of San Mateo Creek (where the proposed toll road will have effects) and into the Pacific Ocean- has been numerically demonstrated ~~remains uncertain.~~

TCA asserts cobble delivery will not be thwarted because its studies show the proposed toll road will bring about only small changes to the hydrology and sediment transport because: a) it will disrupt only 0.3% of the San Mateo watershed, and b) it will incorporate BMPs.

Watershed Impacts

The Commission notes that the scale used to assess impacts to the watershed is critical. As the Surfrider study revealed, when impacts are assessed at a sub-watershed scale (the scale at which the impacts will be experienced) the results are dramatically different. The lowest sub-watershed is projected to have 70% of its area occupied by the proposed toll road and 29% of its area will become impermeable. Impacts at this scale are clearly not insignificant. In contrast, the TCA study compared projected impacts to a 2 mile segment of the lower San Mateo Creek within the context of the entire 139 square mile watershed. Given the great differences in size between these two areas, it is difficult to see how impacts of any magnitude to these 2 miles could affect the much larger 139 square mile area. This is why TCA's study concluded that impacts would be insignificant. The Commission concludes that assessing impacts at the local or sub-watershed level, is not only warranted but essential, particularly because the consequences of underestimating the impact of potentially permanent changes to the watershed, given the significance of Trestles, could be profound. (Note: the estimated increases in peak discharge and erosive runoff volume under project conditions will be mitigated at each discharge location. The analysis in the original RMP was refined in the current RMP to include a more detailed analysis once the necessary roadway geometric information and project topography were available. The project level sub-watershed analysis is included in the RMP submitted to staff. TCA agrees and has included a subwatershed analysis within the most recent version of the RMP, which has been submitted to Coastal Commission Staff.)

Best Management Practices

The TCA study asserts that hydraulics and therefore hydrology and sediment transport will be maintained through the inclusion of Best Management Practices (BMPs). While they do acknowledge that small amounts of sand may increase, they otherwise claim the BMPs will prevent increases in flow rates and erosion.

Through conversations with CDPR, the Commission staff obtained historical facts regarding a previous TCA project, the San Joaquin Hills Transportation Corridor (SJHTC), which the Commission also reviewed. Approximately 10 years ago TCA experienced failures of its BMPs on “the sliver,” an area spanning 35 acres of ridge-top in what is today part of the Laguna Coast Wilderness. This land functioned at the time, and still does, as part of the conservation area for the Natural Communities Conservation Plan/Habitat Conservation Plan. Runoff normally flows down Deer Canyon and into the El Moro Creek subwatershed within Crystal Cove State Park. TCA re-vegetated this area following construction of the SJHTC. CDPR expressed specific concerns to TCA about potential erosion issues. Following a heavy rain, water diversion caused severe erosion on the constructed slope into Deer Canyon. CDPR personnel measured 10 foot deep gashes in the land and estimated 2,000 cubic yards of sediment was dumped into Crystal Cove State Park. Based on this experience, and having witnessed the failure of BMPs on other projects as well, CDPR is very concerned about having more BMP failures with the proposed toll road. CDPR considers the movement of 41 million cubic yards of cut and fill in a traditional land slide area to be an epic undertaking, and has expressed significant doubt that it can be successfully accomplished.⁸⁹ TCA asserts the proposed toll road will use improved BMPs over those that failed at Deer Canyon and has submitted an analysis to the Commission staff of “lessons learned” from those failures. However, the Commission has not forgotten that TCA made the same optimistic claims during Commission review of the SJHTC (Consistency Certification CC-63-92/CDP 5-92-232) that its then “state-of-the-art BMPs” would avoid water quality problems.

Even if the BMPs do not fail for the proposed toll road, it is not evident they will be able to retain the same grain size characteristics of the sediment that is currently delivered by the San Mateo Creek. TCA does not address the grain size characteristics of the sediment, and this will be one of the main factors determining and influencing cobble transport. The Surfrider study contends the proposed toll road would increase the amount of impermeable area, resulting in more rapid runoff from the same amount of rainfall, creating more surface erosion [if unmitigated](#). San Mateo Creek already has large variability in the volume and velocity of flows due to the great variability in rainfall that is characteristic of the southern California climate. The more rapid runoff into San Mateo Creek estimated under the Surfrider study ([without the completion of hydrology calculations](#)) would increase the magnitude of the peak events on the creek. The consequences of increased runoff can result in gulying, bank scour, head cutting, increased sedimentation, and changes to the creek bed; examples of these conditions can be seen in many of the developed watersheds of Orange and San Diego Counties (and was referred to in the Deer Canyon case above). The volume and velocity of the

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Personal communication between Commission staff and David Pryor, Environmental Scientist, California Department

of Parks and Recreation, on September 17, 2007. [Note: Only 1.4 million cubic yards of cut and fill occur within the coastal zone, and therefore, within the project that is the subject of this consistency certification.](#)

discharge from San Mateo Creek will greatly influence the sediment transport modeling. The Surfrider study questions whether the proposed BMPs will be able to prevent these conditions and whether BMPs will be able to prevent an influx of the medium- and fine-sized grain sediment especially during the 2-year flow events. The Commission's geologist concurs that an increase in the amount of medium- and fine-sized grain sediment may decrease the transport of gravel and cobbles.

Summary

In summary, the Commission concludes from the studies reviewed above that the cobbles are essential to the preservation of wave formation. Although the cobbles may continue to descend through their normal routes from their source point in the eastern portion of San Mateo watershed towards the lower San Mateo Creek, their eventual delivery may be reduced. The studies submitted to the Commission neither definitively prove nor disprove that the proposed toll road will affect cobble delivery to the ocean. But the potential for impacts to cobble delivery clearly does exist. Assurance of successful cobble delivery appears dependent on the proposed BMPs functioning exactly as they have been modeled to function *and* their ability to retain the same grain-size characteristics of sediment that currently exist. While TCA contends that its BMPs will function properly and the problems that arose for the SJHTC will not occur again, questions remain over whether those BMPs will in fact preserve the same grain size characteristics of sediment that occur today. Because TCA has not addressed the issue of grain size, or provided the more realistic sub-watershed analysis discussed above, the Commission agrees that, "The effects of the project on sediment processes, with and without the BMPs, are not addressed sufficiently to assess the project impacts on downstream areas."⁹⁰ (Exhibit 21). Therefore, the Commission finds that TCA has not established that the proposed toll road will avoid adverse impacts and protect the cobble delivery and, by extension, the surfing resources.

The Commission notes that the one attempt in California to create a surfing area as mitigation for lost surfing was the unsuccessful surf reef effort offshore from El Segundo. Surf mitigation may be possible; however such projects would have resource impacts and would replace other existing offshore resources. Surfing mitigation is not a proven science and mitigation for a world-class surfing resource has never been attempted.

The Aesthetic

The aesthetic of Trestles is clearly a precious and irreplaceable resource. Trestles represents the last high quality wave located in the last undeveloped portion of coastline in Southern California that is accessible to the public. The unique coastal conditions at Trestles provide a world renowned surfing experience that cannot be found elsewhere. There are simply no other surf breaks like Trestles.

⁹⁰ Philip Williams & Associates, *Orange County Toll Road- Best Management Practices (hereafter "BMP Letter"*, Letter to Mark Rauscher, Surfrider Foundation, May 9, 2007 at 1.

The aesthetic of Trestles is defined by its water quality and natural setting. As discussed in the *Water Quality* and *Conflict Resolution* sections of this report, the Commission does not accept TCA's assertion that the proposed toll road will improve water quality. First, TCA did not provide baseline information about the current state of the water quality at San Mateo Creek. TCA has not established that there is a water quality problem that needs to be improved. In fact, the San Diego Regional Water Quality Control Board ("RWQCB") asserts that none of the available data suggests an existing water quality impairment at San Onofre or San Mateo Creek. Second, it is the RWQCB's expectation, "... that if I-5 is widened as part of the 241 South project, then post-⁹¹ construction BMPs must be added pursuant to the Caltrans NPDES permit." The proposed BMPs are not "above-and-beyond" what the RWQCB would require for this project, and it is not clear how much more of a substantial benefit they would provide. Also, without baseline data TCA will not be able to not demonstrate the effectiveness of the water quality improvements that occur due to its BMPs. Water quality is more likely to degrade with the introduction of a major new highway along a significant stretch of the creek and watershed. Water degradation stems from the introduction of organic pollutants and micro-pollutants, such as heavy metals, hydrocarbons, and fuel additives entering the watershed. These are mainly generated from traffic activities, component wear, fluid leakage, pavement degradation, roadway maintenance, and atmospheric deposition. These sources of pollution can be temporary, seasonal, accidental, or chronic.⁹² BMPs cannot collect all the⁹³ pollutants as highlighted in correspondence to Surfrider:

Because the toll road runs parallel to the creek through the San Mateo Creek watershed, mitigation of the toll road presents unique circumstances. The watershed is rural and undeveloped and therefore any slight change could upset the ecologic balance. The most effective mitigation for the highway under these circumstances may not be the cookie cutter approach generally recommended elsewhere.

The Commission finds that the natural setting of Trestles would suffer adverse impacts from the proposed toll road through the introduction of highly urbanizing elements. Surfers accessing Trestles currently enjoy a transition from the densely populated cities of Orange and San Diego Counties to a relatively pristine wetlands preserve. The change in the character of the trail that connects San Mateo Campgrounds and Trestles will be significant. Rather than a dirt trail that traverses mostly open space, the new trail TCA proposes will be a paved sidewalk that will run adjacent to Cristianitos Road, the proposed toll road, and rise several stories into the air to cross over the proposed toll road. This will no longer be a natural setting. In addition, the viewshed from the water, as experienced by surfers, will include a view of the elevated proposed toll road. The Commission does not concur with TCA's assessment that this change in viewshed will not be substantial or that this viewshed is not sensitive to change. The entire experience for people surfing will be degraded as setting and viewshed are major factors.

⁹¹ See Footnote 2.

⁹² Han et al., *Characteristics of Highway Stormwater Runoff*, Water Environment Research, Volume 78, Number 12 at 2377.

⁹³ See BMP Letter at 3.

The Commission finds that the proposed toll road would adversely affect the aesthetic of Trestles and that this would degrade the quality of the surfing resource. The Commission further finds that this impact alone renders the project inconsistent with Sections 30220 and 30213 of the Coastal Act.

Indirect Effects

TCA did not assess impacts to CDPR, SOSB, San Clemente businesses, surfers, and visitors because TCA does not believe the proposed toll road will affect the surfing resources. However the Commission believes TCA's analysis was incomplete.

The estimated annual revenue the City of San Clemente derives from surfers visiting Trestles is between \$8 million to \$13 million per year. The 9 surf contests that take place throughout the year generate additional income as well. These contests raise the profile of Trestles, provide entertainment value to an estimated audience of 1 million, generate revenue for the local Orange County business community, and provide funds to CDPR without which it may not be able to operate at its current level. CDPR has indicated that if construction for the proposed toll road proceeds it may no longer be able to host some or all of the surf contests because of the loss or diminution of its parking facilities. TCA includes Old Highway 101, which functions as the only parking facility during contests, within their staging areas and disturbance limits. The Commission staff requested information from TCA specifically about continued availability of Highway 101 for contest support parking. TCA's response was that it would attempt to avoid effects on parking; however no firm commitment was made for avoidance of this area during surfing contests over the projected 3 year construction phase. Without such a commitment, and no alternative mitigation offered or available, the Commission cannot find the project will avoid effects on the surfing contests at Trestles and, by extension, to CDPR, SOSB, the City of San Clemente and its local businesses, surfers, and visitors.

Conclusion

Assessing potential impacts to systems for which there is only an imprecise understanding is difficult. But given the requirement in § 30220 that surfing shall be protected, the magnitude of the project, and the value of the resource, the Commission believes a precautionary approach for assessing impacts is therefore warranted.

At best, the Commission is left with the knowledge that there are potential impacts to cobble delivery that will most likely affect wave formation. The Commission takes these potential impacts very seriously because there is no way to mitigate for the loss of the surfing resource if the impacts were to occur. Aside from the irreplaceable nature of the surfing waves, the Commission finds that the proposed toll road would adversely affect the aesthetics. Trestles is a world-class surf break due to the combination of its consistent high quality waves and its aesthetic. The Commission finds that TCA has not adequately demonstrated that surfing at Trestles will be protected if the toll road is built.

If the proposed toll road were to adversely affect the surfing resources, it would eliminate a low-cost recreational activity. This would cause adverse indirect socioeconomic socioeconomical effects to the surf community, beachgoers, residents and visitors, the City of San Clemente and its local businesses, and SOSB. At a minimum, the project would clearly adversely affect the quality of the overall surfing experience at Trestles. The Commission therefore concludes that the proposed toll road is inconsistent with Sections 30220 and 30213 of the Coastal Act.

E. Water Quality.

Section 30231 of the Coastal Act provides:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

TCA's consistency certification provides the following water quality discussion:

***Summary.** FTC-S is consistent with Section 30231 of the Coastal Act requiring the maintenance of biological productivity and quality of coastal waters, streams, wetland, estuaries, and lakes by providing storm water runoff treatment where it currently is not present through the construction of bioswales and extended detention basins and thereby improving water quality over present conditions, following construction mitigation measures to reduce construction impacts to streams, not impacting groundwater resources, and minimizing the alteration of natural streams.*

Comment and Analysis

Improvement of existing water quality. As discussed in detail above, coastal waters and wetlands are currently degraded by untreated runoff from several miles of the I-5 freeway. The receiving waters in the vicinity of FTC-S are San Mateo Creek and San Onofre Creek, which discharge directly into the Pacific Ocean. Roadway runoff along this segment of the I-5 currently is not treated by any storm water pollution control facility (Focused Summary, Section 4.1.1). Nearly one million gallons of runoff per design water quality storm event from existing I-5 would receive treatment with the construction of FTC-S. Over the past two years of record, approximately five design water quality events have occurred annually. Using this estimate, ***the project would treat approximately five million gallons of water each year that currently flow untreated from existing I-5 into San Onofre and San Mateo Creeks, and ultimately, the Pacific Ocean.***

For a detailed discussion of water quality treatment infrastructure provided as part of FTC-S, see the Consistency Review for Section 30230, above.

TCA's supplemental Section 30230 analysis stated:

Summary. FTC-S is consistent with Section 30230 of the Coastal Act requiring the maintenance, enhancement, and restoration of marine resources by significantly improving coastal water quality from existing conditions and not affecting sediment transport in coastal waters. Because of the incorporation of water treatment infrastructure to a segment of I-5 that currently drains untreated storm water runoff from the road into the San Mateo and San Onofre Creeks, FTC-S will enhance the biological productivity of coastal waters.

Comment and Analysis

Improvement of existing water quality. Currently, coastal waters are degraded by untreated runoff from several miles of the I-5 freeway. The receiving waters in the vicinity of FTC-S are San Mateo Creek and San Onofre Creek, which discharge directly into the Pacific Ocean. Currently, roadway drainage from I-5 in this area consists of a series of storm drains and inlets that outlet to longitudinal surface ditches draining directly to San Onofre and San Mateo Creeks without storm water treatment. Along I-5, Basilone Road marks the drainage area boundary between the storm drain system that conveys flow southward to San Onofre Creek and the system that conveys flow northward to San Mateo Creek. Along the existing Cristianitos Road, east of I-5, pavement drainage flows via sheet flow and over side drains to the adjacent hillside, the north bank of San Mateo Creek. This runoff currently has no storm water pollution control facilities and eventually, drains to the Pacific Ocean (Focused Summary, Section 4.1.1). Nearly one million gallons of runoff per design water quality storm event from existing I-5 would receive treatment with the project. Over the past two years of

*record, approximately five design water quality events have occurred annually. Using this estimate, **the project would treat approximately five million gallons of water each year that currently flow untreated from existing I-5 into San Onofre and San Mateo Creeks, and ultimately, the Pacific Ocean.***

Water quality of marine resources and coastal waters will be improved along I-5 by installation of (1) runoff interception and conveyance systems for both on-site and off-site drainage, (2) water pollution prevention control facilities, and (3) water pollution treatment control facilities.

Runoff Interception and Conveyance Systems (On-Site Drainage). *Roadway, or “on-site” drainage, along I-5 from the north side of San Mateo Creek to a point southward approximately two miles, will be retrofitted to provide storm water treatment to on-site runoff. This will be accomplished by constructing storm drain systems along I-5 and along the proposed FTC-S/I-5 connectors that will tie into the existing storm drains. This storm drain network will consist of two systems, the first conveying storm water to an extended detention basin (EDB) adjacent to San Onofre Creek (“System 1”) and the second conveying storm water to an EDB adjacent to San Mateo Creek (“System 2”).*

System 1 runs along I-5 from Basilone Road southward for approximately 1.5 miles, conveying flows to the east side of I-5 into a 3.7 acre-feet extended detention basin located at the south embankment of San Onofre Creek. After treatment, the EDB detention basin will outlet into a pipeline routing the treated runoff to San Onofre Creek. For erosion control, the outlet will consist of a 100 square foot riprap energy dissipater located on the south embankment of San Onofre Creek (Focused Summary, Section 4.1.2).

System 2 includes a storm drain system running along I-5 from Basilone Road northward to San Mateo Creek, conveying flows to the east side of I-5 where it will connect to a 2.5 acre-foot EDB located on the south side of San Mateo Creek. After treatment, the EDB will outlet into a pipeline routing the treated runoff to San Mateo Creek. For erosion control, the outlet will consist of a 100 square foot riprap energy dissipater located on the south embankment of San Mateo Creek. System 2 will also include storm drains at the toe of the embankment along the east side of I-5 to convey storm flow from the above-grade FTC-S Connector structures. Deck drainage from these bridges will be routed down columns, outletting to the System 2 storm drains. All System 2 storm drains will connect to the EDB prior to discharge into San Mateo Creek (Focused Summary, Section 4.1.2).

On-site runoff for the area north of San Mateo Creek, at the Cristianitos Road crossing will be conveyed to treatment BMPs via storm drain systems equipped with flow splitters that capture and convey water quality flows to the BMPs and allow peak flows

to continue on their original flow path. In this way, the on-site low flows and off-site flows are always separated. Treatment BMPs in this vicinity include a detention basin and a series of biofiltration swales (Focused Summary, Section 4.1.2).

Two storm drain systems (Systems 4 and 5) intercept and convey the on-site runoff in this area. System 4 includes a series of pipelines that direct flow from the shoulders into the median where a series of 300-foot long biofiltration swales will treat storm water runoff. The swales will outlet into grated catch basins that connect to the offsite System 3, which ultimately outlets to San Mateo Creek after water treatment.

System 5 includes a storm drain system that intercepts and conveys on-site runoff to a 1 acre-foot EDB located 2,500 feet north of the San Mateo Creek crossing. Where possible, this system is equipped with flow splitters that convey water quality flows to the EDB which outlets to off-site System 3 (Focused Summary, Section 4.1.2).

Runoff Interception and Conveyance Systems (Off-Site Drainage). *Storm water drainage that does not come from the roadway, or “off-site drainage”, is conveyed by San Onofre and San Mateo Creeks under the I-5 at its bridge structures. Proposed improvements at San Onofre Creek consist of widening the existing bridge structure on both the upstream/northbound side (42.5 feet to 52.0 feet) and on the downstream/southbound side (37.0 feet to 52.7 feet) of I-5. The widened structure would be constructed on pier walls similar to the existing structure, with the same two foot width as the existing pier walls. The proposed widening creates an increase in water surface of 0.6 feet at the upstream face of the proposed bridge widening. The increase diminishes to 0 approximately 66 feet upstream of the bridge (Focused Summary, Section 4.2.2).*

Proposed improvements at San Mateo Creek include construction of two connector bridges to FTC-S over San Mateo Creek, upstream of the I-5 bridge structures. The northbound bridge structure (northbound I-5 as it transitions to northbound FTC-S/SR-241) over San Mateo Creek will be approximately 3,860 feet long with 15 column supports. The bridge crosses San Mateo Creek at a skew angle ranging from 45 degrees at the creek crossing to approximately 70 degrees near the north abutment. The southbound bridge structure (southbound FTC-S/SR-241 as it transitions to southbound I-5) will be approximately 3,910 feet long with 14 column supports. The bridge crosses San Mateo Creek at a skew angle ranging from 60 degrees at the creek crossing centerline to approximately 70 degrees near the north abutment. The proposed bridges will result in a maximum increase in water surface elevation of 0.4 feet upstream of the I-5 bridge structure, diminishing to zero approximately 0.75 mile upstream of the proposed bridge structures (Focused Summary, Section 4.2.2).

The proposed off-site system for storm water generated uphill of FTC-S and Cristianitos Road consists of culverts and longitudinal ditches that intercept and convey surface water. The culverts are designed to pass the 10-year flood without causing the headwater elevation to rise above the inlet top of culvert and to pass the 100-year flood without causing objectionable backwater depths, outlet velocities, or ponded water outside the right-of-way. One 36-inch cross-culvert is proposed where a major flow path is located along the hillside approximately 5,000 feet north of the San Mateo Creek crossing. South of this location, off-site runoff consists mainly of sheet flow, which is intercepted and conveyed through a storm drain system (designated as System 3) to a riprap lined section of San Mateo Creek located immediately north of I-5 (Focused Summary, Section 4.2.2).

Water Pollution Prevention Control Elements. *Several Best Management Practices (BMPs) for the prevention of water pollution are incorporated into FTC-S, including the incorporation of flow-splitters, protection-in-place of desirable vegetation, the use of rock slope protection and other erosion prevention measures, and soil stabilization strategies.*

In order to mimic pre-project flows, inlet flow splitters have been incorporated into the design of the storm drain systems. The flow splitters capture and convey water quality flows to extended EDBs and allow peak flows to continue on their original flow path (Water Quality Technical Report Update, Section 6.1). In general, the project would result in a minor increase in impervious surface in the watersheds for San Onofre and San Mateo Creeks, which can be expected to translate into minor localized increases in runoff. However, lag time between the peak runoff of these major streams and that from the freeway runoff is large, i.e. the peak flow from the freeway will have substantially subsided by the time the watershed peak occurs. This, coupled with the minor increase in impervious surface (approximately 0.2 percent of the San Mateo Creek watershed and less than 0.1 percent of the San Onofre Creek watershed), results in an insignificant increase in peak flows found in San Onofre and San Mateo Creeks (Focused Summary, Section 6.1).

Additionally, existing desirable vegetation and landscaping will be protected in place, where possible. The project will include demarcation of the limit of disturbed soil area during construction to ensure that adjacent vegetation is preserved (Focused Summary, Section 6.2).

Risks due to erosion or washout will be minimized through the use of rock slope protection, hydroseeding, ground cover, mulch, and longitudinal ditches and down drains. Velocity dissipation devices, flared end outlets, headwalls, transition structures, and splash walls will be incorporated into the design where necessary at culvert inlets and outlets to prevent erosion. Lined longitudinal ditches will be incorporated at the

uphill side of FTC-S to intercept sheet flow where necessary and to convey it to culverts or bridges that cross under the roadway. Culvert outlets will be equipped with appropriate energy dissipating devices (Focused Summary, Section 6.3).

Various slope and surface protection measures will be used to address site soil stabilization and reduce deposition of sediments in the adjacent surface waters. Typical measures include the application of soil stabilizers such as hydroseeding, rock slope protection, velocity dissipation devices, flared end sections for culverts and others. The project will be constructed to minimize erosion by incorporating retaining walls to reduce the steepness of slopes or to shorten slopes; providing cut and fill slopes flat enough to allow re-vegetation and limit erosion to pre-construction rates; and by collecting concentrated flows in stabilized drains and channels. Energy dissipaters in the form of riprap, impact basins or velocity control rings will be provided at storm drain outlets to control erosion. Riprap sizes and thicknesses will be shown on the plans and stone gradation/ placement methods will be defined in the specifications (Focused Summary, Section 6.4).

Water Pollution Treatment Control Elements. *BMPs for pollution treatment will be designed and implemented to reduce the discharge of pollutants from the on-site storm drain system for all highway runoff from FTC-S and two miles of I-5, to the maximum extent practical, consistent with objectives set forth by Caltrans before discharging to natural channels. Currently, runoff from I-5 in this location is not being treated. Treatment BMPs considered feasible and practicable for the project include extended detention basins (EDBs) and biofiltration swales (Focused Summary, Section 7.1).*

As described above, two EDBs are proposed within the coastal zone; one proposed adjacent to San Onofre Creek and one adjacent to San Mateo Creek. The runoff area tributary to the San Onofre Creek EDB is 62 acres, which includes those sections of I-5 and FTC-S from Basilone Road to the south. The runoff area tributary to the San Mateo Creek EDB is 41 acres, which includes those sections of I-5 and FTC-S from the San Mateo Creek crossings southward to Basilone Road. The water quality volumes are 3.7 acre-feet and 2.5 acre-feet for the San Onofre Creek EDB and San Mateo Creek EDB, respectively (Focused Summary, Section 7.1).

Three biofiltration swales are proposed within the coastal zone. These will be located immediately north of the FTC-S crossing of San Mateo. Here, the vegetated trapezoidal swales will be located in the median of FTC-S at a slope of less than two percent, with 4:1 side slopes and lengths ranging from 200 to 500-feet. Swales will be designed to Caltrans standards which require water quality flow velocities (equal to the flow generated from the 85th percentile storm) to be low enough to keep hydraulic residence times in the swale greater than 5-minutes. The swales will be vegetated with native grasses and will treat runoff from FTC-S for the area north of San Mateo Creek from the connector structures to the Cristianitos Road crossing. The downstream ends of the

swales shall connect to grated inlet structures which outlet to an adjacent off-site storm drain system (that ultimately conveys the treated flow to the north bank of San Mateo Creek) (Focused Summary, Section 7.1).

Mitigation of Water Quality Construction Impacts. *Mitigation measures and storm water regulations will protect marine resources from adverse water quality impacts from construction. Section 402(p) of the Water Quality Protection Act of 1987 requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for construction projects that disturb more than one acre of land as part of the National Pollution Discharge Elimination System (NPDES). In California, the State Water Resources Control Board (SWRCB) is responsible for implementing this requirement through the RWQCB and Caltrans (Focused Summary, Section 3.1).*

TCA is required to obtain coverage under the Caltrans Construction General Permit for discharge of storm water from a construction activity prior to the start of construction of the project. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared once final design documents are available. The selection of construction Best Management Practices (BMPs) will be determined as a part of the development of the SWPPP; however the Final SEIR and supporting technical documents describe the following general construction BMPs for the project (Focused Summary, Section 5.1):

- Source identification and control (through covering and containing) of potential pollutants*
- Erosion control techniques for temporary, permanent and wind conditions. Types of erosion control to be considered include rolled erosion control products (RECPs) and hydraulically applied mulches.*
- Sediment control techniques with the specific objective of maintaining sediment loads consistent with pre-construction levels. Types of sediment control BMPs to be considered include fiber rolls, silt fence, drainage inlet protection and sediment traps and basins.*
- Control of non-storm water through elimination of sources.*

In addition, the RMP stipulates that the SWPPP include a storm water runoff sampling plan to ensure that BMPs are functioning effectively during construction (Focused Summary, Section 5.1).

The temporary residual increased sediment loads from construction areas are unlikely to alter the hydrologic response (i.e., erosion and deposition) downstream in the San Juan Creek and San Mateo Creek watersheds and, subsequently, the sediment processes in these watersheds. With implementation of the Storm Water Management Plan (SWMP) and SWPPP, there is minimal potential for impact in the southern part of the San Onofre Creek watershed upon construction of the Proposed Project (Focused Summary, Section 4.9).

Minimization of stream alteration. As described above, proposed improvements at San Onofre Creek consist of widening the existing bridge structure on both the upstream/northbound side (42.5 feet to 52.0 feet) and on the downstream/southbound side (37.0 feet to 52.7 feet) of I-5. The widened structure would be constructed on pier walls similar to the existing structure, with the same 2-foot width as the existing pier walls. The proposed widening creates an increase in water surface of 0.6 feet at the upstream face of the proposed bridge widening. The increase diminishes to 0 approximately 66 feet upstream of the bridge (Focused Summary, Section 4.2.2). Proposed improvements at San Mateo Creek include construction of two connector bridges to FTC-S over San Mateo Creek, upstream of the I-5 bridge structures (Focused Report, Section 4.2.2).

Thus, TCA believes the proposed toll road will improve water quality because it will incorporate Best Management Practices (BMPs) and treat additional runoff from I-5.⁹⁴ On September 17, 2007, TCA submitted its most recent Runoff Management Plan (dated July 26, 2007) to the Commission staff. As of the date of this mailing, the Commission staff has not had time to review this prior to the mailing for the October Commission meeting. Review of this plan will be discussed in an addendum to this report.

San Mateo and San Onofre Creeks are healthy, unimpaired and among the healthiest streams in southern California, because their watersheds are far less developed than most southern California watersheds. The proposed detention basins on I-5 that TCA proposes to construct may help offset impacts on the watershed from the increased runoff and pollutant loadings from 8-9 miles of highway being constructed along San Mateo Creek and its tributary, Cristianitos Creek, but it is not clear how a benefit over current conditions in San Mateo or Cristianitos Creeks would be provided by this project. In addition, while TCA states it is providing these collection facilities voluntarily, and beyond what would be required for its project, the San Diego Regional Water Quality Control Board (RWQCB) refutes this assertion, stating (Exhibit 22) that because the project includes improvements along I-5, and because State Water Board policies require installation of BMPs when improving existing roads that:

Our expectation is that if I-5 is widened as part of the ... [proposed toll road], then post construction BMPs must be added pursuant to the Caltrans NPDES permit. It is unclear at this point whether TCA is proposing to treat runoff from a larger section of I-5 than would be required by the Caltrans NPDES permit.

The RWQCB further states that none of the available data suggest an existing water quality impairment, that the lower portions of San Onofre and San Mateo Creeks have not been proposed to be listed as impaired, and, further, that:

⁹⁴ Transportation Corridor Agencies, *Coastal Consistency Certification and Analysis for the Foothill Transportation Corridor-South (FTC-S), Marine Corps Base Camp Pendleton, California*, March 23, 2007 (hereafter "Consistency Application") at 33.

Quantifying benefits from the proposed project is difficult without baseline data. Baseline data are currently lacking for both runoff quality and receiving water quality. The current pollutant loading from the I-5 highway and expected reductions from the proposed storm water detention basins may be estimated from existing Caltrans studies. Estimating the environmental benefits, however, requires pre-project data that are not available.

Concerning TCA's latest Runoff Management Plan (dated July 26, 2007), the RWQCB states that TCA has not provided sufficient information to enable the RWQCB to review the adequacy of the plan to protect water quality. The RWQCB has requested additional information (Exhibit 22) including:

1. additional evaluation of media filters for the San Mateo and San Onofre Creek EDBs;
2. soil types and comparisons in areas proposed for EDBs;
3. assurances that environmentally sensitive species in the San Mateo and San Onofre Creek receiving areas will be protected;
4. information about particle sizes that will be captured in EDBs;
5. information about the effect of EDB lining materials;
6. clarification about which EIR mitigation measures will be incorporated into the RMP
7. clarifications about assumed contaminant reductions from the EDBs;
8. clarifications about hydromodification assumptions;
9. an improved explanation of how flow splitters will capture first flush runoff for each roadway segment;
10. clarification of whether fill and cut slope runoff will be routed to EDBs;
11. a number of questions about the methodology and adequacy of offsite habitat mitigation plans.

The RWQCB also questioned, in the absence of adequate baseline information, how TCA could compare pre- and post project conditions, stating: "As a result, the investigation is insufficient for documenting pre-project water quality and for assessing effects of post-project discharges."

The RWQCB further requests that: "A water quality monitoring plan that is designed to assess both the quality of water discharged to receiving waters from the project and the quality of representative receiving waters should be submitted."

Based on the RWQCB's concerns, it would appear premature for the Commission to concur with TCA's water quality assessment that the project is consistent with Sections 30230 and 30231 of the Coastal Act. As noted above, the Commission staff will prepare an addendum to supplement this analysis.

F. Archaeological Resources.

Section 30244 of the Coastal Act provides:

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

Description of the Resource

The native inhabitants of San Juan Capistrano and all of Orange County belong to the Acjachemen Nation. For more than 10,000 years, the Acjachemen occupied the pristine coastline, vast valleys, and mountains which spanned from Long Beach to Oceanside, as far east as Lake Elsinore, and westward to Catalina and San Clemente Islands.⁹⁵

In 1769, Gaspar de Portola's expedition of Spanish soldiers and Franciscan padres would be the first recorded contact in Orange County between the Acjachemen and Spanish. With the advent of Spanish occupation of California in 1769, the native peoples were integrated into the mission systems. The Mission San Juan Capistrano was established upon an Acjachemen sacred site and was the basis for a new identity for the Acjachemen, who were then named San Juaneños by the padres.⁹⁶

Today, scholars identify Juaneño territory as being bound on the east by the Coast Range Peninsular Mountain Range; on the north by Aliso Creek, above present-day Mission Viejo; on the west by the Pacific Ocean; and on the south just north of Las Pulgas Canyon. Therefore, the Juaneño aboriginal territory encompasses the present-day cities of San Juan Capistrano and San Clemente, San Onofre Nuclear Power Plant, and San Onofre State Beach and Park.⁹⁷ However, other scholars extend the Juaneño northward to as far as Long Beach.⁹⁸

There are numerous archeological resources located in the vicinity of the proposed toll road. These resources range in size, significance, and usage by present day Native Americans. TCA believes there are more than 30 archaeological resources within the disturbance limits of the proposed toll road. Based on information and guidance from the State Historic Preservation Officer (SHPO), the Commission focuses the majority of its analysis on two specific archeological resources: *Panhe* and Trestles.

Panhe

Panhe is the ethnographic village of the Juaneño Band of Mission Indians. It lies within the San Mateo Archeological District (the District), which is located in parts of San Onofre State

⁹⁵ See Juaneño Band of Mission Indian, Acjachemen Nation, *Tribal brochure*, <http://www.Juaneño.com/images/Brochurefinalplain.pdf> (last visited September 18, 2007).

⁹⁶ Id.

⁹⁷ Kroeber, Alfred Louis, Handbook of the Indians of California, Smithsonian Institute, Washington, D.C. 1976.

⁹⁸ Personal communication between Commission staff and Dave Peterson, Program Analyst, Native American Heritage Commission, on August 20, 2007.

Beach (SOSB) and the northwest corner of Camp Pendleton Marine Corps Base. The District is approximately 480,000 m² in size, falls primarily within San Diego County, and extends slightly into Orange County. The District includes six sites: CA-ORA-22/CA-SDI-13,071, CA-SDI-4282, CA-SDIE-4535, CA-SDI-8435, CA-SDI-11703, and CA-SDI-11929.

Significance

In 1981, the District was evaluated by archaeologists to determine its eligibility for inclusion on the National Register of Historic Places (National Register). The National Register is the Nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect the nation's historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture.⁹⁹ Resources that are determined to be eligible for listing on the National Register are afforded special consideration in planning for Federal, federally licensed, and federally assisted projects.¹⁰⁰

The criteria for determining National Register eligibility pursuant to the National Historic Preservation Act are the basis for evaluating significance. They are stated as:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics or a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded or may be likely to yield, information important in prehistory or history.¹⁰¹

⁹⁹ See National Register of Historic Places, *Welcome to the National Register*, <http://www.nps.gov/history/nr/about.htm> (last visited September 18, 2007).

¹⁰⁰ See National Register of Historic Places, *What are the results of listing?*, <http://www.nps.gov/history/nr/results.htm> (last visited September 18, 2007).

¹⁰¹ See National Register of Historic Places, *What are the criteria for listing?*, <http://www.nps.gov/history/nr/listing.htm> (last visited September 18, 2007).

On December 31, 1981, the Acting Keeper of the National Register found the District to be eligible for inclusion in the National Register under Criteria A and D.¹⁰² The District was considered significant for Juaneño cultural history and the potential to yield important information in prehistory.

The District was considered significant under Criteria A due to its contribution to broad and specific patterns of Juaneño history. This included the following issues: the view that it represents the location of the historic village of *Panhe*; the documented presence of human burials and the potential for additional burials; its location near the first contact between Juaneño and Europeans in July 1769; and that many *Panhe* residents were coerced into helping with the construction of San Juan Capistrano mission compound and developing the area's ranches.¹⁰³

The District was considered significant under Criteria D due to its scientific importance. The scientific value of the District was based on the fact that 302,000 m² of the District retains contextual integrity, and as much as 80,000 m² of the lower terrace is virtually intact. Thus, vertical and horizontal patterns were potentially present.¹⁰⁴

New fieldwork since 1981 has yielded three important findings: (1) lateral erosion of SDI-8435 has revealed that in situ remains (including human remains) from the site extend over 200 m further northeast and upstream than previously recognized. As such the site extends into the campgrounds leased by the State of California Parks and Recreation; (2) the boundary can be expanded to include two related prehistoric sites (SDI-13,324 and SDI-13,325) directly to the southwest that will aid in linking the cultural remains of this area through a series of common components; and (3) intact cultural deposits occur west of Interstate 5 to San Mateo Point. These results formed the basis for a recommendation to change the boundary of the District to incorporate these three areas, and increase the District's size to 1,517,000 m².¹⁰⁵

The Native American Heritage Commission has recorded 1 discovery of human remains on State Lands near the San Onofre Nuclear Generating Station. The location of these remains constitutes one of the two sites listed by the Native American Heritage Commission as Sacred Lands. The Native American Heritage Commission believes the discovery of these remains raises the likelihood of additional discoveries in the vicinity.¹⁰⁶

¹⁰² US Department of the Interior, Acting Keeper of the National Register, *Response to request for a determination of eligibility for inclusion in the National Register*, Letter to US Department of Transportation Federal Highway Administration, December 31, 1981.

¹⁰³ Byrd, Brian, F. *Re-Evaluation of the San Mateo Archaeological National Register District San Diego County, California*. ASM Affiliates Inc., Prepared for US Army, Corps of Engineers, Los Angeles District. August 1997.

¹⁰⁴ Id.

¹⁰⁵ Id.

¹⁰⁶ Personal communication between Commission staff and Dave Peterson, Program Analyst for the Native American Heritage Commission, on September 17, 2007.

There have been an additional 12 discoveries of human remains on Camp Pendleton. The burials were discovered during a construction project in the San Mateo agricultural fields. The remains were treated according to the requirements of the Native American Graves Protection and Repatriation Act of 1990 and reburied in proximity to the location they were found.¹⁰⁷

Present Day Usage

Descendants of the Juaneños still use a portion of *Panhe* today. Various religious and ceremonial activities are carried out, including the Ancestor Walk—a very important event among Acjachemen, Tongva, Chumash, Tataviam and other Southern California tribal communities. This event has begun at sunrise at *Panhe* for the past 10 years, which speaks to the tremendous importance of *Panhe* to local tribes.¹⁰⁸

According to TCA, there are no areas within the disturbance limits that are currently being used by living Native American representatives of the Juaneño. A reburial area, located immediately adjacent to the disturbance limits, has been used by the Native Americans that contains human remains placed there through modern-era reburial. This is a 5 acre fenced area owned by MCB Camp Pendleton and ceremonial activities are allowed to take place there upon request. Since the 1980s, traditional use of this 5-acre area has been limited to occasional visits and ceremonies. New use agreements between local Juaneño tribes and the Marine Corps are currently in development and are expected to restore some traditional use in this area.¹⁰⁹

The California Department of Parks and Recreation (CDPR) has stated that most present-day Juaneño (Acjachemen) people can trace their ancestry directly to the village of *Panhe*, as evidenced by genealogical research, research with Spanish Mission records, interviews, and other historical research. *Panhe* was the largest Indian village in this region in prehistoric and early historic times. Today, evidence of the village complex of *Panhe* includes occupation debris (midden deposits), aboriginal artifacts and subsistence remains, human burials, house remains, fire hearth remains, other cultural remains, historical documents, and the memory of living Acjachemen people.¹¹⁰

Traditional Cultural Property Potential

The State Historic Property Officer (SHPO) has formally requested that *Panhe* be reviewed as a Traditional Cultural Property. This request was made on April 27, 2007, and is further elaborated in the section below entitled *Section 106 Consultation*. The SHPO's opinion is that

¹⁰⁷

Personal communication between Commission staff and Stanley Berryman, Cultural Resources Program Manager for US Marine Corps Camp Pendleton, on September 17, 2007.

¹⁰⁸

Personal communication between Commission staff and the United Coalition for the Protection of *Panhe*, on September 20, 2007.

¹⁰⁹

LSA Associates, Inc. (on behalf of TCA), *Cultural Resources Response, Table 1: Coastal Commission Response Summary*, (hereafter "*Cultural Resources Response*"), Letter to California Coastal Commission, at A-5, August 10, 2007 (received August 24, 2007).

¹¹⁰

Michael Sampson, Associate State Archaeologist, Southern Service Center, California Department of Parks and Recreation, *Proposed extension of State Route 241 and the ethnographic village of Panhe*, Letter to Dan Silver, Endangered Habitats League, September 7, 2007.

the evaluations performed in 1981 that qualified *Panhe* for listing on the National Register are not sufficient for determining whether or not *Panhe* is a Traditional Cultural Property. The SHPO needs to know if *Panhe* is a Traditional Cultural Property because this determination will allow it to assess impacts and the adequacy of the proposed mitigation.

Trestles

The surfing resources of Trestles are described in detail in the Surfing section of this report above. A short description of the resource and its significance to Southern California culture follows.

Trestles Beach, located at the mouth of the San Mateo Creek in SOSB, is world renowned for its consistent, near perfect waves. It provides one of the best groups of year-round surfing waves in Southern California, an area that supports the greatest concentration of surfers in the world. Lower Trestles is one of ten surf breaks worldwide chosen for the Association of Surfing Professionals Men's World Tour, and is the only one from the continental United States.¹¹¹

Trestles is a source of local pride, as well as income, for the residents of San Clemente. The city's identity is inextricably linked to the development and culture of surfing. On its website, the San Clemente Chamber of Commerce lists "Surfing Legacy" as one of five defining features that describe the city. This Surfing Legacy lists local surf breaks, including Trestles, and makes the following statements about San Clemente: (1) it is a premiere surfing destination, (2) it is the surfing media capitol of the entire world because it houses all of the leading industry publications, (3) it has a large concentration of surfboard shapers, manufacturers, and famous surfers, and (4) its only high school has won six of the last seven National Scholastic Surfing Association Championships.¹¹²

Significance

TCA did not evaluate Trestles for its historic and/or cultural significance. However, CDPR has provided information summarizing Trestles' potential as a State Historic District and a California State Point of Historic Interest to the California Register of Historic Resources (California Register) and the National Register. CDPR's belief is that Trestles is potentially eligible for a variety of State and/or National historic designations. The summary that appears below is a portion of its effort to create a series of recordation forms that will officially document Trestles as a potentially eligible historic district. These recordation forms will be forwarded to the SHPO for consideration for placement on the California Register and also serve as the basis for a future National Register nomination.

¹¹¹

See Association of Surfing Professionals, *Foster's ASP World Tour Schedule*, <http://www.aspworldtour.com/2007/schedule.asp?rView=w&rRat=mwct&rNav=Men&rYear=2007&rTitulo=WCT> (last visited on September 18, 2007).

¹¹²

See San Clemente Chamber of Commerce, *San Clemente, Surfing Legacy*, <http://www.scchamber.com/HTML/city/sanclemente.htm> (last visited on September 18, 2007).

Lower Trestles and its neighboring beaches have a 70-year association with events and activities that have played a significant role in the evolution of surfing as a sport which is an integral part of Southern California's identity as a beach culture. The district's character defining historic landscape elements-sandy beaches and consistent offshore wave breaks-have attracted pioneering local surfers since 1933, and have been the site of surfing competitions since 1938. Historically, the district is associated with a number of notable pre-and post-WWII surfers, who have made significant contributions to the sport and lifestyle: John "Doc" Ball, Peter Peterson, Don James, Phil Edwards, Micky Dora, and perhaps more importantly, Duke Kahanamoku, the father of modern surfing.¹¹³

After the building of Newport Beach's Corona del Mar breakwater in 1935, San Onofre became the surf spot for pioneer surfers in Southern California. The area's relatively easy automobile access along the Coast Highway contributed to it becoming "a meeting place." Surfers from San Diego to Santa Cruz would conduct weekend trips (later called "surfin' safaris") to San Onofre. Local surfer John "Doc" Ball's description of these trips in his seminal 1946 photo book *California Surfriders* helped to define the public's impression of the Southern California beach culture. Ball notes, "Weekend camp-outs (were) filled with Hawaiian guitar, Tahitian dancing and no small amount of boozing." Besides "Doc" Ball, virtually every notable surfer in California came to San Onofre Beach from the mid-1930s to the early 1940s: Tom Blake, Cliff Tucker, Tulie Clark, Gard Chapin, and I.E. "Hoppy" Swarts. Their passion and commitment to the sport inspired them to organize and participate in a number of surfing competitions. The first, the 6th Pacific Coast Surf Riding Championship at "Old Man's," was won by the era's best surfer, Santa Monica's Pete Peterson.¹¹⁴ Peterson won two of his four PCSR championships here: the inaugural meet in 1938 and in 1941.

Beginning in WWII, San Onofre's beaches became part of the U.S. Marine Corps Camp Pendleton training facility and were declared off-limits to civilians. After the war, Orange County surfer Dr. Barney Wilkes organized the San Onofre Surfing Club in 1952. In response, the Marine Corps tentatively allowed club members to surf off San Onofre. However many non-club members constantly played a game of cat and mouse with Marine sentries, some of whom actually fired warning shots over their heads.¹¹⁵

The most important post-war Southern California surfer legends associated with the beach were Mickey Dora and Phil Edwards, who together created the technique, image, and language for surfing in America during the late 1950s to mid-1960s. Arguably, the single most important historical figure associated with San Onofre is Duke Kahanamoku, who was invited to surf at "Sano" by members of the San Onofre Surfing Club sometime after the club's founding. A gold medal-winning U.S. International Olympic swimming champion and heroic lifesaver, Kahanamoku is referred to as the "Father of Modern Surfing" for his efforts in

¹¹³ Alexander D. Bevil, Historian II, Southern Service Center, California Department of Parks and Recreation, *San Onofre State Beach Historical Significance*, Letter to Mark Rauscher, Surfrider Foundation, August 31, 2007.

¹¹⁴ Id.

¹¹⁵ Id.

resurrecting the sport in his native Hawaii, and popularizing it in California and Australia. San Onofre Surfing Club members and their guests all but enshrined the beach as a “warm, nostalgic, easygoing family-style surf break.” The club’s activities fostered the public’s conception of the Southern California beach lifestyle in print, motion pictures, radio and television. Indeed, the *Beach Boys* immortalized Trestles in their seminal hit, *Surfing USA*. An unnamed club member put it best in 1961, “This [surfing] is our life. All the days in between are bare existence.” A palm frond “surf shack” in front of the main surf break became a world icon, as did the club’s yearly automobile parking decal.¹¹⁶

San Onofre became part of the California State Park system in 1973, in no small part due to then President Nixon’s commitment to preserve one of the best surfing beaches in the nation, if not the world. State park designation was a double-edged sword, however, allowing for greater public access and popularity, and subsequent overcrowding. What was once the site of local surfing competitions has evolved into an area where national and international surfing championships are held on a regular basis.¹¹⁷

Present Day Usage

The population of surfers who surf once a week or more throughout the year in California is estimated to number at least one million, with occasional or seasonal surfers perhaps tripling that total. The number of surfers that travel to Trestles each year has steadily increased since record keeping began in the early 1990s. There were more than 367,000 visitors to Trestles in 2006, the vast majority of whom came to surf. Trestles is projected to host 400,000 visitors/surfers in 2007.¹¹⁸

Traditional Cultural Property Potential

The SHPO has formally requested that Trestles be reviewed as a Traditional Cultural Property. This request was made on April 27, 2007, and is further elaborated in the section below entitled *Section 106 Consultation*. The SHPO needs to know if Trestles is a Traditional Cultural Property because this determination will allow it to assess impacts and the adequacy of the proposed mitigation.

Additional Resources

As indicated previously, numerous other archeological resources are found in the vicinity of the proposed toll road. Although the Commission’s analysis has emphasized the two described above (*Panhe* and Trestles), the other resources present are discussed in the Impacts Section below.

Section 106 Consultation

Section 106 of the National Historic Preservation Act requires that the lead federal agency for a proposed project consult with the Advisory Council on Historic Preservation regarding impacts

¹¹⁶

Id.

¹¹⁷

Id.

¹¹⁸

Personal communication between Commission staff and Steve Long, South Sector Superintendent Orange Coast District, California Department of Parks and Recreation, on September 5, 2007.

to properties included in or eligible for the National Register of Historic Places prior to the approval of the proposed project. Indian tribes that may be affected may also participate as interested persons.

The proposed toll road triggered a National Historic Preservation Act Section 106 consultation process that has not yet been completed. Although Section 106 is a separate process from the Coastal Commission's federal consistency review, it is relevant because the SHPO and the Advisory Council on Historic Preservation are involved. Their perspective of the Section 106 process is pertinent because the SHPO is specifically identified in § 30244 as the Commission's archeological adviser. The ACHP works closely with the SHPO and oversees the Section 106 consultation process for the entire federal government. Both agencies have submitted written statements to the lead federal agency (Federal Highway Administration) summarizing very detailed concerns and requests. Specifically, they have requested that the Federal Highway Administration (FHWA) evaluate *Panhe* and *Trestles* for their potential as Traditional Cultural Properties. Their comments are paraphrased below:

State Historic Preservation Officer:

Letter to FHWA dated April 27, 2007¹¹⁹

Despite their explicit request, the SHPO has never been a participating party in the Collaborative (for Section 106 consultation), and the Collaborative has never sought the comment of the SHPO on the selection of the preferred alternative as part of our Section 106 consultation.

The toll road appears to have the potential to affect at least two heritage resources, the ethnohistoric and ethnographic village of Panhe, and Trestles surf break, heritage resources that may ultimately be determined to possess appreciable historic and cultural significance. It appears that the toll road may affect these properties in ways that would be difficult or impossible to mitigate in a meaningful way, absent the ability to adjust the final alignment.

It is unknown what the construction of the toll road would entail. Despite prior requests, no area of potential effect (APE) determination that provides a reasonably thorough description and rationale for the horizontal and vertical character of the APE has been received.

If the SHPO decides to continue to participate in the consultation, evaluations of Panhe and Trestles surf break would be of critical import to the successful conclusion of consultation. There is no mention of Trestles, a potential traditional cultural property of the surfing community that may have resonance at local, state, and national levels of

119

Milford Wayne Donaldson, FAIA, State Historic Preservation Officer, *Section 106 Consultation on the South Orange County Transportation Infrastructure Improvement Project, Orange and San Diego Counties, California*, Letter to Federal Highway Administration, April 27, 2007.

significance. The construction of the toll road may have the potential to directly and indirectly affect this heritage resource. A formal discussion of its presence and an evaluation of its significance are appropriate as one aspect of our consultation.

The SHPO will want to conclude formal consultation on the National Register eligibility of Trestles surf break prior to the Collaborative's final decision to build the proposed toll road.

The SHPO has requested a formal response to the points listed below:

- 1) Has the Collaborative's alternative selection process taken the preferred alternative's potential effects on Panhe and Trestles into account? How? Does the Project yet retain the flexibility to accommodate a substantive consideration of these heritage resources?*
- 2) What exactly, not where, is the preferred alternative? How far along in the design process is that alternative?*
- 3) Will the FHWA agree to evaluate Panhe and Trestles prior to the Collaborative's final decision to build the preferred alternative?*

As of September 21, 2007, the SHPO has not received a response to these comments.

Advisory Council on Historic Preservation:

¹²⁰
Letter to FHWA dated May 9, 2007

- 1. FHWA should evaluate what additional work remains to be done to fully identify the historic properties in the area of potential effects and to evaluate such properties for National Register eligibility. The SHPO has pointed out the need to evaluate the National Register significance of the ethnographic village of Panhe and the Trestles surf break. We agree that these sites should be evaluated before FHWA proceeds further to attempt to resolve adverse effects.*
- 2. We recommend that FHWA, as the lead federal agency, reinstitute consultation with Indian tribes that ascribe traditional religious and cultural significance to historic properties that may be affected by the undertaking. LSA, consultants for TCA, have worked closely with some of the participating Indian tribes toward addressing those tribes' concerns with the project. However, FHWA cannot delegate its responsibility for government-to-government consultation to a non-federal party without the prior agreement of the affected Indian tribes. As this project is*

¹²⁰

Charlene Dwin Vaughn, AICP, Assistant Director, Federal Permitting, Licensing and Assistance Section, Office of Federal Agency Programs, Advisory Council on Historic Preservation, *Section 106 Consultation Regarding the Proposed South Orange County Transportation Infrastructure Improvement Project, Orange and San Diego Counties, California*, Letter to Federal Highway Administration, May 9, 2007.

controversial, and has been challenged by the California Native American Heritage Commission, it is especially important for FHWA to take responsibility for consulting with Indian tribes. If the Marine Corps Base Pendleton has established relationships with these tribes, we encourage you seek the Marine Corps' assistance in carrying out this responsibility.

3. *Finally, we share the SHPO's concern regarding the development of TCA's preferred alternative, and we expect TCA and FHWA to remain open to consideration of alternatives in carrying out the Section 106 process. Section 106 and the Advisory Council on Historic Preservation's regulations, require the federal agency official to consult with the SHPO and other consulting parties to seek ways to avoid, minimize, or mitigate the adverse effects of an undertaking on historic properties. Realignment of a highway, a change in a curve or an interchange, or other alterations to the project design may be needed to successfully carry out this responsibility.*

Pending Litigation

On March 22, 2006, the Attorney General of the State of California filed a complaint against TCA on behalf of the Native American Heritage Commission. The Native American Heritage Commission is authorized to request the Attorney General to bring an action on its behalf.¹²¹

The Native American Heritage Commission submitted comments on the *Final Supplemental Environmental Impact Report* to TCA in January 2006 and held a public hearing to provide public comment and suggested courses of action in February 2006. The Native American Heritage Commission determined that construction of TCA's proposed toll road would cause severe and irreparable damage to the Village of *Panhe* and voted to ask the Attorney General to initiate a legal challenge if the proposed toll road was approved by TCA. TCA approved the *Final Environmental Impact Report* for the proposed toll road on February 23, 2006, without choosing an alternative route that would avoid impacts to the Village of *Panhe* as suggested by the Native American Heritage Commission.¹²² The Attorney General filed its lawsuit the following month.

The complaint states that *Panhe* is on file with the Native American Heritage Commission as a sacred site, that it is eligible for listing on the National Register, and likely qualifies as a Traditional Cultural Property. It further states that the proposed project would come within feet of a Juaneño/Acjachemen cemetery currently used by the Juaneño/Acjachemen people; would cause both short- and long-term adverse impacts; would potentially increase scavenging and damage by relic collectors; that California Native American cultural resources are limited resources and must be protected; and that the proposed project would violate Public Resources

¹²¹

See Native American Heritage Commission, *Complaint for Injunctive Relief*, No. 06-GIN051370 (S.D. Superior Court filed March 22, 2006).

¹²²

Id.

Code section 5097.9 that prohibits public agencies from interfering with and damaging Native American resources. The complaint requests an injunction against the applicant to prevent it from building the project.¹²³

Impacts

TCA acknowledges that the proposed toll road will result in potentially substantial adverse impacts related to archaeological resources that cannot be fully mitigated. TCA has characterized these impacts in terms of: (1) number and significance of cultural resources, (2) construction impacts, (3) long term impacts, and (4) impacts to present day Juaneño descendants.

Number and Significance of Cultural Resources

TCA submitted four separate documents to the Commission staff regarding cultural resources. These documents were inconsistent, used different terminology to refer to specific areas in and around the alternatives, and listed different numbers of resources present. Due to the uncertainty regarding the terminology used and the actual number of cultural resources present, the Commission staff requested clarification from TCA on June 18, 2007, and TCA responded on August 24, 2007, with the information summarized below.

TCA defined the disturbance limits for the proposed toll road (which was referred to in these documents as the Preferred Alternative or A7C-FEC-M-Initial) as the area of the project that would incur direct physical impacts from project construction. The study area was defined by TCA as the disturbance limits plus a 328-foot buffer. TCA stated that only cultural resources found within the disturbance limits of the proposed toll road would be impacted.¹²⁴

TCA also provided a series of maps and a table summarizing the cultural resources impacted. This table revealed 34 cultural resources present within the disturbance limits and 46 present within the study area of the proposed toll road. This table also showed that within the coastal zone a total of 9 cultural resources are within the disturbance limits and 12 are present within the study area. This is contradicted by a written response from TCA that states there are 11 cultural resources within the disturbance limits. Regardless, at least 9 are within the coastal zone and 34 in total are within the disturbance limits.¹²⁵

An important determinant of significance for cultural resources is its eligibility for listing on the National Register. Of the 34 cultural resources present in the disturbance limits, 12 are eligible for listing on the National Register and 9 are unknown. In just the coastal zone, six resources are eligible.¹²⁶ The approximate location of the cultural and archeological resources within the coastal zone is demonstrated in Exhibit 35.

¹²³

Id.

¹²⁴

See *Cultural Resources Response* at A-1.

¹²⁵

Id. at *Table 1, Status of Prehistoric Resources in the SCTIIP Preferred Alternative APE*.

¹²⁶

Id.

Construction Impacts

Impacts on archaeological resources during construction are related to the damage or destruction of these resources that could occur during demolition, earthmoving and other construction activities.

These impacts to archeological resources would be adverse.¹²⁷ As stated above, the disturbance limits of the proposed toll road are the areas that will incur direct physical impacts from project construction.

All 34 of the resources identified by TCA will incur direct physical impacts. This includes direct physical impacts to the 12 that are eligible for listing on the National Register. These impacts would therefore be adverse.¹²⁸

The additional 12 resources that occur within the study area are not projected by TCA to incur direct physical impacts. Some are located within the 328-foot buffer and may even be quite close to the disturbance limits. For example, three of the six sites found within the District are located in very close proximity to the disturbance limits within the buffer. CA-SDI-8435 appears to be directly adjacent to the disturbance limits, CA-ORA-22/CA-SDI-13,071 is about 52 feet away, and CA-SDI-11,703 appears quite close but was displayed at a scale too small to calculate its location relative to the disturbance limits.¹²⁹ TCA categorizes these three sites, and the other 9 found within the study area, as not impacted by the proposed toll road.

Long Term Impacts

The long term impacts related to archeological and historic resources are generally indirect in nature. Long term potential impacts associated with increased noise levels, reduction in air quality and increases in traffic volume in the vicinity of historic resources could potentially affect the public access and enjoyment of these resources. In the case of archeological resources, public access could potentially be made available to previously inaccessible resources, thereby increasing human presence in those areas. Increased human presence creates opportunities for increased disturbance of archeological resources including the potential for scavenging and/or damage by relic collectors.¹³⁰

Impacts to Present Day Juaneño Descendants

The Commission asked TCA about impacts specifically to present day Juaneño descendants that currently use an area within *Panhe* for ceremonies and other activities. The Commission received this response:¹³¹

¹²⁷ Transportation Corridor Agencies, *South Orange County Transportation Infrastructure Improvement Project (SOCTIIP): Final Subsequent Environmental Impact Report (December 2005) (hereafter "FSEIR")*, vol. III at 4.16-33.

¹²⁸ See Cultural Resources Response at A-7.

¹²⁹ See Cultural Resources Response at Figure 6.

¹³⁰ See Footnote 33.

¹³¹ See *Cultural Resources Response* at A-9.

The construction will occur within the District, near, but not directly impacting, the area currently used by present day Native Americans. Native American access to the use area is controlled by MCB Camp Pendleton. The proposed toll road will not affect the existing arrangement between MCB Camp Pendleton and Native Americans for access to this fenced area. This area will be indirectly impacted by noise, view, air quality, and traffic. A proposed sound wall separating the road from the San Mateo Campground and the area used by the local native Americans will decrease vehicle noise dramatically. Because the predominant view is downhill and away from the proposed toll road, the predominant downhill vista will not be affected by the project. Thus, the impact is minimal and indirect. The Native Americans will still be able to hold ceremonies and other events to the extent that they are occurring now and may occur in the future based on a new use agreement with DON/marine Corps. In summary, the proposed toll road will not affect the ability of Native Americans to access and use this area.

Mitigation

TCA believes the proposed toll road has been designed and selected to avoid sensitive resources to the maximum extent feasible, but concedes that the density of resources in the area makes avoidance of all resources impossible.¹³²

TCA maintains that impacts to archaeological resources that are eligible under Criterion D will be mitigated below a level of significance through the incorporation of the prescribed mitigation measures.¹³³

Impacts to resources eligible under Criterion A, B, or C cannot be mitigated to below a level of significance and will be adverse.¹³⁴ This would apply to at least three resources in the coastal zone (CA-SDI-4282, CA-SDI-4535, CA-SDI-11,929).¹³⁵

TCA lists three mitigation measures for archeological impacts and acknowledges these will not reduce adverse impacts for resources eligible under Criteria A-C:¹³⁶

- 1) AR-1: Retaining of a qualified archaeologist and Native American monitor
- 2) AR-2: Historic property treatment plan for eligible resources
- 3) AR-3: Monitoring plan for resource surveillance

TCA believes that the 2003 programmatic agreement between the parties working on the Section 106 consultation process provides assurance that the mitigation is reasonable, and in accordance with the applicable Coastal Act policies.¹³⁷

¹³² See *Cultural Resources Response* at A-11.

¹³³ See Footnote 33.

¹³⁴ Id.

¹³⁵ See Footnote 31.

¹³⁶ See *Cultural Resources Response* at A-12.

Opponents' Contentions

TCA received numerous comments on its *Draft Environmental Impact Statement/Supplemental Environmental Impact Report* (DEIS/SEIR) and *Final Supplemental Environmental Impact Report* (FSIR) pertaining to impacts to archeological resources. Most commenters expressed concern that the resource evaluation, impacts assessment, and proposed mitigation were inadequate, especially for *Panhe*. Excerpts from commenters appear below, grouped in the following categories: 1) State Agencies, 2) Federal Agencies, and 3) Non-Governmental Organizations.

State Agencies

California State Historic Preservation Officer:

Comments already included above on page 192.

California Native American Heritage Commission:

Comments to TCA regarding the FEIR dated January 10, 2006:¹³⁸

The Village of Panhe lies in the SMAD, which is within San Onofre State Beach. The recorded archaeological sites CA-ORA-22 and CA-SDI-8435 are listed as sacred sites with the NAHC. Listing on the Sacred Lands File is based on a site's traditional, cultural, or religious significance to, or its ceremonial use by, or by virtue of its requirement in a ceremony by, a California Native American tribe. CA-ORA-22 and CA-SDI-8435 represent the Village of Panhe and these lands are used by the Juaneño for burial and ceremonial purposes. As such, Panhe continues to be used as an integral part of Juaneño culture.

While the FSEIR recognizes the historical and cultural importance of Panhe, it does not adequately address the severe, adverse impacts. Specifically the FSEIR is misleading in that it states that the areas of Panhe currently used by the Juaneño people lay outside the disturbance limits of the chosen project alternative. Rather, the chosen alternative would come within a matter of feet of a Juaneño cemetery currently used by the Juaneño people thus destroying their ability to carry out religious and ceremonial activities at that site.

The FSEIR suggests that the areas of Panhe currently in use will not be impacted. The only impacts described are construction impacts on discrete Panhe sites, which are described as adverse. It does not adequately assess noise, traffic, air quality,

¹³⁷ See *Cultural Resources Response* at A-13.

¹³⁸ Larry Myers, Executive Secretary, Native American Heritage Commission, *Comments, Final Supplemental Environmental Impact Report for the proposed South Orange County Transportation Infrastructure Improvement Project*, Transportation Corridor Authority, Letter to TCA and Federal Highway Administration, January 10, 2006.

visual/aesthetic, and aggregate impacts on the site's historical and cultural integrity and continued use by the Juaneño community. Although these impacts are categorized as indirect in the FSEIR, these impacts will functionally destroy Panhe's historical and cultural integrity and viability for the Juaneño people.

Panhe should have been analyzed as a Traditional Cultural Property. The Native American Heritage Commission believes Panhe fits the description of a Traditional Cultural Property.

These specific concerns expressed by the Juaneño community regarding project impacts were not included in the FSEIR.

The proposed mitigation measures do not address the impacts the project will have on Panhe's overall cultural integrity and its use by the Juaneño people as a contemporary cultural and ceremonial ground.

The Native American Heritage Commission requested Panhe be evaluated as a Traditional Cultural Property; evaluate impacts on the cultural use of the site; address the issue of long-term access to the site for ceremonial activities; and address the preservation of Panhe's historical and cultural integrity by mitigating impacts through redesign.

Impacts That Still Need to be Addressed:

- 1. Evaluate Panhe as a Traditional Cultural Property (NR Bull 38), including specific details regarding its contemporary importance and use by the Juaneño community*
- 2. Evaluate noise, traffic, air quality, and visual/aesthetic impacts on the cultural use of the site by the Juaneño community*
- 3. Address the issue of the long-term access to the site by the Juaneño community for ceremonial activities*

Mitigation:

- 1. Redesign the toll road project to preserve Panhe's historical and cultural integrity from noise, traffic, air quality, and visual/aesthetic impact*

California Department of Parks and Recreation:

Comments to TCA regarding the DSEIR dated August 2, 2004:¹³⁹

The presence of Panhe (within the SMAD) lends extraordinary cultural significance to the SMAD, and qualifies it to the National Register under criterion A. Present-day Juaneño people have strong feelings for Panhe, as being important to their cultural

139

Ruth Coleman, Director, California Department of Parks and Recreation. *Letter to TCA regarding comments on the South Orange County Transportation Infrastructure Improvement Project Draft Environmental Impact Statement/Subsequent Environmental Impact Report (EIS/SEIR), August 2, 2004.*

traditions and cultural heritage. The project proponents must seek out input from all Juaneño communities about this issue. The area encompassed by the SMAD and surrounding areas (e.g., nearby archaeological sites and the fenced compound used for ceremonies and reburials) likely qualify by Federal standards as a 'Traditional Cultural Property.'

The archaeological fieldwork alluded to in the document appears to be inadequate to properly identify and evaluate archaeological sites, potential sacred sites, and locations important to Native American communities and other stakeholders.

The EIS/SEIR gives no evidence that local archaeologists with knowledge of the project area were contacted for information, e.g., the Camp Pendleton Base Archaeologist, local consultants who have worked in the area, archaeologists from California State Parks, and others. The considerable archaeological work that has been performed on Camp Pendleton, including, areas within and next to the Area of Potential Effect (APE), is no referenced in the EIS/SEIR. Those data are critical for evaluating archaeological remains in the APE and understanding their cultural context.

The section on 'Proposed Status of Mitigation Measures...' is prematurely constructed, as no such measures can be determined with the current state of knowledge of archaeological remains. The EIS/SEIR must present a project alternative that completely avoids all the highly significant cultural properties within SOSB.

Impacts That Still Need to be Addressed:

- 2. Cumulative impacts are not listed (high speed rail authority and federal railroad administration)*

Mitigation:

- 1. Mitigation measures cannot be evaluated based on the current state of knowledge of remains*
- 2. Must present an alternative that completely avoids all of the highly significant cultural properties*
- 3. Use mitigation document prepared in 1997*

Comments to TCA regarding the FSEIR dated January 10, 2006:¹⁴⁰

The response (by TCA) to comments (of State Parks) on the DEIS/SEIR neglects to address the issue of Panhe.

140

Ruth Coleman, Director, California Department of Parks and Recreation, *Subject: South Orange County Transportation Infrastructure Improvement Project Draft Final Subsequent Environmental Impact Report*, Letter to TCA, January 10, 2006.

Addendum to Comments regarding the FSEIR dated January 11, 2006:¹⁴¹

Comments on the archaeological report entitled Pedestrian Survey San Mateo and Cristianitos Valleys, Marine Corps Base Camp Pendleton, California (draft) by LSA:

The LSA report provides no indication that additional research or consultation with appropriate stakeholders and management agencies related to the SMAD and sacred site of Panhe have been attempted. Important sources of information on this highly significant archaeological district and sacred site were not referenced.

The potential direct impacts and indirect effects upon the SMAD and Panhe from the proposed toll road and it's effects upon traditional cultural practices of living Indian communities represent the critical cultural issues.

TCA must open serious consultation efforts with local Indian community leaders, constructive consultation efforts with the State Parks staff, Camp Pendleton staff, the local archaeological community, local stakeholders, and other community groups.

The full effects of the proposed toll road cannot be realized and adequately addressed until the above actions and consultations occur.

Current professional archaeological practices now favor viewing broad project areas from a more holistic cultural landscape contextual approach. Camp Pendleton employs a cultural landscape approach to the management of all cultural resources on the base. LSA did not use this approach.

California State Park and Recreation Commission:

On November 18, 2005, the Park and Recreation Commission passed Resolution 66-2005 entitled *Opposing A Proposed Tollroad Alignment and Request for Action to Protect San Onofre State Beach*.¹⁴²

The Resolution was unanimously adopted and the Park and Recreation Commission expressed strongly that California State Park lands should be protected and preserved from encroachments such as the toll road. It asserts that these lands were set aside for the health, inspiration, and education of all Californians and should not become the path of least resistance for later development.¹⁴³

¹⁴¹

Richard Rozzelle, Acting Superintendent, Orange Coast District, California Department of Parks and Recreation, *Addendum to Comments of California State Parks on South Orange County Transportation Infrastructure Improvement Project Draft Final Subsequent Environmental Impact Report*, Letter to TCA, January 11, 2006.

¹⁴²

Louis Nastro, Assistant to the Commission For Ruth Coleman, Director, California State Parks, Secretary to the Commission, *Resolution 66-2005 adopted by the California State Park and Recreation Commission at its regular meeting in Tahoe City, California*, November 18, 2005.

¹⁴³

Id.

This Resolution was sent to Governor Schwarzenegger on December 8, 2005, for his consideration. The Park and Recreation Commission requested him to oppose any major transportation arterial through San Onofre State Beach and to use all appropriate methods, including litigation if necessary, to defend this valuable and irreplaceable public resource.¹⁴⁴

Federal Agencies

Advisory Council on Historic Preservation:

Comments already included above on page 193.

National Trust for Historic Preservation:

Request for Consulting Party Status dated April 26, 2007:¹⁴⁵

The National Trust has been following the progress of the toll road since release of the FSEIR and continues to have concerns about potential adverse effects of the project on historic and cultural resources in southern California. The National Trust is especially concerned about potential adverse effects to resources at SOST, the US Marine Corp property at Camp Pendleton, and the SMAD, a resource listed in the National Register of Historic Places.

Non-Governmental Organizations

Juaneño Band of Mission Indians Acjachemen Nation:

Comments to TCA regarding the Draft EIS/SEIR dated August 6, 2004:¹⁴⁶

There is no discussion in the DEIS/FSEIR about Traditional Cultural Properties, or about the status of Panhe as a TCP. Panhe is listed by the Native American Heritage Commission as a Sacred Lands site. National Register Bulletin 38 has substantial guidance on evaluating Traditional Cultural Properties, and should have been used during the evaluations.

There are 11 additional cultural places that are eligible for the National Register of Historic Places that will be significantly and adversely impacted by the proposed project.

There are numerous documented burials within the study area that will be significantly and adversely impacted by the proposed project.

¹⁴⁴

Bobby Shriver, Chair, California State Park and Recreation Commission, *Letter to Governor Schwarzenegger*, December 8, 2005.

¹⁴⁵

Anthea Hartig Director, National Trust for Historic Preservation, *Request for Consulting Party Status- South Orange County Transportation Infrastructure Improvement Project Orange and San Diego Counties, California*, Letter to Federal Highway Administration and SHPO, April 26, 2007.

¹⁴⁶

Christopher Lobo, Secretary/Treasurer, CFO, Juaneño Band of Mission Indians, Acjachemen Nation, *South Orange County Transportation Infrastructure Improvement Project Phase I Archaeological Inventory, prepared by Greenwood and Associates and the SOCTIIP Draft EIS/SEIR*, Letter to TCA, August 6, 2004.

There are prehistoric burial grounds and established reburial grounds within the study area that will be significantly and adversely impacted by the proposed project.

Public accessibility to currently isolated archaeological sites will allow the possibility of and subject to robbing of graves and traditional cultural properties.

The tribe remains firm in exercising our sovereign rights in protecting our people while preserving our few remaining sacred sites and cultural resources. Defined relevance of tribal relations to this land is well documented and is actively alive today through its descendents. The project alternative as it is demonstrated stands as a potential catastrophic event to the people of the State of California, Orange County, San Diego County and the indigenous people of the lands of Panhe, The Juaneño Band of Mission Indians, Achachemen Nation.

Impacts That Still Need to be Addressed:

- 1. Evaluate Panhe as a Traditional Cultural Property*
- 2. 11 additional places eligible for the National Register*
- 3. Numerous documented burials*
- 4. Prehistoric burial grounds and established reburial grounds*
- 5. Public accessibility to areas currently isolated*

Mitigation:

- 1. Requests direct involvement, especially for AR-4*

Sierra Club Orange County Native American Sacred Sites Task Force and California Cultural Resource Preservation Alliance:

Comments to TCA regarding the Draft EIS/SEIR dated August 6, 2004:¹⁴⁷

The discussion of the SMAD, consisting of the ethnographic village and associated cultural areas of Panhe, is woefully inadequate and deficient.

The SMAD is a Traditional Cultural Property and there was no discussion of its status. National Register Bulletin 38 has substantial guidance on evaluating Traditional Cultural Properties and should have been used during the evaluations.

The SMAD was recently reevaluated by Dr. Brian Byrd who found that it is eligible under Criteria A and D.

¹⁴⁷

Rebecca Robles, Chairperson, Orange County Native American Sacred Sites Task Force, *DEIS/SEIR Comments*, Letter to TCA, August, 5, 2004.

None of the information about TCP values of Panhe and the significant values retained in the National Register District is mentioned in the DEIS/SEIR. This is a fatal flaw.

Native American consultation did not include descendents of Panhe, nor did it recognize that the NAHC has listed it as a Sacred Lands site. Consultation should be reinitiated using a consultant familiar with tribal issues.

For those sites that have been determined eligible (for the National Register), there is no discussion about how the project will adversely impact the qualities and values that caused these properties to be listed. Therefore, it is impossible to assess the adequacy of the mitigation measures.

Data recovery conducted at eligible resources is the only mitigation offered. No preservation mitigation measures are discussed.

The number of sites impacted is not an accurate or adequate method. The decision on the build alternative will be made based on the number of sites found within a particular alignment, not site significance. Unmitigatable impacts to cultural resources will occur.

Since there is no map showing where the consultant surveyed and where they did not, it is impossible to assess the accuracy or validity of the field studies.

Impacts That Still Need to be Addressed:

- 1. TCP values of Panhe*
- 2. Values retained in the National Register District*
- 3. Sacred Lands site with descendents still holding Panhe sacred*
- 4. Discuss how the listed project will impact the qualities and values that caused those properties to be on the NR*
- 5. A map showing where surveys occurred is necessary*

Mitigation:

- 1. Preservation in place*
- 2. Avoidance (preferred mitigation measure for CEQA and NEPA)*
- 3. Mitigation for Traditional Cultural Properties is needed. AR 4 does not address tribal or cultural issues for Panhe (Traditional Cultural Property) and did not consult with any descendents.*

Commission Analysis

There is no dispute that the proposed toll road will have adverse impacts on multiple cultural resources located both in and out of the coastal zone. The Commission analyzed impacts by considering: 1) location and significance of the resources, 2) resource impacts and mitigation, 3) impacts to present day Juaneño descendants, and 4) the SHPO's recommendations.

Location and Significance of Resources

Commission staff consulted several different archaeologists regarding the appropriateness of reviewing impacts to only those cultural resources found within the coastal zone. All experts consulted indicated that cultural resources found throughout the study area are linked to each other, including to cultural resources within the coastal zone. These resources are linked together by virtue of the fact they are all various types of remains from the Juaneño. These experts indicated the entire area was inhabited and used by the Juaneño people and impacts to any one particular resource will reflect on the overall integrity of the remaining resources. They explained that boundaries between resources are often arbitrary and devised only as a means of general identification. Therefore, the Commission considered impacts to all 34 cultural resources within the disturbance limits to affect coastal zone archaeological resources.

There is a potential that more resources than these exist that simply have not yet been discovered. Therefore the total number of resources directly impacted (within the disturbance limits) is at least 34 and could possibly be more. The total number of resources indirectly impacted (outside the disturbance limits but within the 328-foot buffer of the study area) is at least 12 and could possibly be more.

Resource Impacts and Mitigation

According to TCA's estimates, 34 cultural resources distributed throughout the disturbance limits will be destroyed. TCA believes they will be able to mitigate impacts to below a level of significance for most of the 34, primarily by surveying and collecting data prior to earth movement. However, TCA will not be able to mitigate impacts for resources eligible for the National Register under Criteria A, B, or C. This is because the particular attributes that qualify cultural resources for inclusion on the National Register, such as integrity and setting, are impossible to mitigate for. There are at least three resources, all of which are located within *Panhe* and the coastal zone, that would be impacted in this manner. Therefore, there is no mitigation for these resources.

The Commission disagrees with TCA's assertion that only cultural resources located within the disturbance limits will be impacted. Even though cultural resources located in the 328-foot buffer of the proposed toll road will not be physically destroyed, they may have the following impacts: 1) visual, 2) sound, 3) access issues (possible increase in scavenging and possible decrease for Native American use), and 4) quality, value, and other attributes that may suffer from the nearby presence of a six-lane highway. TCA states there are 12 cultural resources located in the 328-foot buffer. According to maps provided by TCA to the Commission, three of the six cultural sites of the District are located in the buffer and in very close proximity to the proposed toll road (the other three are located within the disturbance limits). The Commission believes these potentially damaging impacts need a more thorough assessment and set of mitigation measures.

Impacts to Present Day Juaneño Descendants

According to the Juaneño descendants who continue to gather at *Panhe*, the proposed toll road will have severe and irreparable impacts on the ceremonial use of the site. Currently the

ceremonial site is in a pristine natural state, the stars are easily visible at night (the Acjachemen are often called star people for their ancient knowledge of stars) and the noise level is generally low. However, if the toll road is built, the integrity of the site will be compromised and it will be extremely difficult for Acjachemen people to engage in traditional religious practices at the site. The proposed toll road will impact their access and ability to practice their religion. The proposed toll road will also have a detrimental impact on the ability of tribal members to gather natural resources used in traditional cultural and ceremonial activities such as sage.¹⁴⁸

The Juaneño Band of Mission Indians passed the *Resolution Supporting the Protection of Panhe and the Tribe's Full Sovereign Participation In Any and All Land and Water Use Decisions Likely to Impact the Ancient Acjachemen/Juaneño Village of Panhe* on May 19, 2007.

SHPO's Recommendations

Following the guidance of the SHPO, as required by § 30244, the Commission concentrated its analysis on two specific resources: *Panhe* and Trestles. It is apparent that there will be direct, adverse, physical impacts to 3 of the 6 sites located within *Panhe* and that these impacts will not be mitigated. The remaining 3 sites located within *Panhe* are located within the buffer and will be indirectly impacted. TCA has not evaluated Trestles as a cultural and/or historical resource, and the Commission therefore finds TCA's evaluation of cultural resources to be inadequate. The CDPR indicated it is taking steps to submit information to the SHPO for Trestles' inclusion on the California Register and the National Register.

However, the primary issue is that neither *Panhe* nor Trestles were evaluated by TCA as Traditional Cultural Properties. This is important because both the SHPO and the ACHP requested TCA to conduct these analyses to better inform impact assessment and mitigation. As stated above, neither agency has received a response from TCA. The Commission inquired if TCA would be performing these analyses in the future and its written response indicated it would not.¹⁴⁹

Section 30244 requires the Commission to seek the SHPO's identification of adverse impacts to cultural resources. The SHPO has indicated to the Commission that absent the Traditional Cultural Property evaluations for *Panhe* and Trestles, it is impossible to assess impacts. Traditional Cultural Property evaluations will enable the SHPO to assess impacts to *Panhe* beyond just physical impacts, and it will allow an assessment of impacts for Trestles.¹⁵⁰

Under Section 30244, the Commission relies on identification by SHPO in its analysis to ensure reasonable mitigation measures are provided for adverse impacts to cultural resources. The results of the Traditional Cultural Property evaluations will have direct bearing on the

¹⁴⁸ See Footnote 14.

¹⁴⁹ See *Cultural Resources Response* at A-14.

¹⁵⁰ Personal communication between Commission staff and Michael McGuirt, RPA, Associate State Archaeologist, California Office of Historic Preservation (speaking on behalf of the SHPO), on June 4, June 28, August 27, and September 20, 2007.

SHPO's ability to assess mitigation. Mitigation cannot be assessed before all of the impacts are known. The SHPO maintains that all of the impacts will not be known until Traditional Cultural Properties are performed for both *Panhe* and Trestles.¹⁵¹ The Commission finds that under Section 30244 of the Coastal Act, the SHPO's opinion must be followed and that TCA must perform Traditional Cultural Property evaluations for *Panhe* and Trestles before impacts can be adequately assessed and mitigation be deemed reasonable. The Commission finds that it is therefore premature to evaluate whether or not proposed mitigation is adequate or meets the requirement of Section 30244 that, reasonable mitigation measures shall be required.

(The SHPO has also indicated to the Commission that as a member of the Section 106 Consultation process it will not concur with an impacts assessment and proposed mitigation until these Traditional Cultural Property evaluations are complete and have been provided to the SHPO for review.¹⁵²)

Conclusion

Based on the advice of the SHPO, the Commission finds that TCA has not provided sufficient information to enable the Commission to identify the full range of adverse impacts to cultural resources. The Commission is therefore unable to assess whether the proposed mitigation qualifies as "reasonable mitigation" as required under Section 30244 of the Coastal Act. Traditional Cultural Property evaluations for *Panhe* and Trestles would provide the Commission with the information necessary to assess impacts and mitigation. The Commission therefore concludes that it lacks sufficient information to determine whether the proposed toll road is consistent with § 30244.

¹⁵¹ Id.

¹⁵² Id.

G. Greenhouse Gas Emissions.

Section 30253 of the Coastal Act provides that:

New development shall: ... (4) Minimize energy consumption and vehicle miles traveled.

The CCMP also protects numerous resources that will be adversely affected by the climate change that greenhouse gas emissions are driving. These include public access (Sections 30210-30214), recreation (Sections 30212.5, 30213, 30220-30222), marine resources (Sections 30230-30231), wetlands (Sections 30231, 30233), ESHA (Section 30240), agriculture (Sections 30241-30242), natural land forms (30251), and existing development (Sections 30235, 30253).

As explained in further detail below, TCA has not established either that the project will minimize energy consumption and vehicle miles traveled or that greenhouse gas emissions associated with the project will be minimized or mitigated to avoid adverse impacts to coastal resources.

The Fourth Assessment Report of Working Group I of the Intergovernmental Panel on Climate Change (IPCC) (2007) represents the consensus of some 50 top international scientists working in fields related to climate change. More than one hundred national governments, including the United States, have approved the report. The report concludes that the evidence of global climate system warming is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global mean sea level (IPCC, 2007). Further, the report concludes that “most of the observed increase in globally averaged temperatures since the mid-20th century is very likely [$>90\%$ probability] due to the observed increase in anthropogenic greenhouse gas concentrations. The report cites numerous long-term changes in climate, including changes in Arctic air temperatures, decreases in the amount of Arctic sea ice, widespread changes in precipitation amounts, increase in ocean salinity, changes in wind patterns and increased incidences of extreme weather including droughts, heavy precipitation, heat waves and tropical storms. Based on six emissions scenarios ranging from “business as usual” to aggressive shifts to cleaner technologies, the best estimates of global average temperature increase are between 1.8 and 4.0 degrees Celsius by 2099, and that sea level will rise between 0.18 and 0.59 m. This amount of sea level rise does not include contributions from rapid melting of either the Greenland or Antarctic ice caps. (Bindschadler, 2006; Ekström et al., 2006; Joughin, 2006; Kerr, 2006).

In addition, absorption of carbon dioxide by the ocean leads to a reduction in ocean pH with concomitant consumption of dissolved carbonate ions, which adversely affects calcite-secreting marine organisms, marine water quality and the abundance and distribution of marine species (The Royal Society, 2005).

Impacts to the California Coastal Zone

In July 2006, the California Climate Change Center released a series of reports describing ongoing and future effects of global warming on the California environment (Baldocchi and Wong, 2006; Battles et al., 2006; Cavagnaro et al., 2006; Cayan et al., 2006a; Cayan et al., 2006b; Cayan et al., 2006c; Drechsler et al., 2006; Franco and Sanstad, 2006; Fried et al., 2006; Gutierrez et al., 2006; Joyce et al., 2006; Lenihan et al., 2006; Luers et al., 2006; Luers and Moser, 2006; Medellin et al., 2006; Miller and Schlegel, 2006; Moritz and Stephens, 2006; Vicuña, 2006; Vicuña et al., 2006; Westerling and Bryant, 2006). Drawing on three projected warming scenarios (low, medium, and high), the reports projected severe impacts by the end of the century in the areas of public health, water resources, agriculture, forests and landscapes, and sea level. Many of these effects will adversely impact resources of the coastal zone. The adverse effects include worsened air quality, changes in species distribution, significant reductions in plant and animal diversity, loss of various kinds of agriculture (such as fruit trees), expansion of invasive plant and animal species, increase in plant pathogens, increase in number and severity of wildfires, rising sea level, coastal flooding, and increased coastal erosion. In addition, absorption of carbon dioxide by the ocean is causing a reduction in ocean pH with concomitant consumption of dissolved carbonate ions, which is adversely impacting calcite-secreting marine organisms. The warming of ocean waters is also adversely affecting marine resources.

As identified in the 2006 Climate Change Center reports, the median emission scenario will lead to 75-85% more days in the Los Angeles area conducive to smog generation. Air quality will also be compromised by soot from wildfires, which the report predicts will increase. Coastal agriculture, already threatened by land development and habitat fragmentation, will be subject to further impacts from climate change. Impacts to coastal agricultural will include impacts to wine grapes, which will be subject to premature ripening and decreased fruit quality; adverse impacts to fruit and nut trees, many of which will no longer be able to produce once the number of “chill hours” per day drops below that necessary for proper ripening; and adverse impacts to milk production. Other threats to coastal agriculture identified by the Climate Change Center reports include the expansion of the ranges of agricultural weeds and an increase in plant pests and pathogens. Coastal forests and scrublands will be increasingly susceptible to wildfires due to longer and warmer periods of summer drying. This, together with the warmer climate itself, will lead to shifts in vegetation type, probably resulting in the loss of coastal scrub as it is converted to grasslands. Inasmuch as suitable habitat exists, species requiring cooler climates can migrate northward or to higher elevations. Their ability to do this, however, will be limited by the speed with which they are able to disperse, the suitability and interconnectivity of available habitat, and their ability to compete with non-native invasive species which, by definition, are able to disperse and exploit habitat efficiently. All of these effects will lead to a decline in forest productivity, with a concomitant loss in habitat.

The most direct impacts of global warming focused on the coastal zone are sea level rise and its associated impacts, ocean warming, and ocean acidification.

Sea Level Rise

According to tide gage data, global mean sea level has been rising at the rate of approximately 1.8 mm/yr for the past century (IPCC, 2001). Although no acceleration of this rate is apparent from the tide gage data (IPCC, 2001), satellite measurements starting in the early 1990s indicate an annual rate of approximately 2.8 mm/yr (Church and White, 2006). Sea level is clearly rising, and the rate of increase may in fact be accelerating. Since land can also change elevation due to either uplift or subsidence, global sea level change affects various coastal areas differently. Much of the California coast is rising; however the rate of uplift is, everywhere except northernmost California, lower than the rate of sea level rise. The *relative* historic rate of sea level rise (relative sea level rise is global sea level minus local land uplift or plus local land subsidence) has been calculated by Commission staff to range from a high of 2.16 ± 0.11 mm/yr in San Diego to a low of 0.92 ± 0.17 mm/yr in Los Angeles. Relative sea level is actually falling at Crescent City due to the high rates of tectonic uplift at that locality. (California Coastal Commission, 2001).

Even the 0.18 to 0.59 meter rise in sea level by 2100 predicted by the IPCC will have a large impact on the California coast. The effects of a much larger increase in sea level due to large contributions from the Greenland and/or Antarctic ice sheet would be truly catastrophic. The 2001 Coastal Commission report concluded:

The most obvious consequence of a large rise in sea level will be changes in areas that are submerged. Lands that now are only wet at high tide could be wet most of the day. Structures that are built above the water, like docks and piers, will be closer to the water, or eventually submerged. A second consequence will be an increase in wave energy. Wave energy is a factor of wave height. Waves heights along the California coast are influenced greatly by bottom depths and for most locations along the coast, the heights of nearshore waves are "depth limited". When the water depth increases, the wave height can be higher. Thus, higher waves impact the coast during high tide than during low tide. Wave energy increases with the square of the wave height. Thus, a 2-foot (0.6-meter) wave would have 4 times the energy of a 1-foot (0.3-meter) wave. Small changes in water level can cause significant changes in wave energy and the potential for shoreline damage from wave forces. A 1-foot to 3-foot (0.3 to 0.9 meter) rise in sea level, such as projected to occur over the next 100 years, would cause enormous changes in nearshore wave energy. The consequences of a 1-foot to 3-foot (0.3 to 0.9 meter) rise in sea level are far reaching. Along the California coast, the best analogy for sea level rise is thought to be El Niño, where a significant rise in sea level will be like El Niño on steroids. One of the factors that contributed to the amount of damage caused by the 1982/83 El Niño was that several storms coincided with high tide events and the elevated water levels (from tides and low pressure system combined) brought waves further inland than would have occurred otherwise...

Beaches and Coastal Bluffs: Open coastal landforms like beaches and bluffs will be exposed to greater and more frequent wave attack. There will more potential for erosion and shoreline retreat. For gently sloping beaches, the general rule of thumb is

that 50 to 100 feet of beach width will be lost from use for every foot of sea level rise... Some global circulation models predict significant increases in run-off from coastal watersheds in California (Wolock and McCabe, 1999) ...

In general, erosion of the landward edge of a beach, dune, or coastal bluff creates additional beach area, and so even in a period of sea level rise such as the present, in which the seaward extent of the beach is reduced by flooding and erosion, new beach creation can result in a relatively constant beach width. However, when threats to existing development from erosion lead to the construction of shoreline protective devices that halt the landward migration of the back beach, continued flooding of the seaward beach results in a reduction in beach width. Thus, on beaches experiencing erosion due to rising sea level, the protection of threatened structures will result in the loss of beaches wherever property owners choose to harden the coast to prevent coastal erosion. This loss of beach has immense negative impacts, including loss of recreational value, tourism, marine mammal haul-out area, sandy beach habitat, and buffering capacity against future bluff erosion.

The 2001 Coastal Commission report goes on to indicate other potential impacts of sea level rise on the California coast:

Wetlands: Coastal wetlands will be greatly modified by changes in sea level; however, the consequences will vary with the different wetland areas. Overall there will be greater areas of inundation. The change in the intertidal area will depend on local topography, the future change in tidal range, and the ability of the wetland to migrate both up and inland. Historically many wetlands have accommodated the rise in sea both up and inland. Historically many wetlands have accommodated the rise in sea level by increasing the base elevation. Sediment collects in the roots and vegetative mass of the wetland and provides a substrate for new growth. If the rate of sediment entrapment equals the rate of sea level rise, the wetland will remain fairly constant. If entrapment equals the rate of sea level rise, the wetland will remain fairly constant. If the rate of sedimentation exceeds the rate of sea level rise, the wetland will convert to a wet meadow or other system with more supratidal vegetation. If the sediment rate is less than the rise in sea level, the wetland will become intertidal and subtidal habitat.

Wetland changes also will be affected by inland development. Historically, wetland areas migrated both upward and landward as they were inundated. If the inland area has a slope and soil composition that can support a wetland and is not already developed, then inland migration may be possible. If there is a steep bluff or some type of fixed development, such as a highway or bulkhead, inland of a wetland, inland migration will not be possible and the wetland area will diminish over time.

Another physical change to wetland in response to a rise in sea level is an increase in the tidal currents, with the potential for increased scour. Also, for estuarine systems there will be a shift in the location of the salt water-freshwater interface, and an inland movement of the zone of brackish water...

Ports, Harbors and Marine Facilities: Much of the infrastructure of a port or harbor will be affected by a change in sea level. So too will marine terminals and offshore structures. All of the horizontal elements, such as the decking of wharves and piers, will be exposed more frequently to uplift forces larger than those occurring now. Compared to current conditions, ships will ride higher at the dock and cargo-handling facilities will have less access to all parts of the ship. Loading and unloading may have to be scheduled for low tide periods to allow greatest access into the ship, or else mooring and cargo handling facilities will need to be elevated.

If breakwaters or jetties protect the harbor, these structures will become less efficient as water levels increase. The breakwaters and jetties will need to be enlarged and heightened to keep up with the rise in sea level, or the harbor will have to accept a higher level of overtopping and storm surge, and a higher probability of storm damage. The increase in water level could also increase the tidal prism of the harbor, resulting in increased scour at the foundations of any structures in the harbor. So, it may also be necessary to reinforce the base of the breakwater or jetty to insure stability. Benefits that could occur from a rise in sea level would be the opportunity for harbors to accommodate deeper draught ships and a decrease in dredging to maintain necessary channel depths.

Seawalls and other engineered shoreline protection: [Seawall] foundations would be exposed to greater scour and the main structure would be exposed to greater and more frequent wave forces. As with breakwaters and jetties, these structures will need to be reinforced to withstand these greater forces, or a lower level of protection will have to be accepted for the backshore property.

Ocean Warming

In December 2006 the Commission held the first in a series of workshops on global warming. One of the well-recognized connections between the atmosphere and the ocean is heat exchange. Global warming of the atmosphere is expected to cause an increase in ocean warming as the ocean absorbs greater amounts of thermal energy from the atmosphere. At the workshop, Dr. James Barry (Associate Scientist, Monterey Bay Aquarium Research Institute) presented a summary of observed and predicted effects of ocean warming on California coastal ecosystems. Dr. Barry inventoried intertidal animals along the Monterey coast, and compared his results to a 1932 baseline inventory. He found that species that increased in abundance in southern California had increased markedly since the baseline study. Over the same time, there was a dramatic decline in species more associated with northern California. This demonstrates that the observed warming of the ocean over the past 60 years has resulted in a shift in the geographic ranges of species. With continued warming, species can be expected to continue to migrate northward as long as suitable habitat is available.

Some instances of remarkable biodiversity are due to the fortuitous combination of suitable ocean temperature and suitable geomorphic conditions. For example, one of the most diverse shallow water habitats in California is found in the rocky-bottom waters around the northern

Channel Islands. This is a zone of mixing of species characteristic of a “southern California realm” and a “northern California realm.” The abundant rocky bottom habitat in the shallow waters ringing the islands provides a niche in which this diversity is expressed. If, because of global warming, the suitable temperature zone migrates northward, it will be moved off of the abundant rocky bottom habitat and the diversity and ocean productivity might decrease significantly.

Declines in ocean productivity due to habitat shifts are an indirect consequence of ocean warming. Ocean warming can cause a direct loss of primary productivity as well. Warming of the surface of the ocean results in increased ocean stratification, limiting the upwelling of deep, nutrient-rich waters that are responsible for California’s rich coastal productivity. Roemmich and McGowan (1995) report a 1.2 to 1.4 degree centigrade increase in ocean temperature between 1950 and 1994. This was accompanied by a 75% reduction in zooplankton biomass. Reductions in phytoplankton and zooplankton biomass have profound cascading effects throughout the food chain. Short term warming events, such as El Niño events, have resulted in abrupt decline in commercial fish species, marine mammals, and birds (Laws, 1997; Nezlin et al., 2005). Similar effects might accompany global warming on a longer time scale, vastly affecting California’s coastal resources.

Ocean warming could also create a disconnect between historic feeding and breeding grounds for many species. Welch and others (1998) reported on potential changes in sockeye salmon distribution due to future global warming. Sockeye salmon, which spend 2-3 years in waters of the northern Pacific, migrate northwards to areas of high productivity, such as the Bering Sea, in the summer. Productivity decreases with temperature increase, however, and as the Bering Sea warms, migration routes would have to be longer. Eventually, the metabolic cost of migrating further northwards to feeding grounds could make the migration infeasible. When summer feeding grounds are disconnected from winter breeding grounds, a population crash may be anticipated. A population crash in such species would not only impact commercial fishing in California, but would ripple up through the food chain, impacting protected coastal resources such as marine mammals and birds.

Ocean Acidification

Just as there is an exchange of thermal energy between the atmosphere and the oceans, there is an ongoing exchange of gases between the atmosphere and the ocean. Each year some 92 billion metric tonnes of CO₂ annually are directly absorbed by the ocean from the atmosphere. At the same time, approximately 90 billion metric tonnes are released back to the atmosphere (Schlesinger, 1997). The net increase in dissolved CO₂ in the ocean is a direct result of increases in the atmosphere related to changes humans are making to the carbon cycle—most notably fossil fuel burning and land use changes (deforestation, mostly in the tropics). The ocean is an enormous reservoir that can absorb a vast amount of CO₂, although the rate of ocean mixing is too slow to prevent the current buildup in the atmosphere. Without this net absorption of CO₂ by the oceans, the atmospheric buildup—and global warming—would be far greater than it is now.

Over the past 200 years, the oceans have taken up approximately half of the industrial age CO₂ emissions, substantially reducing the net atmospheric concentrations of CO₂. This effect does not come without a cost, however. When CO₂ is absorbed by the ocean, some of it combines with water to form carbonic acid (H₂CO₃). This results in only a modest decrease in ocean pH, however, because most of the carbonic acid recombines to form bicarbonate ions (HCO₃⁻). However, in the process, carbonate ions (CO₃⁻²) are consumed. The net result is that absorption of CO₂ by the ocean consumes carbonate ions and reduces the pH of the ocean. The decrease in pH is minor because of the “buffering capacity” of these carbonate reactions, but appears to have decreased mean average surface water pH by 0.1 pH units over the past 200 years (Caldeira and Wickett, 2003). Because the pH scale is logarithmic, this decrease in ocean pH (commonly called “ocean acidification,” but more properly referred to as a decrease in alkalinity) means that hydrogen ion activity (which defines acidity) has increased by some 30% in this time frame (The Royal Society, 2005).

The effects of decreasing ocean alkalinity and carbonate ion concentration are twofold. First, many species are directly affected by the reduction in pH. In his presentation before the Commission in December 2006, Dr. Barry identified several physiologic stresses to which some species are susceptible. These stresses include respiratory stress (reduced pH limits oxygen binding and transport by respiratory proteins, such as hemoglobin, leading to reduced aerobic capacity), acidosis (disruption of acid/base balance which impairs function and requires energy to restore or maintain optimal pH balance), and metabolic depression (reduced pH associated with increased environmental CO₂ can cause some animals to enter a state of torpor or semi-hibernation). In addition to these physiologic effects, calcite-secreting organisms (including many phytoplankton, zooplankton, clams, snails, sea stars, sea urchins, crabs, shrimp, and many others) have more difficulty secreting their shells or tests under reduced carbonate ion concentrations. Deep-sea species will be particularly affected because increasing CO₂ levels in seawater decreases the saturation state of seawater with respect to calcium carbonate (CaCO₃) and raises the saturation horizon closer to the surface. The CaCO₃ saturation horizon is a depth in the ocean above which CaCO₃ can form, but below which CaCO₃ dissolves. Increasing surface CO₂ levels could have serious consequences for organisms that make external CaCO₃ shells and plates (The Royal Society, 2005).

The consequences of reduced calcification are not fully known, but are likely to include changes to plankton communities, higher metabolic costs for water-breathing species, resulting in lower growth, survival and reproduction, and higher metabolic costs for calcite secreting organisms. The effect on food webs is unclear, but it is very likely that these effects will result in a loss of biodiversity and complexity in California’s coastal marine ecosystems.

TCA Analysis: TCA asserts that:

Direct impacts on climate change from a roadway are difficult to determine because infrastructure does not constitute a separate source of greenhouse gas emissions distinct from overall emissions in the area. Potential cumulative incremental climate change impacts related to urban development, including infrastructure, cannot be

discerned with a high degree of certainty. The assessments of impacts incorporates many assumptions and generalized formulas. Impacts may be substantially] overstated because of these limitations.

...

Greenhouse gas emissions resulting from tailpipe emissions are not within the Transportation Corridor Agencies (TCA) jurisdiction, they are the responsibility of the State and federal government. Thus, there is an argument that mitigation of these impacts by TCA is not required.

TCA goes on to state:

... the following discussion conservatively analyzes the Preferred Alternative's construction phase impacts and long-term and operations impacts relative to greenhouse gas emissions in response to a question by ... Coastal Commission staff. This document calculates, to the extent feasible, the project's greenhouse gas emissions; and lists the Project Design Features (PDFs) incorporated into the project to avoid, minimize and reduce greenhouse gas emissions; and mitigation measures expected to achieve further reductions in vehicle miles traveled (VMT) and energy consumption, thereby further reducing greenhouse gas emissions.

Greenhouse gases include water vapor, CO₂, CH₄, N₂O, HCFCs, PFCs and HFCs. ... Vehicular emissions include CO₂ and water vapor; however, only CO₂ emissions are included in the Emission Factors (EMFAC) air quality model. ... CO₂ emissions can be calculated using the EMFAC model and are provided below. Emissions of O₃ precursors, NO_x and ... VOCs, have also been estimated for the project and are included in the ... FSEIR....

...

CARBON FOOTPRINT ASSESSMENT

Long Term Emissions

...

The Preferred Alternative results in more vehicles traveling at a higher speed than with the corresponding No Action Alternatives. The increase in the VMT increases vehicle emissions; however, reduction of congestion and an increase in traveling speed decreases vehicle emissions. The combination of these two factors results in a reduction of CO₂ emissions anticipated during the long-term operation of the Preferred Alternative ... The net reduction is relatively small as a percentage of emissions generated within the region (0.137 percent) compared with baseline conditions;

however, the actual emissions reduction of over 568,000 pounds per day is a notable benefit.

Short-Term Construction Impacts

The Preferred Alternative will result in short-term emissions during construction. Air pollutants, including greenhouse gases, will be emitted by construction equipment. As discussed below, the Preferred Alternative incorporates mitigation measures that require compliance with Air Quality Management District rules and policies (including Rules 401, 402, and 403), and grading code and construction air quality policies. These mitigation measures will limit idling and construction equipment emissions, require the use of ARB-certified equipment of post-combustion controls, and compliance with State construction vehicle emission standards. Other measures require the use of proper maintenance of low-emission mobile construction and require that work crews shut off equipment when not in use to reduce emissions.

...

CONCLUSION

Implementation of FTC-S will result in a reduction in emissions of CO₂, largely as a result of improved travel speeds in the region. This reduction in emissions of CO₂, a greenhouse gas, is consistent with the objectives of AB 32 to reduce greenhouse gas emissions in California. Further, the proposed project includes design features to require energy efficiency lighting, conserve water, and reduce construction equipment emissions. Therefore, the Preferred Alternative, when combined with the results of other greenhouse gas reduction efforts anticipated to occur as mandated by AB 32 and other legislation, is expected to have a beneficial cumulative effect of reducing greenhouse gas emissions.

Mitigation of Greenhouse Gas Emissions

Transportation and highways in California are *the* highest producers of greenhouse gas emissions. Studies estimate that transportation accounted for 41% of California's total 2004 greenhouse emissions, with gasoline use alone accounting for 27% of the 2004 total. A recent draft Energy Commission staff paper¹⁵³ notes:

Most urban growth over the last 30 years has been characterized by travel-inducing features: low-density; a lack of balance and accessibility between housing, jobs and services; inefficient infrastructure design; and not designed for any mode of transportation except the single-occupancy vehicle. This growth pattern has resulted in vehicle miles traveled (VMT) by California residents increasing at a rate of over 3

153

California Energy Commission Draft Staff Paper: The Role of Land Use in Meeting California's Energy and Climate Change Goals, June 2007, pages 7, 15

percent a year between 1975 and 2004, markedly faster than the population growth rate over the same period, which was less than 2 percent. ... This increase in VMT directly correlates to an increase in petroleum use and GHG production and has led to the transportation sector being responsible for 41 percent of the state's GHG emissions in 2004. In 2005, California's gasoline consumption was essentially the same as 2004, and in 2006, gasoline demand declined slightly as a result of high prices.

The California Department of Transportation (Caltrans) estimates that VMT will continue to increase at nearly 3 percent per year for the foreseeable future. Even with significant penetration of ARB's greenhouse gas regulations and implementation of the LCFS, the increase in GHG emissions from the increased travel will outweigh the policies combined benefits. The state, in partnership with regional planning organizations, local governments and utilities, must address VMT growth and the most effective way to do so is through better land use planning and development. . . .

The degree to which transportation GHG emissions must be reduced is uncertain given the status of several approaches to reduce transportation GHG emissions. However, it is apparent that reduced VMT growth will be required to meet GHG reduction goals. It is imperative that land use planning and infrastructure investments place a high priority on reducing VMT. Meeting Executive Order S-3-05's long-term goal, which requires a reduction by 2050 to 80 percent below 1990 emissions levels, would certainly require nearly carbon-free fuel use and most likely even stronger actions to reduce VMT.

In addition, cement manufacture contributes to an significantly high proportion of industrial greenhouse gas emissions. Energy Information Administration figures note:

*Estimated industrial process emissions of carbon dioxide in 2005 totaled 74.0 MMT, 13.9 MMT (23 percent) higher than in 1990 and 0.3 MMT (0.3 percent) lower than in 2004 (Table 14). Of the total estimate for carbon dioxide emissions from industrial processes in 2005, 62 percent is attributed to cement manufacture. When calcium carbonate is heated (calcined) in a kiln, it is converted to lime and carbon dioxide. The lime is combined with other materials to produce clinker (an intermediate product from which cement is made), and the carbon dioxide is released to the atmosphere. In 2005, the United States produced an estimated 97.4 million metric tons of cement, ... resulting in the direct release of 45.9 MMT into the atmosphere. This calculation is independent of the carbon dioxide released by the combustion of energy fuels consumed in making cement. The estimate for 2005 represents an increase in carbon dioxide emissions of 12.5 MMT (38 percent) compared with 1990 and an increase of about 0.2 MMT (0.4 percent) compared with 2004.*¹⁵⁴

154

U.S. Energy Information Administration, Emissions of Greenhouse Gases in the United States 2005

Studies also show that continuing to attempt to resolve traffic congestion through the building of more and more highways is counterproductive to reducing greenhouse emissions. Professor Robert Johnston (UC Davis) concluded, upon review of the results of numerous studies,¹⁵⁵ that NOT adding highways is a critical part of any long range strategy designed to reduce vehicle miles traveled and greenhouse gas emissions, and that "...highways must be allowed to become congested, while improving transit." Dr. Johnston's studies show that this dilemma is not improved by adding high occupancy (HOV) lanes, stating:

Expanding road capacity increases auto travel and emissions, compared to doing nothing. New HOV lanes on radial freeways increase travel and emissions. They also increase sprawl. Congestion generally becomes worse, in spite of adding highway capacity.

In recent (March 30 ,2006) comments on Orange County's Long-Range Transportation Plan Draft Program EIR, the California Attorney General noted:

Moreover, the Plan could include mitigation for these impacts. The Governor has recognized, "mitigation efforts will be necessary to reduce greenhouse gas emissions and adaptation efforts will be necessary to prepare Californians for the consequences of global warming." (Executive Order S-3-05, June 1, 2005). Increased public transportation, increased support of alternative fuels and technologies, the purchase of carbon offsets (or mitigation "credits"), installation of electric vehicle charging stations, and other affirmative steps to reduce the transportation impacts of CO₂ could be considered as potential mitigation projects. These are real, achievable and available mitigation measures that could be considered when OCTA recognizes its obligations to analyze greenhouse gas emissions and their impact on climate change as part of its long term transportation planning.

The only "environmental program" contemplated under the Plan is a program for augmenting urban runoff treatment and mitigation to create a "coordinated high-quality urban runoff program." (DPEIR at 2-11.) As discussed in detail above, the impacts of the Plan on greenhouse gas emissions and the cumulative impacts of those emissions on climate change, warrant close examination in this DPEIR. Likewise, a plan like this one which places so much of its emphasis for transportation planning and spending on automobile and truck travel versus mass transit will likely result in greater emissions of criteria pollutants and toxic air contaminants than would an alternative that focuses on improving mass transit and reducing vehicular miles traveled. Given these considerations, the state of air quality in the South Coast air basin and the severe impacts climate change can inflict on the citizens of Orange County, it would be a responsible and reasonable planning measure to include some "environmental

155

Review of U.S. and European Regional Modeling Studies of Policies Intended to Reduce Motorized Travel, Fuel Use, and Emissions Robert A. Johnston, UC, Davis (August 2006)

program” aimed at reducing the air quality and climate impacts of the proposed Plan. As mentioned in above, there are some easily implemented steps that might be considered, such as the purchase of mitigation credits. There are also programs that might encourage greater use of alternative technologies and fuels (e.g., electric and hybrid vehicles) or that might add incentives for increased use of public transit (enhanced employer managed discount programs that reward use of transit when compared with parking costs) that could be explored. This long term plan is an opportunity for OCTA to take a truly “visionary” role in shaping the transportation and environmental landscape of Orange County for the next quarter century. We hope that the opportunity will not be missed.

In total, the proposed completion of the toll road will consist of a 16-mile long, ultimately 6-lane 4-lane highway, with a paved width of 128 feet wide for a portion of the toll road outside of the coastal zone, and a paved width of 89 feet for the 2.72 mile portion of the project within the coastal zone (paved width), highway. Construction duration is up to 42 months, with work occurring 5 days per week. ~~A rough ballpark Commission staff estimate of the amount of concrete in a road this size yields something in the vicinity of 400,000 cu. yds. of concrete, approximately one-seventh of which by weight would be cement, yielding over 100,000 tons of cement required just to make the concrete. Bridges and support columns would add significantly more cement. Using the national average of 0.97 tons of CO₂ per ton of cement, over 100,00 tons of CO₂ would be generated to create the cement to create the road bed.~~ The majority of the project will be paved with asphalt. Production of the estimated 400,000 cubic yards of asphalt required to pave the facility would generate 266,300 tons of CO₂ over the course of the construction period. None of these calculations includes the energy to move the cement, water, sand or sub-base gravel to the road site or the creation any of steel that would go into the reinforcing. Construction emission estimates from 4 years of construction are also not included; this estimate is simply to show that the greenhouse gas emission contribution from construction alone is substantial. TCA has not provided any analysis of or mitigation for these impacts.

The Commission also finds that TCA’s contention that long term operational impacts will be beneficial is unsupported and unlikely. The studies by the California Energy Commission staff and Professor Johnston demonstrate that reducing vehicle miles traveled in California is critical to achieving reductions in greenhouse gas emissions, and that adding highway capacity will increase vehicle miles traveled. TCA asserts that the reduced congestion and increase speed of vehicles on the toll road will offset any increase in vehicle miles traveled. However, while vehicle emissions on the toll road might be less, per vehicle, than vehicles on I-5 during its peak congestion periods, the project will ultimately foster continued growth, low density housing and inefficient transit patterns and the overall traffic system will be equally or more congested than it is currently. Thus toll road emissions are more likely to additive, rather than subtracting from vehicle emissions on I-5. Further, TCA’s argument that greenhouse gas emissions from vehicle tailpipes are not within its jurisdiction is misleading. TCA is proposing to build a road that will likely lead to increased VMT and therefore increased greenhouse gas emissions. Regulation of tail-pipe emissions is a separate matter; the road will likely lead to increased greenhouse gas emissions regardless of the standards set by other agencies for tail-pipe emissions. Finally, full mitigation of this release, in the form of reduced emissions, carbon sequestration, or purchase of carbon credits is feasible.

Because TCA has not fully calculated or agreed to mitigate the total greenhouse gas emissions attributable to the construction phase of the project, or analyzed use of potentially less damaging alternative types of cement, the Commission cannot find that the greenhouse gas emissions of the project have been mitigated, or that the project is consistent with the requirement of Section 30253 that it minimize energy consumption and vehicle miles traveled. TCA has therefore failed to establish that the project will avoid, minimize, or mitigate adverse impacts to a wide range of coastal resources, including public access, recreation, marine resources, wetlands, ESHA, agriculture, natural land forms, and existing development. The Commission exhorts TCA to join OCTA, as recommended by the Attorney General in taking "...a truly 'visionary' role in shaping the transportation and environmental landscape of Orange County for the next quarter century."

H. Conflict Between Coastal Act Policies.

In the event a project poses a conflict between Coastal Act policies, Section 30007.5 of the Coastal Act provides the Commission with the ability to resolve any such conflict. Section 30007.5 provides:

The Legislature further finds and recognizes that conflicts may occur between one or more policies of the division. The Legislature therefore declares that in carrying out the provisions of this division such conflicts be resolved in a manner that on balance is the most protective of significant coastal resources. In this context, the Legislature declares that broader policies which, for example, serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies.

In addition, Section 30200(b) provides:

(b) Where the commission or any local government in implementing the provisions of this division identifies a conflict between the policies of this chapter, Section 30007.5 shall be utilized to resolve the conflict and the resolution of such conflicts shall be supported by appropriate findings setting forth the basis for the resolution of identified policy conflicts.

Conflict

As discussed in the Environmentally Sensitive Habitat, Wetlands, Public Access and Recreation, Public Views, Surfing, Water Quality, Archaeological Resources, and Greenhouse Gases/Global Warming, Sections of this report, the project is inconsistent with Sections 30240, 30233, 30210-30214, 30220, 30231, 30244, and 30253(4) of the Coastal Act. In order for the Commission to consider balancing Coastal Act policies, it must first establish that there is a conflict between these policies. The fact that a project is consistent with one policy of the Coastal Act and inconsistent with another policy does not necessarily result in a conflict. Rather, the Commission must find that to object to the project based on the policy inconsistency would result in coastal zone effects that are inconsistent with the Coastal Act.

TCA asserts that if the Commission does not agree with TCA that the project is consistent with Chapter 3 of the Coastal Act, then the project qualifies for review under the conflict resolution policy (Section 30007.5) due to the benefits to coastal resources from: (a) water quality improvements (i.e., treating additional runoff); (b) decreased traffic congestion allowing more capacity for visitors to use I-5 for recreational purposes, and increased access to the coast for inland residents; and (c) public safety reasons (i.e., improved ability to evacuate the area in the event of a nuclear power plant accident/explosion, or a fire or tsunami). TCA states:

However, if the Commission were to determine that FTC-S is not an allowable use under Section 30233 and 30240 the coastal zone portion of the Project would be inconsistent with the wetland protection and ESHA policies of the Coastal Act. To deny the FTC-S project based on inconsistency with Sections 30233 and 30240(a) would result in significant adverse impacts to coastal resources. Denial of FTC-S

would result in significant adverse water quality impacts, inconsistent with water quality protection policy in Section 30231 of the Coastal Act, which requires the maintenance and restoration of coastal waters. Further, it would result in significant adverse impacts inconsistent with the public access policies in Sections 30210-30214 of the Coastal Act, which require maximizing public access and recreational opportunities, as well as the public safety policy in Section 30253, which requires that new development minimizes risks to life and property in areas of high geologic, flood, and fire hazard. As discussed below, approval of FTC-S would provide significant benefits to coastal resources by greatly improving water quality, public access and public safety that afford, on balance, a greater level of consistency with the Coastal Act than existing conditions.

In support of its position, TCA cites the seven cases in the chart below where the Commission adopted findings of consistency with the Coastal Act under Section 30007.5 after initially finding the projects inconsistent with Section 30233 and/or 30240:

Table 6, Recent Coastal Commission Balancing Decisions [from TCA consistency certification]

Decision	Year	Project Description	[Conflicting] Sections ...
CPDM 1-98-103 (O'Neil)	1999	Construction of barn for dairy cows near stream	30233 (wetlands) and 30231 (water quality)
CDPM 9-98-127 (City of San Diego)	2000	Construction of freeway segment of SR-56	30233 (wetlands) and 30231 (water quality)
Appeal No. AS-IRC-99-301 (Irvine Community Development Co.)	2000	Mass grading and backbone infrastructure for future residential and recreation development	30233 (wetlands) and 30231 (water quality)
LCPA OXN-MAJ-1-00 (Oxnard Northshore)	2002	Site remediation, residential development, and resource protection area	30233 (wetlands) and 30231 (water quality)
CC-004-05, (North County Transit District)	2005	Construction of second railroad track	30233 (wetlands), 30240 (ESHA) and 30231 (water quality), 30252 (public access), and 30253 (air quality and energy conservation)
CDP No. 1-06-033 (Tilch)	2006	Replace failing onsite sewage wastewater disposal system for residence	30233 (wetlands) and 30231 (water quality)
UCSB LRDP Amendment 1-06, NOISE 1-06, and LDP No. 4-06-097	2006	Campus housing	30233 (wetlands) and 30250 (concentration of development)

TCA is correct in noting that the Commission has, in some instances, approved transportation and other projects, under Section 30007.5, in situations where projects were inconsistent with Section 30233 (and in one instance Section 30240), made a finding that conflict with other policies existed, and concluded that the Commission's interpretation was that to not approve

the project would be less protective of significant coastal resources than to approve the project. However, the Commission strongly disagrees with the argument that any of these situations are comparable to the situation raised by the proposed road, and, as will be discussed following the discussions of the cited cases, the Commission will find that proposed project **does not even present a conflict** between Coastal Act policies, and thus Section 30007.5 is not applicable to this project.

In **1-98-103** (O'Neil), the Commission found that denial of a proposed barn in the Eel River delta in Humboldt County would result in significant water quality and wetland detriments by perpetuating discharge of waste contaminants generated by openly grazed dairy cows to an adjacent wetland complex. The proposed barn would collect the waste generated by the cows and thereby substantially reduce the discharge of contaminants that impaired use of the seasonal wetlands by birds. Second, denial of the project would have resulted in the continued discharge by means of stormwater runoff of significant quantities of untreated cow waste (manure and urine), estimated at over a million pounds annually, into adjacent sloughs and other watercourses. The Commission found:

The project creates a conflict between the water quality policies of Chapter 3 of the Coastal Act on the one hand and the wetland policies on the other. If the proposed project is denied based on its inconsistency with the wetland policy requirements, the existing and future water quality impacts from the dairy operation would not be reduced, resulting in continued degradation of coastal waters and wetland habitat. Therefore, the project results in a conflict among Coastal Act policies. The water quality benefits from this project are significant. The wetland impacts of the project are not as significant for two reasons. First, the habitat values lost as a result of filling a half acre of grazed seasonal wetland will be fully offset by the establishment of an equivalent amount of riparian habitat that will afford greater habitat values. Second, the project will increase the habitat values of the remaining 80-acres of seasonal wetlands by reducing contaminants in the waste from the dairy operation discharged to these areas.

The Commission also found:

The Commission would not approve this project even using the balancing provisions of 30007.5 if this were not an existing agricultural facility, the operation of which will be substantially improved.

In **6-98-127**,¹⁵⁶ City of San Diego, Route 56, an east-west 7,000 ft. freeway serving as the final segment connecting I-15 and I-5, the Commission found the road was not an allowable use under Section 30233. The wetland being filled was an isolated intermittent stream with sparse vegetation the Commission staff ecologist determined did not constitute ESHA. The wetland impact was unavoidable and the mitigation would provide greater habitat benefits than that of

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We assume TCA's numerical reference in the chart to 9-98-127 is an error, and that TCA meant 6-98-127, based on TCA's verbal discussion of the case.

the isolated wetland. The project helped to concentrate development within existing urban areas, did not affect any ESHA, and would benefit wildlife movement by bridging known wildlife corridors. The road improvements provided substantial water quality benefits by reducing the same constituents that have led to downstream Los Penasquitos Lagoon's being listed as an impaired water body. The extensive water quality improvements from that project are described in Exhibit 33. The Commission found that to not approve the project would perpetuate degradation of the lagoon as an impaired water body.

In **Appeal No. A5-IRC-99-301**, an appeal of an Irvine Company Master Plan amendment including mass grading and infrastructure for residential and recreational development in southern Orange County, the Commission noted that its reliance on Section 30007.5 had been its consistent interpretation for 20 years for the Irvine Coast LCP, based on concentration of development policies and large areas being set aside for habitat, recreation, and open space protection (7,343 acres, or 77% of the total land, had been set aside and protected from development). For this specific amendment, which included 0.05 acres of fill of seasonal wetland that had not been defined as wetland in the original LCP, the wetland was isolated and not connected to a stream or any other water source, intermittent, was of marginal value, the mitigation would be of higher value, the project would divert dry weather nuisance flows and improve water quality. The project did not affect ESHA.

In **Oxnard LCP Amendment OXN-MAJ-1-00**, North Shore Mandalay Bay Annexation, the Commission approved a plan for a 300 home residential development in an area that was highly contaminated from hydrocarbons, with millions of barrels of contaminants dumped over decades by over 50 oil drilling companies, and without remediation the area's agricultural and drinking water supply was at risk. The project was modified to avoid ESHA; however, the project included wetland fill. The wetland values were marginal, and probably created by a cap placed over the contaminants. Due to the serious groundwater contamination the Commission found a conflict existed between the wetland and water quality policies, that to not approve the project would pose serious contamination risks, and that it was more protective of significant coastal resources to remove the contamination and mitigate wetland impacts.

In **CC-004-05, North County Transit District**, the Commission concurred with a consistency certification for the O'Neil to Flores Second Track project, the addition of a 2.7 miles of second railroad track within an existing railroad right-of-way parallel to I-5 on Camp Pendleton. The project was inconsistent with Sections 30233 and 30240 (i.e., not an allowable use). In its Section 30007.5 analysis, the Commission cited the benefits of mass transit in reducing traffic congestion, improving air and water quality, and improving public access, and found these mass transit benefits encouraged under two Coastal Act policies: (a) Section 30253(4), which provides for improved air quality and reductions in energy consumption and vehicle miles traveled; and (b) Section 30252, which articulates that one of the Coastal Act's access goals is encouraging maintenance and enhancement of public access through facilitating the provision or extension of transit service. In resolving the conflicts, the Commission found that the affected species were "likely to be able to adapt to this relatively minor rail line widening" and that "objecting to this consistency certification would result in conditions that

would be inconsistent with the access policies (Section 30210), and would result in adverse effects to coastal waters and the coastal air basin and be inconsistent with the achievement of water quality, air quality, energy conservation, and reductions in vehicle miles traveled goals expressed in Sections 30231, 30253(4), and 30252.”

In **1-06-033, Tilch**, a sewage wastewater disposal system replacement near Eureka, Humboldt County, the existing system violated state and local health codes because it discharged sewage into an area of high groundwater. The Commission found that to not approve the project would pose a public health hazard. The project involved wetland fill, but the Commission approved the project under Section 30007.5 because “the improvements to water quality and the elimination of avoidance of contamination of the area from raw sewage would be more protective of coastal resources than the impacts on wetland habitat from the construction of the leachfield.”

In **UCSB LRDP Amendment 1-06, NOISE 1-06, and LDP No. 4-06-097**, the Commission approved an amendment to UC’s Long Range Development Plan to incorporate the 174-acre North Campus into the LRDP. Plan implementation would include removal of approximately 0.08 acres of scattered patches of purple needlegrass ESHA and approximately 600 sq. ft. of riparian vegetation considered ESHA, and would reduce buffers to wetlands and ESHA. The Commission found a conflict between the ESHA inconsistency and the Coastal Act’s concentration of development policies (Section 30250), and as well, that to not approve the project would result in buildout under the existing plan that would involve greater ESHA impacts. The amended plan would reduce ESHA impacts and improve public access and recreation, and increase open space dedications, and the Commission found it more protective of significant coastal resources to approve the plan than to leave the existing plan in place.

For the subject project, TCA argues that the habitat impacts will be more than offset by the proposed mitigation that will create and/or restore native grassland, mulefat scrub, southern willow woodland, and southern coast live oak/elderberry woodland within approximately 215.8 acres in and adjacent to Chiquita Creek, in the San Juan Creek Watershed, including approximately 15.9 acres of wetlands, and by the previously established a conservation bank:

... established by CDFG, USFWS, and TCA when the TCA purchased the conservation easement for Upper Chiquita Canyon from Rancho Mission Viejo, which was under substantial threat of development, to address coastal sage scrub impacts from FTC-S, including the small segment in the coastal zone.

TCA’s consistency certification states:

Under the initial bank agreement, 327 conservation credits were established for the preservation of existing coastal sage scrub habitat within the Conservation Area. The 327 conservation credits are to be used as mitigation for impacts to coastal sage scrub associated with FTC-S, with each conservation credit representing 1 acre of occupied coastal scrub habitat. The Conservation Area is geographically located within the

Orange County Southern Subregion of the Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP), a conservation study area of approximately 132,000 acres. A critical aspect of the NCCP/HCP that benefits and contributes to the recovery of the gnatcatcher is the preservation of the Conservation Area, which is considered by the USFWS as a key location for CSS and the gnatcatcher.

The Conservation Area was originally under substantial threat for development; however, the TCA was able to conserve this area that would have been lost or substantially degraded by development in advance of the anticipated impacts from the FTC-South project. The gnatcatchers present in the Conservation Area represent the northern portion of the gnatcatcher population in areas “integral to the overall function of the reserve for this species because they provide linkage to other populations, including Camp Pendleton. (Draft NCCP/HCP Planning Guidelines, April 2003). This mitigation meets the goal of the NCCP/HCP of replacing and protecting ESHA that will be located in areas that provide larger contiguous contributions to the overall preserve system, and will ensure that largest populations of gnatcatchers have sufficient areas of high-quality habitat for species survival. Thus, adequate on-site and off-site mitigation is provided to compensate for the ESHA and wetland losses. [Emphasis in original]

The Commission notes that it has not endorsed this mitigation bank in any previous action. Nor has the Commission ever commented or agreed that use of the credits to offset coastal habitat with habitat 16 miles inland of the coast is appropriate. The fact remains that the project would be located within ESHA and is inconsistent with Section 30240. TCA’s proposal to mitigate for loss of ESHA is not evidence of a conflict. Further, the Commission disagrees with TCA’s interpretation that the project poses a conflict between Coastal Act policies, and thus, whether the project is even subject to the conflict resolution provision.

TCA states:

On the other hand, an objection to this consistency certification would result in conditions that would be inconsistent with the water quality (Section 30231), public access (Section 30210-30214), and public safety (Section 30253) policies of the Coastal Act. FTC-S creates a unique situation for the application of conflict resolution processes under Section 30007.5.

In support, TCA relies on the fact that the proposed toll road “has been identified as a critical transportation facility in regional planning documents since 1981,” and “represents the completion of a critically needed segment of a highway system that has been identified in formal planning documents for decades.” TCA maintains that the project’s arguable benefits to water quality, public access, and public safety should be interpreted to lead to the conclusion that not approving the project would conflict with Sections 30321, 30210-30214, and 30253, because it believes the project would:

(a) significantly improve water quality because it would include the construction of detention basis that can treat approximately five million gallons of runoff from the I-5 each year that currently flows untreated into San Onofre and San Mateo Creeks and on to Trestles Beach, enhancing the use of downstream resources by both wildlife and humans; in addition, TCA states that neither TCA nor Caltrans is otherwise legally required to install the detention basis;

(b) by reducing congestion on I-5, the proposed toll road: would reduce the constraint posed to public recreation that existing and future congestion causes; would improve public access by providing increased access for inland populations to this coastal area; and would provide new sidewalks as part of some project components; in support, TCA states:

Access to and along this portion of the coast is currently restricted because of severe traffic congestion on I-5. In this area, I-5 is the only north-south route and thus is the only regional facility available to handle inter-regional, local and recreational travel. Access to the coast is particularly restricted during peak recreational periods such as weekends and holidays. Traffic on I-5 on weekends is higher than weekday traffic (Final SEIR, Chapter 3). Because of I-5 congestion, significant congestion is also occurring on local streets in San Clemente on the weekends as drivers attempt to avoid I-5 congestion. This results in additional barriers to coastal access.

(c) providing several public safety benefits including the provision of an alternate major evacuation route for the San Onofre Nuclear Generating Station (SONGS) and for local area residents, the public, and coastal recreation users during a wildfire or flooding by tsunami. Further, FTC-S provides enhanced fire protection opportunities and increases accessibility for emergency vehicles. TCA contends that not providing these opportunities would be inconsistent with the hazards policy (Section 30253) of the Coastal Act.

TCA has not provided evidence that the benefits it claims the project would bring could only be obtained if the project goes forward, and the Commission disagrees with TCA that the project even poses a conflict between Coastal Act policies.

Concerning **water quality**, it is not the toll road itself that would benefit water quality, but rather the detention basins that TCA proposes to construct in addition to the toll road. San Mateo and San Onofre Creeks are healthy, unimpaired and among the healthiest streams in southern California, because their watersheds are far less developed than most southern California watersheds. The proposed detention basins on I-5 that TCA proposes to construct may help offset impacts on the watershed from the increased runoff and pollutant loadings from 8-9 miles of highway being constructed along San Mateo Creek and its tributary, Cristianitos Creek, but it is not clear how substantial a benefit this would provide. In addition, while TCA states it is providing these collection facilities voluntarily, and beyond what would be required for its project, the San Diego Regional Water Quality Control Board (RWQCB) refutes this assertion, stating (Exhibit 22) that because the project includes improvements along

I-5, and because State Water Board policies require installation of BMPs when improving existing roads that:

Our expectation is that if I-5 is widened as part of the ... [proposed toll road], then post construction BMPs must be added pursuant to the Caltrans NPDES permit. It is unclear at this point whether TCA is proposing to treat runoff from a larger section of I-5 than would be required by the Caltrans NPDES permit.

The RWQCB further states that none of the available data suggest an existing water quality impairment, that the lower portions of San Onofre and San Mateo Creeks have not been proposed to be listed as impaired, and, further, that:

Quantifying benefits from the proposed project is difficult without baseline data. Baseline data are currently lacking for both runoff quality and receiving water quality. The current pollutant loading from the I-5 highway and expected reductions from the proposed storm water detention basins may be estimated from existing Caltrans studies. Estimating the environmental benefits, however, requires pre-project data that are not available.

In conclusion, with respect to water quality, the Commission finds:

- (a) that not authorizing the project would be more protective of water quality in San Mateo Creek;
- (b) that the proposed benefits cited by TCA have not been quantified or established;
- (c) that the project differs highly from the TCA-cited situation described above in City of San Diego Route 56 (CDP 6-98-127), which involved minor habitat impacts and benefits to an impaired water body, and is not comparable to any of the other cases TCA cited involving water quality considerations; and
- (d) that the project does not pose a conflict between the wetland/ESHA policies on the one hand and water quality policies on the other; and
- (e) contrary to the circumstances involved in most of the above-discussed CDPs, the toll road is not what will treat stormwater run-off from I-5. Thus, there is not a conflict between construction of the toll road and protection of water quality. Rather, it is the proposed improvements like detention basins that will treat the run-off. These detention basins are mitigation measures, and they can be constructed to treat the run-off regardless of whether the toll road is constructed. If San Mateo Creek were impaired due to I-5 runoff, and the toll road was the only way that runoff could be treated, that would be the only way a conflict could be considered to be present.

Concerning **public access and recreation**, again TCA does not quantify its stated benefit of bringing additional visitors to the coast. TCA further undermines its argument when it attempts to characterize the project as an incidental public service. TCA's consistency certification (p. 47) acknowledges the Commission's interpretation that improvements to existing roads necessary to maintain existing capacity can qualify as incidental public services,¹⁵⁷ whereas roads that would increase capacity do not qualify as incidental public services (as discussed previously). Thus, TCA is making conflicting arguments. TCA also has not provided evidence that significant numbers of recreational travelers, as opposed to commuters, will be willing to pay tolls to reduce travel times. I-5 weekend traffic is heavy; nevertheless existing toll road use on weekends remains low.

Concerning its assertions of an **emergency evacuation** benefit, again TCA does not quantify its purported benefit. TCA has not established that existing evacuation plans are inadequate, or that additional highway capacity is needed in this location for this purpose. The Commission staff has discussed existing evacuation plans with the operators of the San Onofre Nuclear Generating Station, the U.S. Marine Corps, and the Governor's Office of Emergency Services (OES), all of which maintain that the existing evacuation and emergency response plans are adequate, are tested every year, and in fact Southern California Edison could not operate SONGS without adequate emergency response plans. Exhibit 34 from OES to the Federal Emergency Management Agency (FEMA), provides evidence that the most up-to-date emergency response preparedness plans comply with FEMA requirements. The Commission also notes that Section 30253 of the Coastal Act addresses the need to minimize risks to life and property in areas of high geologic, flood, and fire hazard. This section is not applicable to the proposed toll road's relationship to a nuclear power plant. The toll road would have no bearing on the question of whether the nuclear power plant faces increased geologic and fire risks as a result of construction of the toll road, which is the only way Section 30253 could logically be construed to apply in this situation. Moreover, alternatives are available to increase traffic capacity in the region and any could be used to supplement emergency evacuation needs, if such a need exists.

Resolution

Despite the fact that the project does not raise a conflict between Coastal Act policies, for purposes of discussion, assuming the project were to raise such a conflict, the Commission finds that of attempting to justify accepting the project's significant adverse environmental effects discussed in the Environmentally Sensitive Habitat, Wetlands, Public Access and Recreation, Public Views, Surfing, Water Quality, Archaeological Resources, and Energy/VMT/Greenhouse Gases/Global Warming Sections of this report, in order to provide unquantified water quality, public access and improved emergency response benefits, is not supported by any previous Commission actions, and does not fit within the confines of Section 30007.5 because it is not a resolution which is, given the facts in this case "on balance, most protective of significant coastal resources."

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TCA's consistency certification, p. 47, states "The FTC-S is necessary to maintain existing traffic capacity..."

TCA states that:

The impacts on coastal resources from not constructing FTC-S would be more significant and adverse than the Project's ESHA and wetland impacts. Therefore, the Project is, on balance, most protective of coastal resources.

The Commission could not more strongly disagree with TCA's arguments that on balance it is most protective of significant coastal resources to authorize the project. The Commission finds that while the above water quality, access, and emergency response aspects of the project may be beneficial, none of the benefits TCA contends warrant invoking Section 30007.5 actually rise the level of constituting an actual conflict with Coastal Act policies. First of all, they are all unquantifiable benefits; second, the project's adverse effects on coastal resources far outweigh these benefits.

Even if the benefit of getting existing beach users to the coast faster were present, it would be far outweighed by the project's direct and severe adverse effect on recreation at SOSB, as described in the Public Access and Recreation, Public Views, and Surfing Sections of this report. The adverse effects on the quality of the recreational experience include noise, visual degradation, air quality degradation, recreational quality degradation, significant adverse effect on the viability of the campground and on the aesthetic experience of hiking in a relative pristine area, and the physical alteration of the trails to the beach, which will require greater physical effort to cross over the proposed toll road (6% grade uphill and over the tollway). Similarly, the access benefit TCA claims could be attributed to improved sidewalks, for the same reasons, far outweighed by these adverse effects on recreational quality. When compounded with the adverse wetland, ESHA, archaeological impacts, and the increased risks to water quality and surfing, the Commission can only conclude that if a conflict were to exist the proposed project could not be considered "on balance, most protective of significant coastal resources."

IV. Substantive File Documents

1. TCA Consistency Certification No. CC-018-07 and supporting documents: Coastal Consistency Certification and Analysis FOR the Foothill Transportation Corridor - South (FTC-S).
2. Final Subsequent Environmental Impact Report (Final SEIR), South Orange County Transportation Infrastructure Improvement Project, December 2005.
3. Coastal Commission coastal development permits issued on Marine Corps Base Camp Pendleton: 6-04-015, 6-99-017, 6-96-024-W, 6-01-086-A1, 6-2-031, 6-2-032, 6-01-106-A1, 6-02-051, 6-05-052, 6-00-057, 6-00-058, 6-00-059, 6-00-060, 6-00-159, 6-00-150, 6-01-059, 6-04-064, 6-04-065, 6-04-066, 6-02-080, 6-01-086, 6-94-086, 6-94-086-A1, 6-01-086, 6-01-105, 6-01-106, 6-01-086, 6-01-161, 6-01-149G, 6-06-064, 6-94-086, 6-93-105, 6-96-130-W, 6-04-139, 6-05-093, 6-98-142-G, 6-87-183, 6-97-009, 6-98-074, 6-98-074, 6-99-127, 6-05-079, 6-05-080, 6-07-003X, 6-88-79, 183-73, F0781, F0774, F8978, 6-81-330-A, 6-81-92, F2567, F1962, F2896, F0226, 6-81-280, F1730, F5177, F5895, F7024, F9653, F0192, F6018, F8150.
4. Commission Coastal Development Permits LCPs, LRDPs, and Consistency Certifications: 6-98-127, City of San Diego, Route 56, Appeal No. A5-IRC-99-301, Irvine Company Master Plan amendment, Oxnard LCP Amendment OXN-MAJ-1-00, North Shore Mandalay Bay Annexation, CC-004-05, North County Transit District, 1-06-033, Tilch, UCSB LRDP Amendment 1-06, NOISE 1-06, and LDP No. 4-06-097, CC-094-00, Caltrans Devil's Slide Tunnel, CC-55-05, CC-52-05, CC-86-03, CC-004-05, and CC-008-07, North County Transit District's double tracking proposals, and CC-63-92, TCA SJHTC.
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6. Smart Mobility, Inc. Reports: *An Alternative to the Proposed Foothill South Toll Road, The Refined AIP Alternative*, (September 2007), and *A Practical, Cost Effective, and Environmentally Superior Alternative to a New Toll Road for the South Orange County Infrastructure Improvement Project* (July 2005).
7. Glen Lukos Associates, *Foothill Transportation Corridor-South, Orange County, California*, (Hereafter "Wetlands Letter"), Letter to TCA, August 31, 2007 (received on September 4, 2007).
8. Earthworks Restoration Inc., Glen Lukos Associates, BonTerra Consulting, *Conceptual Habitat Mitigation and Monitoring Plan, South Orange County Transportation Infrastructure Improvement Project (SOCTIIP) Orange and San Diego Counties, California*, Prepared for TCA, August 31, 2007.

9. John Robertus, Executive Officer, California Regional Water Quality Control Board, San Diego Region, *Foothill Transportation Corridor- South (State Route 241)*, Letter to California Coastal Commission, June 27, 2007.
10. California Department of Parks and Recreation, *Mitigation Assessment of FTC-South Impacts on San Onofre State Beach*, August 1997.
11. Philip Williams & Associates, Ltd. *Final Report: Potential Toll Road Impacts on San Mateo Creek Watershed Processes, Mouth Morphology and Trestles Surfing Area*, Prepared for the Surfrider Foundation, January 2006.
12. Chad Nelsen, Doctoral Candidate, UCLA Environmental Science and Engineering Program, *The Economic Impact of Surfers Visiting Trestles to the City of San Clemente*, Memo to the California Coastal Commission, September 12, 2007.
13. Robert Crisman, Engineering Geologist and David Skelly, Civil Engineer, GeoSoils, Inc., *Preliminary Clast (Cobble Fraction) Provenance Study, Lower San Mateo Creek, in Conjunction with the South Orange County Transportation Project, Orange County, California*. Letter Report to TCA, May 30, 2007.
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21. Matt Hagemann, Soil Water Air Protection Enterprise, *Comments on the Environmental Impact Statement/Subsequent Environmental Impact Report for the South Orange County Transportation Infrastructure Improvement Project*, Letter to TCA from SWAPE, July 28, 2004.
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35. Larry Myers, Executive Secretary, Native American Heritage Commission, *Comments, Final Supplemental Environmental Impact Report for the proposed South Orange County Transportation Infrastructure Improvement Project, Transportation Corridor Authority*, Letter to TCA and Federal Highway Administration, January 10, 2006.
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44. California Energy Commission Draft Staff Paper: The Role of Land Use in Meeting California's Energy and Climate Change Goals, June 2007.
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46. Review of U.S. and European Regional Modeling Studies of Policies Intended to Reduce Motorized Travel, Fuel Use, and Emissions Robert A. Johnston, UC, Davis (August 2006).

Exhibits (Attached)

- 1-9 – Project Details and Alternatives Map
- 10-11 – Current and Future Traffic Congestion, with and without the Project
- 12 – Non-Competition Zone
- 13 – CCC Biologist Pacific Pocket Mouse Memorandum
- 14-16 – Habitat Maps
- 17 – Staging Area Map
- 18-20 – Habitat Maps
- 21 – 22 – Hydrology/Water Quality letters (Philip Williams & Assoc., and RWQCB)
- 23 - Wetland Fill in the coastal zone
- 24-25 – Alternatives charts and discussions
- 26 – Wetland Mitigation in the coastal zone
- 27 – City of San Diego Route 56 discussion
- 28 – Office of Emergency Services letter
- 29 – Trestles Surf Breaks

Appendices

- 1. Ex Parte Disclosure Forms (attached)**
 - A. Appendices – Correspondence (separate enclosure)**