

ISSUE/IMPACT	LEVEL OF SIGNIFICANCE							APPLICABLE MITIGATION MEASURES
	Project Component Alternative							
	A1	A2*	A3	B1*	B2	C1*	C2	
Issue B.3.31: Long term O&M Effects on Marsh Habitat	NA	NA	NA	NI	NI	NA	NA	
Issue B.3.32, C.3.20: Long term O&M Effects on Coastal Sage Scrub Habitat	NA	NA	NA	NI	NI	NA	NI	
Issue B.3.33: Long term O&M Effects on Oak Woodland Habitat	NA	NA	NA	NI	NI	NA	NA	
Issue B.3.34: Effects of Inundation on Willow Riparian Woodland	NA	NA	NA	NI	NS	NA	NA	
Issue B.3.35: Effects of Inundation on Riparian Scrub/Herbaceous Riparian	NA	NA	NA	NI	NI	NA	NA	
Issue B.3.36: Effects of Inundation on Marsh Habitat	NA	NA	NA	NI	NI	NA	NA	
Issue B.3.37: Effects of Inundation on Coastal Sage Scrub	NA	NA	NA	NI	NI	NA	NA	
Issue B.3.38: Effects of Inundation on Oak Woodland Habitat	NA	NA	NA	NS	NS	NA	NA	
<b>Non-Sensitive Habitat</b>								
Issue A.3.21, B.3.39, C.3.21: Construction Effects on Arundo	NI	NI	NI	NI	NI	NI	NI	A2, A3: BR-3C* B1, B2: BR-15A* C1: BR-18C*
Issue A.3.22, B.3.40, C.3.22: Construction Effects on Sandy Wash Habitat	NI	NI	NI	NI	NI	NI	NI	A2, A3: BR-3C* B1, B2: BR-15A* C1: BR-18C*
Issue A.3.23, B.3.41, C.3.23: Construction Effects on Annual Grassland, Agricultural Fields, and Pastureland	NI	NS	NS	NS	NS	NS	NS	A2, A3: BR-3C* B1, B2: BR-15A* C1: BR-18C*
Issue A.3.24, B.3.42: Construction Effects on Eucalyptus Woodland	NI	NS	NS	NI	NI	NA	NA	A2, A3: BR-3C* B1, B2: BR-15A* C1: BR-18C*
Issue B.3.43: Construction Effects on Degraded Woodlands	NA	NA	NA	NI	NI	NA	NA	A2, A3: BR-3C* B1, B2: BR-15A* C1: BR-18C*
Issue B.3.44: Construction Effects on Ponds	NA	NA	NA	NS	NI	NA	NA	A2, A3: BR-3C* B1, B2: BR-15A* C1: BR-18C*
Issue A.3.25, B.3.45, C.3.24: Long term O&M Effects on Arundo	NI	NI	NI	NI	NI	NI	NI	
Issue A.3.26, B.3.46, C.3.25: Long term O&M Effects on Sandy Wash	NI	NI	NI	NI	NI	NI	NI	
Issue A.3.27, B.3.47, C.3.26: Long term O&M Effects on Annual Grassland, Agricultural Fields, and Pastureland	NI	NI	NI	NI	NI	NI	NI	
Issue A.3.28, B.3.48: Long term O&M Effects on Eucalyptus	NI	NI	NI	NI	NI	NA	NA	
Issue B.3.49: Long term O&M Effects on Degraded Wetlands	NA	NA	NA	NI	NI	NA	NA	
Issue B.3.50: Long term O&M Effects on Ponds	NA	NA	NA	NS	NS	NA	NA	

\*Preferred Alternative Component

**Legend:**

NI = No Impact

NS = Not Significant

NA = Not Applicable

B = Beneficial

SM = Significant But Mitigated

SU = Significant Unavoidable Adverse Impact

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	Project Component Alternative							
	A1	A2*	A3	B1*	B2	C1*	C2	
Issue B.3.51: Effects of Inundation on Arundo	NA	NA	NA	NI	NA	NA	NA	
Issue B.3.52: Effects of Inundation on Sandy Wash	NA	NA	NA	NI	NA	NA	NA	
Issue B.3.53: Effects of Inundation on Annual Grassland, Agricultural Fields and Pastureland	NA	NA	NA	NI	NA	NA	NA	
Issue B.3.54: Effects of Inundation on Eucalyptus Woodland	NA	NA	NA	NI	NA	NA	NA	
Issue B.3.55: Effects of Inundation on Degraded Wetlands	NA	NA	NA	NI	NA	NA	NA	
Issue B.3.56: Effects of Inundation on Ponds	NA	NA	NA	NI	NA	NA	NA	
<b>Wildlife Movement Corridor</b> Issue A.3.29, B.3.57, C.3.27: Wildlife Movement Corridors	NI	NI	NI	NI	NI	NI	NI	<b>B1, B2:</b> BR-15B*
<b>Indirect Impacts</b> Issue A.3.30, B.3.58, C.3.28: Impacts on Downstream Riparian Habitats	NI	NS	NS	NS	NS	NI	NI	
<b>AIR QUALITY</b>								
<b>Construction Impacts</b> Issues A.4.1, B.4.1, C.4.1: Emissions from Construction Activities	NI	SU	SU	SU	SU	SU	NS	<b>A2, A3, B1, B2, C1:</b> AQ-1 thru AQ-23
<b>NOISE</b>								
Issues A.5.1, B.5.1, C.5.1: Roadway Noise Levels During Construction Activities	NI	NS	SM	SM	NS	NS	NS	<b>A2:</b> N-1 <b>A3:</b> N-2 <b>B1:</b> N-3
Issues A.5.2, B.5.2, C.5.2: Onsite Construction Noise Levels	NI	NS	NS	NS	NS	NS	NS	
<b>CULTURAL RESOURCES</b>								
Issues A.6.1, B.6.1, C.6.1: Effects on Archaeological Resources	NI	NI	NI	SM	SM	SM	SM	<b>A2, A3:</b> CR-1 <b>B1:</b> CR-2 thru CR-6 <b>C1:</b> CR-7, CR-8
<b>LAND USE AND RECREATION</b>								
Issue A.7.1: Onsite and Surrounding Land Uses	NI	NS	B	NA	NA	NA	NA	
Issue A.7.2: Existing Recreational Activities	NI	B	B	NA	NA	NA	NA	
Issue A.7.3: Consistency with Goals and Objectives of the Land Use Element	NI	B	B	NA	NA	NA	NA	
Issue A.7.4: Consistency with the Goals and Objectives of the Resource Element	NI	B	B	NA	NA	NA	NA	
Issue B.7.1, C.7.1: Effects Upon Adjacent Land Uses	NA	NA	NA	B	SU	B	SU	
Issue B.7.2: Effects Upon Residential Views	NA	NA	NA	SM	SM	NA	NA	

\*Preferred Alternative Component

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ISSUE/IMPACT	LEVEL OF SIGNIFICANCE							APPLICABLE MITIGATION MEASURES
	Project Component Alternative							
	A1	A2*	A3	B1*	B2	C1*	C2	
Issue C.7.2: Effects Upon Trails	NA	NA	NA	NA	NA	SM	NI	C1: LU-2
Issue C.7.3: Effects Upon Parkland	NA	NA	NA	NA	NA	NS	NI	

NI = no impact; NS = not significant; SM = significant but mitigated impact; SU = significant unavoidable impact; B = beneficial impact; NA = Not applicable/not analyzed in Section 4 because no additional impacts would occur.  
 \* = USACE has committed to these measures even though there are no significant impacts to the accompanying issue.  
 Note: "Previous mitigation" refers to mitigation presented in the 1988 Phase II GDM SEIS.

**\*Preferred Alternative Component**

**Legend:**

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The preferred project consists of three areas of flood protection work (the Norco Bluffs, Prado Basin, and Reach 9 components). Alternatives A1, B2, and C2 are "No Project" alternatives, which in the case of the Norco Bluffs protection component, would truly be a "do nothing" alternative. The B2 and C2 No Project Alternatives would mean that the previously approved flood control improvements from the Phase II GDM project would be implemented. Section 2.4 of the FSEIS/EIR describes a number of alternatives to the proposed project that were considered but subsequently rejected for further evaluation. These alternatives were determined to be infeasible, would not meet the purpose and need of the project and the project objectives, and/or would have increased environmental impacts compared to the preferred project alternatives.

In consideration of the conclusions presented in Chapter 4.0 of the FSEIS/EIR and summarized in the table above, there is relatively little difference between the project component alternatives in terms of their level of significance of environmental impacts. For some environmental effects, the preferred alternatives are beneficial compared to the No Project Alternatives (e.g., geologic effects of Norco Bluffs Alternatives A2 and A3 are beneficial compared to Alternative A1, No Project).

Alternative A1 does not meet the stated objectives of the project to provide stabilization of the toe of the bluff slope to prevent flood flows from eroding and undercutting the toe, and to provide stabilization of the bluff to reduce damages from bluff sloughing. When compared to the preferred project alternatives, Alternatives A1, B2, and C2 do not meet the objective to maximize contributions to the National Economic Development (NED). The NED objective for this project is defined as the provision of flood protection for portions of Orange, Riverside, and San Bernardino Counties, and to stabilize the bluff toe at Norco Bluffs while maximizing contributions to the NED (FSEIS/EIR, Section 2.2). The No Project Alternatives do meet the project objectives of technical feasibility, provision of flood protection along the Santa Ana River Mainstem, protection of existing residential and commercial land uses from flooding hazards (Alternative A1 does not meet this latter objective), prevention of migration of the elevation 172-m (566-ft) contour, compliance with all applicable federal and local laws governing land use; and do not increase the frequency, duration, or severity of flooding downstream. The preferred project alternatives meet all of the project objectives. The No

Project Alternatives, A1, B2, and C2, and Alternative A3 would not substantially reduce the environmental effects otherwise caused by the preferred project alternatives.

In light of the above-described reasons, the preferred project Alternatives, Alternatives A2, B1, and C1, represent the Environmentally Superior Alternative for the project as a whole.

### **8.7 ALTERNATIVES CONSIDERED BUT ELIMINATED**

Section 2.4 of the FSEIS provides a detailed description of the alternative flood protection designs that were considered but subsequently eliminated.

## 9.0 STATEMENT OF OVERRIDING CONSIDERATIONS

The data contained in the administrative record for the FSEIS/EIR for Prado Basin and Vicinity, including Reach 9 and Stabilization of the Bluff Toe at Norco Bluffs, is the source of the information contained in this Statement of Overriding Considerations.

The proposed project would provide urban flood protection to growing communities within the Counties of Orange, Riverside, and San Bernardino. Upon completion, the project will provide flood protection to areas susceptible to floods ranging from 100-year to 190-year frequencies for people and businesses within the three county area. Without the proposed SARP improvements, the most severe flood that could occur along the river could inundate more than 170 square miles to a depth of three feet, and cause more than \$15 billion in economic damages. Within the area of the Norco Bluffs, the 172-m (566-ft) elevation line has been continually migrating due to storm water erosion of the bluffs. The greatest amount of erosion occurs during storm events when lateral migration of the river causes erosional undercutting of the toe of the bluffs, resulting in sloughing of the bluff top. The continued retreat of the bluff top is expected to result in the loss of residential property and eventually residential structures. The purpose of this project component is to stabilize the toe of the bluff so that the 172-m (566-ft) elevation line is stabilized. If the 172-m (566-ft) elevation contour continues to migrate, OCFCD would be required to acquire more land through purchase or obtain a flowage easement. The proposed alternatives for this project component include structural solutions, including toe stabilization, as well as non-structural solutions such as land acquisition.

For these reasons, on balance, the RCFCWCD finds that there are specific economic, legal, social, technological, and other considerations associated with the proposed project that serve to override and outweigh the project's unavoidable significant environmental effects and, thus, the adverse effects are considered acceptable.

## Exhibit “B”

Mitigation Monitoring and Reporting Program for Santa Ana River Mainstem Project: Prado Basin and Vicinity, Including Reach 9 and Stabilization of Bluff Toe at Norco Bluffs.

**MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA RIVER MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9**

(Includes applicable mitigation measures from the 2001 Final SEIS/EIR and the 1988 GDM Phase II SEIS)

**Component A: Norco Bluffs**

<b>Number</b>	<b>Mitigation Measures</b>	<b>Source</b>	<b>Responsibility</b>	<b>Implementing Action</b>	<b>Timing</b>
WR-1	Prior to initiating construction, the construction contractor shall prepare an erosion control plan to control potential sedimentation and turbidity impacts. The erosion control plan shall include temporary measures such as sandbags and/or water bars and may include long-term measures such as revegetating the access road and soil borrow areas.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Prepare erosion control plan	Prior to construction
WR-2	Prior to trenching, the construction contractor shall obtain a dewatering permit if the installation and maintenance of the sub-surface toe structure extends into the groundwater table.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Obtain De-watering Permit	During construction (prior to trenching)
WR-3	The construction contractor shall obtain a National Pollution Discharge Elimination System (NPDES) construction stormwater permit prior to construction.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Obtain NPDES Permit	Prior to construction
WR-4	Prior to construction, the construction contractor shall prepare a pollution prevention plan to reduce the potential for accidental release of fuels, pesticides, and other materials. This plan shall include the designation of refueling locations, emergency response procedures, and definition of reporting requirements for any spill that occurs. Equipment for immediate cleanup shall be kept at the staging area for immediate use. This plan shall also include pesticide application activities such as storage, handling of herbicides, and application methods.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Prepare Pollution Prevention Plan	Prior to construction
BR-1	The USACE shall develop and implement a monitoring program that entails surveys for least Bell's vireo and southwestern willow flycatcher in the spring and early summer in the year of construction.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Develop/implement Monitoring Program and Surveys	Prior to and during construction
BR-1A	The construction contractor shall keep grading activities associated with project construction to a minimum and existing root systems will be left intact to the extent possible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Minimize grading activities	During construction
BR-1B	The USACE shall develop and implement a monitoring program that entails surveys for bald eagles immediately prior to fall/winter construction near flowing water, and for golden eagles prior to initiating activities at Borrow Area #2. If eagles are foraging in the vicinity, the Corps will coordinate with the Contracting Officer Representative and FWS to develop appropriate avoidance measures.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Develop and implement Monitoring Program	Prior to construction
BR-2	The construction contractor shall clear vegetation associated with project construction within potential vireo or flycatcher habitat only during periods when the least Bell's vireo and southwestern willow flycatcher are not nesting (15 August through 28 February).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Time limit on vegetation clearing (August 15 to February 28)	During construction

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-3	<p>For each acre of riparian/wetland habitat (excluding unvegetated perennial stream) that is temporarily disturbed during construction related activities (9.57 ha [23.67 ac]), the USACE shall contribute sufficient funds to the Santa Ana Watershed Association of Resource Conservation Districts (Trust Fund) to:</p> <ul style="list-style-type: none"> <li>• Remove one acre of <i>Arundo donax</i> from the upper Santa Ana River watershed and/or action area (for each acre affected)</li> <li>• Actively monitor and manage this acreage until riparian habitat is completely restored</li> <li>• Maintain this acreage <i>Arundo</i>-free for the life of the project.</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Contribute funds to SAWARCD Trust Fund	Prior to, during, and after construction
BR-3A	<p>The USACE shall successfully restore each acre of riparian vegetation that is temporarily disturbed during construction-related activities (1.85 ha [4.57 ac]) and will keep all temporarily disturbed areas free of exotic plants until riparian vegetation is re-established. If the site has not begun to recover within 5 years (i.e., 50 percent of the disturbed areas are not vegetated with young riparian vegetation), then the site will be replanted with cuttings from native riparian species.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Restore disturbed riparian habitat	After construction



Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-3B	<p>The USACE shall maintain non-riparian areas that are temporarily disturbed or destroyed free of exotic plants for 8 years. In addition, the USACE shall use one of the following alternatives, or a combination thereof, to mitigate for each acre of non-riparian wetland habitat (excluding perennial stream) that is permanently destroyed or isolated from the floodplain during construction related activities (7.73 ha [19.1 ac]):</p> <ul style="list-style-type: none"> <li>• The USACE shall successfully create one acre of flood plain within the action area (for each acre affected). These areas will be kept free of exotic plants for 8 years; or</li> <li>• The USACE shall contribute sufficient funds to the Trust Fund to:                             <ul style="list-style-type: none"> <li>○ Remove three acres of <i>Arundo donax</i> from the upper Santa Ana River watershed and/or action area for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction-related activities</li> <li>○ Actively monitor and manage this acreage</li> <li>○ Maintain this acreage <i>Arundo</i>-free for the life of the project</li> <li>○ Conduct cowbird removal trapping in the vicinity of the restored habitat for the life of the project.</li> </ul> </li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Riparian restoration specifics	During and after construction

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-3C	<p>The USACE shall use one of the following alternatives, or a combination thereof, to mitigate for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction related activities (1.39 ha [3.43 ac]):</p> <ul style="list-style-type: none"> <li>• The USACE shall successfully create 3 acres of riparian vegetation within the action area (for each acre affected); or</li> <li>• The USACE shall contribute sufficient funds to the Trust Fund to:                             <ul style="list-style-type: none"> <li>○ Remove 5 acres of <i>Arundo donax</i> from the upper Santa Ana River watershed and/or action area for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction-related activities</li> <li>○ Actively monitor and manage this acreage;</li> <li>○ Maintain this acreage <i>Arundo</i>-free for the life of the project; and</li> <li>○ Conduct cowbird removal trapping in the vicinity of the restored habitat for the life of the project.</li> </ul> </li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Riparian restoration specifics	During and after construction
BR-3D	<p>The USACE shall successfully restore each acre of perennial stream that is temporarily disturbed during construction related activities (0.28 ha [0.69 ac]). Restoration will include:</p> <ul style="list-style-type: none"> <li>• Replacement of pre-construction substrates and microhabitat features</li> <li>• Maintenance or re-establishment of natural channel morphology (e.g., stream meanders, pool-riffle complexes)</li> <li>• Maintenance or re-establishment of perennial flows</li> <li>• Verification that the structure and composition of the restored area is similar to pre-construction conditions.</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Restore perennial stream habitat	After construction

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-3E	<p>The USACE shall create and/or enhance one acre of perennial stream habitat within the Santa Ana River or its tributaries for each acre of unvegetated perennial stream that is temporarily or permanently disturbed during construction-related activities. Creation/enhancement activities could include but are not limited to the following:</p> <ul style="list-style-type: none"> <li>• The development of pool-riffle complexes by placing clusters of various sized boulders within the river channel to provide limited cover and areas of reduced water velocity</li> <li>• The creation of potential sucker habitat below Prado Dam within one or more tributaries of the Santa Ana River</li> <li>• The creation of lateral stream habitats that are apparently essential for the survival of larval suckers.</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Create or enhance perennial stream habitat	After construction
BR-4	<p>The USACE or the County of Orange shall implement a cowbird trapping program along Norco Bluffs or shall make a cash contribution to the Santa Ana River Conservation Trust Fund for that purpose. In lieu of a cash contribution, the USACE or the County of Orange shall conduct a cowbird trapping program for a period of 2 years during project construction and 5 years following project completion. Trapping shall consist of fifteen monitored traps during the vireo and flycatcher egg-laying season (15 March to 30 July). This effort is viewed as supplementing on-going cowbird trapping activities in the Prado Basin.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified biologist)	Cowbird Trapping Program	During and after construction
BR-5	<p>Construction activities shall be monitored by the USACE to assure that vegetation is removed only in the designated areas. Riparian areas not to be disturbed will be flagged.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Construction monitoring	During construction
BR-6	<p>The construction contractor shall install a noise barrier prior to March 1 at the extreme downstream end of the access road to shield nesting vireos and flycatchers from excessive noise generated by construction vehicles and equipment entering and leaving the staging area.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Install noise barrier by February 28	During construction
BR-7	<p>To minimize impacts on the Santa Ana sucker population, the construction contractor shall divert the stream channel in Zone 3 away from the initial project construction area. The construction area shall then be de-watered to lower the water table. Discharge shall be directed into a stilling basin and allowed to flow through existing vegetation and into the river downstream of the construction area.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Divert stream channel (Zone 3)	During construction

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-8	During construction, the construction contractor shall implement measures to control sedimentation; these include recontouring, sandbagging, sediment basins, and other appropriate erosion control measures developed on a site-specific basis.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Implement sediment control measures	During construction
BR-9	During construction, the USACE shall monitor riparian vegetation adjacent to de-watering areas. Supplemental water shall be added to this vegetation as necessary to avoid water stress.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Monitor riparian vegetation in dewatering areas	During construction
BR-10	In areas where de-watering is necessary, a permitted biologist shall be retained by the USACE to seine the area for Santa Ana suckers. If suckers are found, they shall be removed and relocated further upstream away from construction areas.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified biologist)	Seine for S.A. suckers in dewatering areas	During construction
BR-10A	As construction is completed in a given area, the construction contractor shall hydroseed all disturbed upland areas with local native shrubs and groundcover. The mix of native species in the hydroseed shall be approved in advance by the Environmental Resources Branch of the USACE, Los Angeles District.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Hydroseed disturbed Upland areas	After construction
AQ-1	The project construction contractor shall retard diesel engine injection timing by two degrees before top center on all construction equipment that was manufactured before 1996, and which does not have an existing IC engine warranty with the manufacturer. The contractor shall provide a certification from a third-party certified mechanic prior to start of construction, stating the timing of all diesel-powered construction equipment engines have been retarded two degrees before top center.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Retard timing of diesel engines two degrees	During construction
AQ-2	The project construction contractor shall use high-pressure injectors on all diesel engines that were manufactured before 1996, and which do not have existing IC engine warranties with the manufacturer. The contractor shall provide documentation of warranty and manufacture date or a certification from a third-party certified mechanic stating that all diesel construction equipment engines are utilizing high-pressure fuel injectors.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Implement high pressure fuel injectors	During construction
AQ-3	The project construction contractor shall use Caterpillar pre-chamber diesel engines or equivalent, and perform proper maintenance and operation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use caterpillar pre-chamber diesel engines (or equivalent)	During construction
AQ-4	The project construction contractor shall electrify equipment, where feasible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Electrify equipment where feasible	During construction
AQ-5	The project construction contractor shall restrict the idling of construction equipment to 10 minutes.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Restrict engine idle time	During construction

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
AQ-6	The project construction contractor shall ensure that equipment will be maintained in proper tune to prevent visible soot from reducing light transmission through the exhaust stack exit by more than 20 percent for more than 3 minutes per hour and use low-sulfur fuel as required by SCAQMD regulation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EJR	Construction contractor	Maintain equipment in proper tune	During construction
AQ-7	The project construction contractor shall use catalytic converters on all gasoline equipment (except for small [2-cylinder] generator engines). If this measure is not implemented, emissions from gasoline equipment shall be offset by other means (e.g., Emission Reduction Credits).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EJR	Construction contractor	Use catalytic converters on gasoline equipment	During construction
AQ-8	The project construction contractor shall cease construction during periods of high ambient ozone concentrations (i.e., Stage 2 smog alerts) near the construction area (SCAQMD, 1993).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EJR	Construction contractor	Halt construction during periods of high ozone	During construction
AQ-9	The project construction contractor shall schedule all material deliveries to the construction spread outside of peak traffic hours, and minimize other truck trips during peak traffic hours, or as approved by local jurisdictions.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EJR	Construction contractor	Schedule construction material deliveries in off-peak periods	During construction
AQ-10	The project construction contractor shall use only solar powered traffic signs (no gasoline-powered generators shall be used).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EJR	Construction contractor	Use solar powered traffic signs	During construction
AQ-11	The project construction contractor shall apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more; soil stock piled for 2 days or more).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EJR	Construction contractor	Application of nontoxic soil stabilizers	During construction
AQ-12	The project construction contractor shall enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed stock piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EJR	Construction contractor	Enclose, cover, water, or apply soil stabilizers to stock piles	During construction
AQ-13	In areas where dewatering is not required, the project construction contractor shall water active grading/excavation sites at least twice daily.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EJR	Construction contractor	Water active grading sites	During construction
AQ-14	The project construction contractor shall increase dust control watering when wind speeds exceed 15 miles per hour for a sustained period of greater than 10 minutes, as measured by an anemometer. The amount of additional watering would depend upon soil moisture content at the time; but no airborne dust should be visible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EJR	Construction contractor	Increase dust control watering during wind speeds over 15 mph	During construction
AQ-15	The project construction contractor shall suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph (40 kph).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EJR	Construction contractor	Suspend all earthwork during high wind periods	During construction

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
AQ-16	The project construction contractor shall ensure that trucks hauling dirt on public roads to and from the site are covered and maintain a 50 mm (2 in) differential between the maximum height of any hauled material and the top of the haul trailer. Haul truck drivers shall water the load prior to leaving the site to prevent soil loss during transport.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Cover trucks hauling dirt on public roads	During construction
AQ-17	The project construction contractor shall ensure that graded surfaces used for off-road parking, materials lay-down, or awaiting future construction are stabilized for dust control, as needed.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Stabilize surfaces for dust control	During construction
AQ-18	The project construction contractor shall sweep streets in the project vicinity once a day if visible soil material is carried to adjacent streets.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Street sweeping after soil hauling	During construction
AQ-19	The project construction contractor shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Install wheel washers	During construction
AQ-20	The project construction contractor shall apply water three times daily, or apply non-toxic soil stabilizers according to manufacturers' specifications to all unpaved parking, staging areas, or unpaved road surfaces	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Dust control of unpaved areas	During construction
AQ-21	The project construction contractor shall ensure that traffic speeds on all unpaved roads to be reduced to 15 mph (25 kph) or less.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Traffic speed control	During construction
AQ-22	Prior to the approval of plans and specifications, the USACE shall ensure that plans and specifications specify that all heavy equipment shall be maintained in a proper state of tune as per the manufacturer's specifications.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Plan check for vehicular tuning specifications	Prior to construction (plans & specs)
AQ-23	Deleted. (Similar to AQ-5)	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR			
AQ-24	The USACE shall contact local jurisdictions, including jurisdictions affected by haul routes, prior to each phase of construction to identify other planned construction projects in the local vicinity. If other construction projects are identified in the local vicinity that would occur at the same time as construction for the project, the USACE shall coordinate with local officials to identify possible methods for reducing cumulative effects, including modifying construction schedules, modifying haul routes, modifying equipment mixes, and other reasonable and feasible measures that could reduce the magnitude of the combined effects of construction activities.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Coordination with local jurisdictions to determine timing of other construction project hauling activities	Prior to and during construction

**MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9**

<b>Number</b>	<b>Mitigation Measures</b>	<b>Source</b>	<b>Responsibility</b>	<b>Implementing Action</b>	<b>Timing</b>
N-1	Prior to the approval of plans and specifications, the USACE shall ensure that plans and specifications include a restriction of not more than 166 construction truck trips per day along Norco Drive and 316 construction truck trips per day on the streets designated for the haul route within the County of Riverside, and County of San Bernardino.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Plan check for specification to restrict truck trips per day	Prior to construction (plans & specs)
CR-1	Construction shall be monitored by qualified archaeologists. Unanticipated discoveries shall be coordinated and evaluated with the California State Historic Preservation Officer pursuant to 36 CFR 800.11.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified archaeologist)	Construction monitoring by archaeologist	During construction

**Component B: Prado Basin**

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
I.A.	Incorporate measures to stabilize slopes on road, borrow areas, and other impacted soil into construction plans and specifications. Monitor implementation of these measures during construction. (Specific measures need to be identified)	1988 GDM Phase II SEIS	USACE and contractor	Plan check for specifications to stabilize slopes/Construction monitoring	Prior to and during construction
I.B.2	Design borrow areas to minimize turbidity (controls such as settling basins).	1988 GDM Phase II SEIS	USACE	Plan check for turbidity controls	Prior to construction
I.B.3	Utilize leakproof areas (impervious aprons) for lubrication and other toxic fluids. Leave no contamination.	1988 GDM Phase II SEIS	Construction contractor	Construction monitoring for equipment maintenance	During construction
I.B.4	Obtain and comply with all necessary water quality permits.	1988 GDM Phase II SEIS	Construction contractor	Obtain all water quality permits	Prior to construction
BR-11	The construction contractor shall only clear riparian (cottonwood-willow, willow, mulefat scrub) vegetation associated with project construction only during periods when the least Bell's vireo and southwestern willow flycatcher are not nesting (15 August through 28 February).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Time limit on vegetation clearing (15 August through 28 February)	During construction
BR-11A	The USACE shall successfully restore each acre of perennial stream that is temporarily disturbed during construction related activities (2.6 ha [6.5 ac]). Restoration will include: <ul style="list-style-type: none"> <li>• Replacement of pre-construction substrates and microhabitat features</li> <li>• Maintenance or re-establishment of natural channel morphology (e.g., stream meanders, pool-riffle complexes)</li> <li>• Maintenance or re-establishment of perennial flows</li> <li>• Verification that the structure and composition of the restored area is similar to pre-construction conditions.</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Vegetation restoration specifics	During and after construction
BR-11B	The USACE shall create and/or enhance one acre of perennial stream habitat within the Santa Ana River or its tributaries for each acre of unvegetated perennial stream that is temporarily or permanently disturbed during construction-related activities. Creation/enhancement activities could include but are not limited to the following: <ul style="list-style-type: none"> <li>• The development of pool-riffle complexes by placing clusters of various sized boulders within the river channel to provide limited cover and areas of reduced water velocity</li> <li>• The creation of potential sucker habitat below Prado Dam within one or more tributaries of the Santa Ana River</li> <li>• The creation of lateral stream habitats that are apparently essential for the survival of larval suckers.</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Habitat restoration specifics	After construction



**MITIGATION MONITORING AND REPORTING PROGRAM**  
**SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9**

<b>Number</b>	<b>Mitigation Measures</b>	<b>Source</b>	<b>Responsibility</b>	<b>Implementing Action</b>	<b>Timing</b>
BR-12	Construction activities shall be monitored by the USACE to assure that vegetation is removed only in the designated areas. Riparian areas not to be disturbed shall be flagged.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Construction monitoring	During construction
BR-13	The construction contractor shall install a noise barrier prior to March 1 along the access road east and southeast of the dam along the southwestern border of the Basin to shield nesting vireos from excessive noise generated by construction vehicles and equipment.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Install noise barrier	Prior to construction
BR-13A	The USACE shall redesign the drop structure and associated baffles at the gauging station below Prado Dam to minimize the risk to fish species of injury or death owing to collision while not precluding connectivity. If this redesign results in additional disturbances to habitat, then the USACE will contribute to the Trust Fund at a 1:1 ratio for each additional acre affected.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Redesign of drop structure, or contribution to Trust Fund	Prior to construction
BR-13B	The USACE shall roughen the surface of the low-flow portion of the concrete-lined outlet channel and revegetate along both sides of the channel with native trees.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Revegetate low-flow portion of outlet channel	After construction
BR-14	Prior to utilizing the borrow sites, the construction contractor shall place dirt berms between Borrow Sites 1 and 2 and the willow riparian forest to shield nesting vireos and flycatchers from excessive noise generated by heavy equipment.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Construct dirt berms between borrow sites and willow riparian forest	During construction
BR-14A	When construction is completed in a given area, the construction contractor shall hydroseed the completed dikes and all disturbed upland areas, including borrow sites, with local native shrubs and groundcover. The mix of native species in the hydroseed shall be approved in advance by the Environmental Resources Branch of the USACE, Los Angeles District.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Hydroseed new dikes and disturbed upland areas	After construction
BR-14B	The USACE shall schedule excavation in the eastern third of borrow site #1A to avoid possible impacts to nesting willow flycatchers. Construction-related activities in this area will not occur from April 29 to September 25 during each calendar year or at any other time while flycatchers are present in habitats adjacent to the borrow site.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE and construction contractor	Restrict construction when flycatchers are present	Prior to and during construction
BR-14C	The USACE has agreed to mow all areas that will be excavated during spring/summer months, prior to March 15, to preclude nesting of and impacts to grasshopper sparrows and other species of concern.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Mow areas prior to March 15	Prior to and during construction
BR-15	Deleted. (Same as WR-1)	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	N/A	N/A	N/A

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-15A	The USACE will investigate ways to facilitate wildlife movement over the dam; possibly including a ramp vegetated with native species. The USACE will coordinate with the FWS and CDFG on design and location of the corridor. The area between the dam and the downstream end of the new outlet channel will be revegetated, thereby providing additional cover for any wildlife that may be attempting to cross through the area. If necessary, the vehicle bridge over the outlet channel may be modified to be more conducive for wildlife crossing. Native upland vegetation could be planted at the approaches to the bridge, and soil could be placed on the surface.  Construction of the outlet channel will occur only during daylight hours to minimize disturbance to wildlife species that move primarily at night.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Maintain non-riparian areas free of exotic plants	During and after construction
II.J	Esthetic Treatment Plan. Stockpile topsoil from dike sites and borrow areas and reuse it. Seed and maintain d/s sides of dikes with forbs and grasses. Esthetically reshape borrow areas and reseed with native shrubland, native wetland or geese foraging species, as appropriate. Searify haul roads when retired from use.	1988 GDM Phase II SEIS	USACE	Review of Resource Use Plan	Update Resource Use Plan prior to future recreation plans.
II.G.1	Change land use category of 32 acres to category 1 (lowest use). Protect mitigation area.	1988 GDM Phase II SEIS	USACE	Review of O&M Manual	Provide input to O&M manual prior to completion of construction.
II.G.2	Phased use of Borrow Site #2 (divided into 3 sections and each section will be used until no additional suitable material is left or is practicable to remove).	1988 GDM Phase II SEIS	USACE	Review of Plans & Specs	Prior to construction (plans & specs) plus inspections during construction period.
	Esthetic Treatment Plan. Each section of Borrow Site #2 will be restored as soon as possible after completion of activities between 15 October and 15 January. Restoration will include recontouring, respreading salvaged topsoil, fertilization, and seeding with appropriate seedmix(es).	1988 GDM Phase II SEIS	USACE	Review plans and specs/monitor construction	Prior to construction (plans & specs) plus inspections during construction period. Monitor after construction.
II.G.3	Establishment of new oak woodlands near Prado Regional Park; replace 84 trees impacted by Hwy. 71 dike at 4:1 ratio. Irrigate and protect trees. <b>Note: This measure is no longer warranted due to SR 71 Dike redesign which eliminated all impacts to existing oak woodlands.</b>	1988 GDM Phase II SEIS	N/A	N/A	N/A

**MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9**

<b>Number</b>	<b>Mitigation Measures</b>	<b>Source</b>	<b>Responsibility</b>	<b>Implementing Action</b>	<b>Timing</b>
II.G.4	Avoid impacts to sycamore trees along north edge of Borrow Site No. 1.	1988 GDM Phase II SEIS	USACE and construction contractor	Review of Plans & Specs	Prior to construction (plans & specs) plus inspections during construction period.
II.G.5 (Part 1)	Establish 133 acres of willow woodland with understory above 505'. <b>Note: This measure was superceded by the 1995 Cooperative Agreement between OCWD, USFWS, and USACE wherein \$1 million was contributed to the SAR Conservation Trust Fund in lieu of revegetation.</b>	1988 GDM Phase II SEIS	N/A	N/A	COMPLETED
II.G.5 (Part 2)	Set aside \$450,000 for a monitoring program for the vireo and a management program for its pests.	1988 GDM Phase II SEIS	USACE and Orange County	Completed	COMPLETED
AQ-1	The project construction contractor shall retard diesel engine injection timing by two degrees before top center on all construction equipment that was manufactured before 1996, and which does not have an existing IC engine warranty with the manufacturer. The contractor shall provide a certification from a third-party certified mechanic prior to start of construction, stating the timing of all diesel-powered construction equipment engines have been retarded two degrees before top center.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Retard timing of diesel engines two degrees	During construction
AQ-2	The project construction contractor shall use high-pressure injectors on all diesel engines that were manufactured before 1996, and which do not have existing IC engine warranties with the manufacturer. The contractor shall provide documentation of warranty and manufacture date or a certification from a third-party certified mechanic stating that all diesel construction equipment engines are utilizing high-pressure fuel injectors.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Implement high pressure fuel injectors	During construction
AQ-3	The project construction contractor shall use Caterpillar pre-chamber diesel engines or equivalent, and perform proper maintenance and operation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use caterpillar pre-chamber diesel engines (or equivalent)	During construction
AQ-4	The project construction contractor shall electrify equipment, where feasible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Electrify equipment where feasible	During construction
AQ-5	The project construction contractor shall restrict the idling of construction equipment to 10 minutes.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Restrict engine idle time	During construction
AQ-6	The project construction contractor shall ensure that equipment will be maintained in proper tune to prevent visible soot from reducing light transmission through the exhaust stack exit by more than 20 percent for more than 3 minutes per hour and use low-sulfur fuel as required by SCAQMD regulation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Maintain equipment in proper tune	During construction

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
AQ-7	The project construction contractor shall use catalytic converters on all gasoline equipment (except for small [2-cylinder] generator engines). If this measure is not implemented, emissions from gasoline equipment shall be offset by other means (e.g., Emission Reduction Credits).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use catalytic converters on gasoline equipment	During construction
AQ-8	The project construction contractor shall cease construction during periods of high ambient ozone concentrations (i.e., Stage 2 smog alerts) near the construction area (SCAQMD, 1993).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Halt construction during periods of high ozone	During construction
AQ-9	The project construction contractor shall schedule all material deliveries to the construction spread outside of peak traffic hours, and minimize other truck trips during peak traffic hours, or as approved by local jurisdictions.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Schedule construction material deliveries in off-peak periods	During construction
AQ-10	The project construction contractor shall use only solar powered traffic signs (no gasoline-powered generators shall be used).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use solar powered traffic signs	During construction
AQ-11	The project construction contractor shall apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more; soil stock piled for 2 days or more).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Application of nontoxic soil stabilizers	During construction
AQ-12	The project construction contractor shall enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed stock piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Enclose, cover, water, or apply soil stabilizers to stock piles	During construction
AQ-13	In areas where dewatering is not required, the project construction contractor shall water active grading/excavation sites at least twice daily.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Water active grading sites	During construction
AQ-14	The project construction contractor shall increase dust control watering when wind speeds exceed 15 miles per hour for a sustained period of greater than 10 minutes, as measured by an anemometer. The amount of additional watering would depend upon soil moisture content at the time; but no airborne dust should be visible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Increase dust control watering during wind speeds over 15 mph	During construction
AQ-15	The project construction contractor shall suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph (40 kph).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Suspend all earthwork during high wind periods	During construction
AQ-16	The project construction contractor shall ensure that trucks hauling dirt on public roads to and from the site are covered and maintain a 50 mm (2 in) differential between the maximum height of any hauled material and the top of the haul trailer. Haul truck drivers shall water the load prior to leaving the site to prevent soil loss during transport.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Cover trucks hauling dirt on public roads	During construction
AQ-17	The project construction contractor shall ensure that graded surfaces used for off-road parking, materials lay-down, or awaiting future construction are stabilized for dust control, as needed.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Stabilize surfaces for dust control	During construction
AQ-18	The project construction contractor shall sweep streets in the project vicinity once a day if visible soil material is carried to adjacent streets.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Street sweeping after soil hauling	During construction

**MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9**

<b>Number</b>	<b>Mitigation Measures</b>	<b>Source</b>	<b>Responsibility</b>	<b>Implementing Action</b>	<b>Timing</b>
AQ-19	The project construction contractor shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Install wheel washers	During construction
AQ-20	The project construction contractor shall apply water three times daily, or apply non-toxic soil stabilizers according to manufacturers' specifications to all unpaved parking, staging areas, or unpaved road surfaces	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Dust control of unpaved areas	During construction
AQ-21	The project construction contractor shall ensure that traffic speeds on all unpaved roads to be reduced to 15 mph (25 kph) or less.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Traffic speed control	During construction
AQ-22	Prior to the approval of plans and specifications, the USACE shall ensure that plans and specifications specify that all heavy equipment shall be maintained in a proper state of tune as per the manufacturer's specifications.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Plan check for vehicular tuning specifications	Prior to construction (plans & specs)
AQ-23	Deleted. (Similar to AQ-5)	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	N/A	N/A	N/A
AQ-24	The USACE shall contact local jurisdictions, including jurisdictions affected by haul routes, prior to each phase of construction to identify other planned construction projects in the local vicinity. If other construction projects are identified in the local vicinity that would occur at the same time as construction for the project, the USACE shall coordinate with local officials to identify possible methods for reducing cumulative effects, including modifying construction schedules, modifying haul routes, modifying equipment mixes, and other reasonable and feasible measures that could reduce the magnitude of the combined effects of construction activities.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Contact local jurisdictions to determine timing of other construction project hauling activities	Prior to and during construction
I.D.1	Use approved dust suppressants and water dirt haul routes and excavation/deposition areas frequently.	1988 GDM Phase II SEIS	Construction contractor	Construction monitoring	During construction
I.D.2	Obtain and comply with all necessary air quality permits.	1988 GDM Phase II SEIS	USACE	Obtain air quality permits	Prior to construction
N-3	Prior to approval of plans and specifications, the USACE shall ensure that plans and specifications include a restriction of not more than 316 construction truck trips per day on the streets designated for the haul route within the County of Riverside, County of San Bernardino, and City of Corona.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Review plans and specs.	Prior to construction (plans & specs)
I.F.	Place restrictions on days and hours of construction near residences as necessary to reduce noise impacts.	1988 GDM Phase II SEIS	USACE	Construction monitoring	During construction

**MITIGATION MONITORING AND REPORTING PROGRAM**  
**SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9**

<b>Number</b>	<b>Mitigation Measures</b>	<b>Source</b>	<b>Responsibility</b>	<b>Implementing Action</b>	<b>Timing</b>
CR-2	If previously unknown cultural resources are found during construction of any feature of the Santa Ana River Project, construction in the area of the find shall cease until the requirements in 36 CFR 800 are met. This would include coordination with the California State Historic Preservation Officer, the Advisory Council on Historic Preservation, and appropriate Native American groups and/or other interested parties. It may require additional mitigation measures such as test and data recovery excavations, archival research, avoidance measures, etc.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Construction monitoring	During construction
CR-3	In accordance with Stipulation 6 of the Programmatic Agreement, a Historic Properties Management Plan shall be developed for the basin by a qualified cultural resource specialist. This document shall outline the appropriate management measures the USACE shall take subsequent to completion of the dam and spillway.  NHRP eligible Prado Dam has been documented in accordance with Historic American Engineering Record Standards. A copy of the documentation is on file with the Library of Congress, and the National Park Service. No further mitigation measures are required for the original Prado Dam structure itself.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Prepare Historic Properties Management Plan	Before completion of construction
CR-4	The USACE shall ensure that construction throughout the Basin is monitored by archaeologists meeting the Secretary of the Interior's Standards. Any finds shall be documented in accordance with the Programmatic Agreement. Particular attention will be made to protecting the historic cemetery near the borrow area.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified archaeologist)	Construction monitoring	During construction
CR-5	The USACE shall develop a plan to flood proof the Yorba Slaughter Adobe and the plan shall be made available for review by the California State Historic Preservation Officer, the Advisory Council on Historic Preservation, San Bernardino County Museum, and interested parties. The floodproof design shall be consistent with the historic setting of the structure and be designed as visually inconspicuous as possible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Prepare Flood Protection Plan	Prior to construction
CR-6	A test excavation and NRHP evaluation of historic archeological sites affected by the interior dikes shall be conducted by a qualified archaeologist. These sites include CA-RIV-8091H (PB-69), PB-7, and PD-44. If any are determined to be NRHP eligible after consultation with the SHPO, a treatment plan shall be developed and implemented prior to construction. In addition, monitoring of construction by a qualified archaeologist shall be required during construction.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified archaeologist)	Conduct Test Excavation/Prepare treatment plan if necessary	Prior to construction
I.I.	Negotiate Memorandum of Agreement, including mitigation program design, for National Register eligible sites.	1988 GDM Phase II SEIS	USACE	Negotiate Memorandum of Agreement for eligible archaeological sites	Prior to construction

MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
II.H.	Monitor excavation of Borrow Site No. 1 and gather samples of fossils present.	1988 GDM Phase II SEIS	USACE (implemented by a qualified paleontologist)	Construction monitoring	During construction
LU-1	Subsequent to construction of the Dike at Corona National Housing Tract, the construction contractor shall ensure that the northeast side of the dike is hydroseeded with local native shrubs and groundcover.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Hydroseed Dike at Corona National Housing Tract	After construction
II.E.	Use flagmen and dip crossing where needed.	1988 GDM Phase II SEIS	Construction contractor	Review of construction specifications	During construction

**Component C: Reach 9**

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-16	Prior to construction, a monitoring program shall be developed and implemented by the USACE that entails surveys for least Bell's vireo and southwestern willow flycatcher in the spring and early summer in the year prior to construction, as well as during the year of construction.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified biologist)	Prepare monitoring program for vireo and flycatcher	Prior to and during construction
BR-16A	Within 1 year after initiation of construction activities, the USACE shall finalize a habitat management plan for the areas where the USACE and/or project sponsors have the legal right/jurisdiction. The FWS and CDFG will review the plan, which will address how the USACE and/or their sponsors will maintain or increase the baseline amount of riparian habitat, and funding. This plan will also address conservation goals and thresholds, monitoring and evaluation methodologies, and reporting and review procedures.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (coordinated with the FWS and CDFG)	Finalize Habitat Management Plan	During and after construction
BR-17	The construction contractor shall only clear vegetation associated with project construction during periods when the least Bell's vireo and southwestern willow flycatcher are not nesting (15 August through 28 February).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Time limit on vegetation clearing (15 August to 28 February)	During construction
BR-17A	Grading activities associated with project construction shall be kept to a minimum and existing root systems will be left intact to the extent possible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Construction monitoring	During construction
BR-18	For each acre of riparian/wetland habitat (excluding unvegetated perennial stream) that is temporarily disturbed during construction related activities (7.4 ha [18.2 ac]), the USACE shall contribute sufficient funds to the Santa Ana Watershed Association of Resource Conservation Districts (Trust Fund) to: <ul style="list-style-type: none"> <li>• Remove one acre of <i>Arundo donax</i> from the upper Santa Ana River watershed and/or action area (for each acre affected)</li> <li>• Actively monitor and manage this acreage until riparian habitat is completely restored</li> <li>• Maintain this acreage <i>Arundo</i>-free for the life of the project.</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Cash contribution to SARC Trust Fund	Before completion of construction
BR-18A	The USACE shall successfully restore each acre of riparian vegetation that is temporarily disturbed during construction-related activities (7.1 ha [17.5 ac]) and will keep all temporarily disturbed areas free of exotic plants until riparian vegetation is re-established. If the site has not begun to recover within 5 years (i.e., 50 percent of the disturbed areas are not vegetated with young riparian vegetation), then the site will be replanted with cuttings from native riparian species.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Restore riparian vegetation	After construction



Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-18B	<p>The USACE shall maintain non-riparian areas that are temporarily disturbed or destroyed free of exotic plants for 8 years. In addition, the USACE shall use one of the following alternatives, or a combination thereof, to mitigate for each acre of non-riparian wetland habitat (excluding perennial stream) that is permanently destroyed or isolated from the floodplain during construction related activities (0.2 ha [0.4 ac]):</p> <ul style="list-style-type: none"> <li>• The USACE shall successfully create one acre of flood plain within the action area (for each acre affected). These areas will be kept free of exotic plants for 8 years; or</li> <li>• The USACE shall contribute sufficient funds to the Trust Fund to:                             <ul style="list-style-type: none"> <li>○ Remove three acres of <i>Arundo donax</i> from the upper Santa Ana River watershed and/or action area for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction-related activities</li> <li>○ Actively monitor and manage this acreage</li> <li>○ Maintain this acreage <i>Arundo</i>-free for the life of the project</li> <li>○ Conduct cowbird removal trapping in the vicinity of the restored habitat for the life of the project.</li> </ul> </li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Riparian restoration specifics	During and after construction

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-18C	<p>The USACE shall use one of the following alternatives, or a combination thereof, to mitigate for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction related activities (3.6 ha [8.8 ac]):</p> <ul style="list-style-type: none"> <li>• The USACE shall successfully create 3 acres of riparian vegetation within the action area (for each acre affected); or</li> <li>• The USACE shall contribute sufficient funds to the Trust Fund to:                             <ul style="list-style-type: none"> <li>○ Remove 5 acres of <i>Arundo donax</i> from the upper Santa Ana River watershed and/or action area for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction-related activities</li> <li>○ Actively monitor and manage this acreage;</li> <li>○ Maintain this acreage <i>Arundo</i>-free for the life of the project; and</li> <li>○ Conduct cowbird removal trapping in the vicinity of the restored habitat for the life of the project.</li> </ul> </li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Non-Riparian restoration specifics	During and after construction
BR-19	<p>The USACE or the County of Orange shall implement a cowbird trapping program in Reach 9 or shall make a cash contribution to the Santa Ana River Conservation Trust Fund for that purpose. In lieu of a cash contribution, the USACE or the County of Orange shall conduct a cowbird trapping program for a period of 2 years during project construction and 5 years following project completion. Trapping shall consist of fifteen monitored traps during the vireo and flycatcher egg-laying season (15 March to 30 July). This effort is viewed as supplementing on-going cowbird trapping activities in the Prado Basin.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified biologist)	Implement cowbird trapping program/or contribution to Trust Fund	During and after construction
BR-20	<p>The USACE shall monitor construction activities to assure that vegetation is removed only in the designated areas. Riparian areas not to be disturbed shall be flagged.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Construction monitoring	During construction
BR-21	<p>If any construction is to take place during the time of year when vireos are present, the construction contractor shall install noise barriers between construction areas and riparian habitat prior to March 1 and kept in place until all construction in the area is completed.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Install noise barriers by February 28	During construction
BR-22	<p>To minimize impacts on the Santa Ana sucker population, in areas where dewatering is to take place, the construction contractor shall direct discharge water into a stilling basin and allowed to flow through existing vegetation and into the river downstream of the construction area.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Discharge water into stilling basin	During construction

MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-23	During construction, the construction contractor shall implement measures to control sedimentation; these include recontouring, sandbagging, the development of stilling basins, and other appropriate erosion control measures developed on a site-specific basis.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Implement sedimentation control measures/Construction monitoring	During construction
BR-24	During construction, riparian vegetation adjacent to de-watering areas shall be monitored by the USACE for signs of plant stress. Supplemental water shall be added to this vegetation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Construction monitoring	During construction
BR-25	In areas where dewatering is necessary, a permitted biologist shall be retained by the USACE to seine the area for Santa Ana suckers. If suckers are found, they shall be removed and relocated further upstream away from construction areas.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified biologist)	Seine for S.A. Suckers	During construction
BR-26	In order to allow construction work in the river at the upper Highway 91 bank stabilization area, the Green River Housing Estates, the strip mall near Weir Canyon Road, and minimally at the lower Green River Golf Course, the flow will be reduced to a minimum by the USACE and a channel will be cut by the construction contractor to divert the flow past the area of construction. Once construction is completed, the river will be allowed to return to its original channel.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Reduce river flow/cut a channel	During construction
BR-26A	As construction is completed in a given area, the construction contractor shall hydroseed all disturbed upland areas with local native shrubs and groundcover. The mix of native species in the hydroseed shall be approved in advance by the Environmental Resources Branch of the USACE, Los Angeles District.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Hydroseed all disturbed upland areas	After construction
BR-26B	The USACE shall successfully restore each acre of perennial stream that is temporarily disturbed during construction related activities (1.42 ha [3.5 ac]). Restoration will include: <ul style="list-style-type: none"> <li>• Replacement of pre-construction substrates and microhabitat features</li> <li>• Maintenance or re-establishment of natural channel morphology (e.g., stream meanders, pool-riffle complexes)</li> <li>• Maintenance or re-establishment of perennial flows</li> <li>• Verification that the structure and composition of the restored area is similar to pre-construction conditions.</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Restoration specifics for perennial stream habitat	After construction

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-26C	<p>The USACE shall create and/or enhance one acre of perennial stream habitat within the Santa Ana River or its tributaries for each acre of unvegetated perennial stream that is temporarily or permanently disturbed during construction-related activities. Creation/enhancement activities could include but are not limited to the following:</p> <ul style="list-style-type: none"> <li>• The development of pool-riffle complexes by placing clusters of various sized boulders within the river channel to provide limited cover and areas of reduced water velocity</li> <li>• The creation of potential sucker habitat below Prado Dam within one or more tributaries of the Santa Ana River</li> <li>• The creation of lateral stream habitats that are apparently essential for the survival of larval suckers. (Same as BR-22)</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Restoration specifics for perennial stream habitat	During and after construction
BR-27	Deleted. (Same as BR-22)	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	N/A	N/A	N/A
BR-28	Deleted. (Unnecessary with implementation of BR-25)	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	N/A	N/A	N/A
BR-28A	The USACE shall implement a "trap and haul" program to periodically trap Santa Ana suckers from existing pools downstream of existing drop structures and transport and release the fish in favorable habitat upstream of the Prado reservoir. Non-native predators of the sucker that are caught during trapping bouts will be destroyed rather than released.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Implement "trap and haul" program for S.A. Suckers	After construction
BR-28B	Construction of the upper Highway 91 embankment protection will occur only during daylight hours to minimize disturbances to wildlife species that move primarily at night.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Contractor	Construction of upper Highway 91 embankment protection	During construction
III.G.2	Maintenance of approximately 1,100 acres of post-project 100-yr floodplain acquired in the canyon for open space and wildlife habitat values. Agricultural lands acquired in fee will not be leased back for agriculture.	1988 GDM Phase II SEIS	Orange County	Completed	COMPLETED
AQ-1	The project construction contractor shall retard diesel engine injection timing by two degrees before top center on all construction equipment that was manufactured before 1996, and which does not have an existing IC engine warranty with the manufacturer. The contractor shall provide a certification from a third-party certified mechanic prior to start of construction, stating the timing of all diesel-powered construction equipment engines have been retarded two degrees before top center.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Retard timing of diesel engines two degrees	During construction

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
AQ-2	The project construction contractor shall use high-pressure injectors on all diesel engines that were manufactured before 1996, and which do not have existing IC engine warranties with the manufacturer. The contractor shall provide documentation of warranty and manufacture date or a certification from a third-party certified mechanic stating that all diesel construction equipment engines are utilizing high-pressure fuel injectors.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Implement high pressure fuel injectors	During construction
AQ-3	The project construction contractor shall use Caterpillar pre-chamber diesel engines or equivalent, and perform proper maintenance and operation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use caterpillar pre-chamber diesel engines (or equivalent)	During construction
AQ-4	The project construction contractor shall electrify equipment, where feasible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Electrify equipment where feasible	During construction
AQ-5	The project construction contractor shall restrict the idling of construction equipment to 10 minutes.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Restrict engine idle time	During construction
AQ-6	The project construction contractor shall ensure that equipment will be maintained in proper tune to prevent visible soot from reducing light transmission through the exhaust stack exit by more than 20 percent for more than 3 minutes per hour and use low-sulfur fuel as required by SCAQMD regulation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Maintain equipment in proper tune	During construction
AQ-7	The project construction contractor shall use catalytic converters on all gasoline equipment (except for small [2-cylinder] generator engines). If this measure is not implemented, emissions from gasoline equipment shall be offset by other means (e.g., Emission Reduction Credits).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use catalytic converters on gasoline equipment	During construction
AQ-8	The project construction contractor shall cease construction during periods of high ambient ozone concentrations (i.e., Stage 2 smog alerts) near the construction area (SCAQMD, 1993).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Halt construction during periods of high ozone	During construction
AQ-9	The project construction contractor shall schedule all material deliveries to the construction spread outside of peak traffic hours, and minimize other truck trips during peak traffic hours, or as approved by local jurisdictions.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Schedule construction material deliveries in off-peak periods	During construction
AQ-10	The project construction contractor shall use only solar powered traffic signs (no gasoline-powered generators shall be used).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use solar powered traffic signs	During construction
AQ-11	The project construction contractor shall apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more; soil stock piled for 2 days or more).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Application of nontoxic soil stabilizers	During construction
AQ-12	The project construction contractor shall enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed stock piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Enclose, cover, water, or apply soil stabilizers to stock piles	During construction
AQ-13	In areas where dewatering is not required, the project construction contractor shall water active grading/excavation sites at least twice daily.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Water active grading sites	During construction

**MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9**

<b>Number</b>	<b>Mitigation Measures</b>	<b>Source</b>	<b>Responsibility</b>	<b>Implementing Action</b>	<b>Timing</b>
AQ-14	The project construction contractor shall increase dust control watering when wind speeds exceed 15 miles per hour for a sustained period of greater than 10 minutes, as measured by an anemometer. The amount of additional watering would depend upon soil moisture content at the time; but no airborne dust should be visible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Increase dust control watering during wind speeds over 15 mph	During construction
AQ-15	The project construction contractor shall suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph (40 kph).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Suspend all earthwork during high wind periods	During construction
AQ-16	The project construction contractor shall ensure that trucks hauling dirt on public roads to and from the site are covered and maintain a 50 mm (2 in) differential between the maximum height of any hauled material and the top of the haul trailer. Haul truck drivers shall water the load prior to leaving the site to prevent soil loss during transport.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Cover trucks hauling dirt on public roads	During construction
AQ-17	The project construction contractor shall ensure that graded surfaces used for off-road parking, materials lay-down, or awaiting future construction are stabilized for dust control, as needed.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Stabilize surfaces for dust control	During construction
AQ-18	The project construction contractor shall sweep streets in the project vicinity once a day if visible soil material is carried to adjacent streets.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Street sweeping after soil hauling	During construction
AQ-19	The project construction contractor shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Install wheel washers	During construction
AQ-20	The project construction contractor shall apply water three times daily, or apply non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking, staging areas, or unpaved road surfaces	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Dust control of unpaved areas	During construction
AQ-21	The project construction contractor shall ensure that traffic speeds on all unpaved roads be reduced to 15 mph (25 kph) or less.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Traffic speed control	During construction
AQ-22	Prior to the approval of plans and specifications, the USACE shall ensure that plans and specifications specify that all heavy equipment shall be maintained in a proper state of tune as per the manufacturer's specifications.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Plan check for vehicular tuning specifications	Prior to construction (plans & specs)
AQ-23	Deleted. (Similar to AQ-5)	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	N/A	N/A	N/A

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
AQ-24	The USACE shall contact local jurisdictions, including jurisdictions affected by haul routes, prior to each phase of construction to identify other planned construction projects in the local vicinity. If other construction projects are identified in the local vicinity that would occur at the same time as construction for the project, the USACE shall coordinate with local officials to identify possible methods for reducing cumulative effects, including modifying construction schedules, modifying haul routes, modifying equipment mixes, and other reasonable and feasible measures that could reduce the magnitude of the combined effects of construction activities.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Contact local jurisdictions to determine timing of other construction project hauling activities	Prior to and during construction
N-4	In areas of noise sensitivity such as the residential uses at Green River Mobile Home Park and Green River Housing Estates, the construction contractor shall erect temporary noise barriers where feasible to limit direct line-of-sight noise impacts during construction.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Erect temporary noise barriers in sensitive land use areas	During construction
CR-7	Archival research, test excavations and NRHP evaluations shall be conducted by a qualified archaeologist for historic site PB-145, the Alta Vista site. The USACE shall coordinate with the California State Historic Preservation Officer [following] these studies. If PB-145 is determined to be NRHP eligible, a treatment plan shall be developed and implemented in accordance with the Programmatic Agreement.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified archaeologist)	Conduct archival research, test excavations and NRHP evaluations/Coordinate with CSHP officer	Prior to construction
CR-8	Monitoring of construction by a qualified archeologist shall be required during construction.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified archaeologist)	Construction monitoring	During construction
III.1.	Negotiate Memorandum of Agreement, including mitigation program design, for National Register eligible sites.	1988 GDM Phase II SEIS	USACE	Negotiate MOA for National Register eligible sites	Prior to construction
LU-2	The construction or maintenance contractor shall keep bike trails open at all times and provide detour alignments as necessary. The contractor shall provide signage to alert trail users of construction zones, and detours shall be provided along with flag personnel, and fencing as necessary for safety. Prior to construction or maintenance activity, the contractor shall obtain approval from the Manager, County of Orange, Public Facilities and Resources Department, [Harbors,] Beaches and Parks, of detour plans that include a diagram and text describing the proposed detour and safety measures. After construction, the contractor shall restore the trail to original condition. Repairs shall be coordinated with County of Orange, Public Facilities and Resources Department, [Harbors, Beaches and Parks,] Supervising Maintenance Technician [Chief, Maintenance Systems].	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Review of construction specifications/Keep bicycle trails open and provide for detours	During and after construction
III.E.	Avoid closing bridges. Avoid reducing traffic capacity on two adjacent bridges simultaneously. Use signing and flagmen.	1988 GDM Phase II SEIS	USACE	Construction monitoring	During construction

[ ] Text in brackets is corrected from FSEIS/R.

908B



**SUBMITTAL TO THE FLOOD CONTROL AND WATER CONSERVATION DISTRICT BOARD  
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

**FROM:** General Manager-Chief Engineer

**SUBMITTAL DATE:**  
June 14, 2011

**SUBJECT:** Prado Basin and Vicinity, Including Reach 9 and Stabilization of the Bluff Toe at Norco Bluffs Project

**RECOMMENDED MOTION:**

1. Adopt Resolution No. F2011-18 adopting CEQA Findings, Mitigation Measures, and a Statement of Overriding Considerations pursuant to the California Environmental Quality Act (CEQA) for the Prado Basin and Vicinity, Including Reach 9 and Stabilization of the Bluff Toe at Norco Bluffs Project; and

Continued on Page 2.

**WARREN D. WILLIAMS**  
General Manager-Chief Engineer

JDS:rlp

<b>FINANCIAL DATA</b>	Current F.Y. District Cost:	N/A	In Current Year Budget:	N/A
	Current F.Y. County Cost:	N/A	Budget Adjustment:	N/A
	Annual Net District Cost:	N/A	For Fiscal Year:	N/A

<b>SOURCE OF FUNDS:</b> N/A	<b>Positions To Be Deleted Per A-30</b>	<input type="checkbox"/>
	<b>Requires 4/5 Vote</b>	<input type="checkbox"/>

**C.E.O. RECOMMENDATION:**

APPROVE

BY:   
Michael R. Shetler

**County Executive Office Signature**

**MINUTES OF THE FLOOD CONTROL AND WATER CONSERVATION DISTRICT**

On motion of Supervisor Stone, seconded by Supervisor Benoit and duly carried, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Buster, Tavaglione, Stone and Benoit  
 Nays: None  
 Absent: Ashley  
 Date: June 14, 2011  
 xc: Flood

Kecia Harper-Ihem  
 Clerk of the Board  
 By:   
 Deputy

FORM APPROVED COUNTY COUNSEL  
BY: CARIN L. WATSON  
DATE: 6/14/11

Departmental Concurrence

Dep't Recomm.:  Consent  Policy  
 Per Exec. Ofc.:  Consent  Policy

Prev. Aan. Ref.:

District: 2<sup>nd</sup>

Agenda Number:

11.7



**FLOOD CONTROL AND WATER CONSERVATION DISTRICT BOARD SUBMITTAL  
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

**SUBJECT:** Prado Basin and Vicinity, Including Reach 9 and Stabilization  
of the Bluff Toe at Norco Bluffs Project

**SUBMITTAL DATE:** June 14, 2011

**Page 2**

**RECOMMENDED MOTION (Continued):**

2. Consider and approve the Addendum; and
3. Direct the Clerk of the Board to deliver the Notice of Determination to the office of the County Clerk and the State Office of Planning and Research for filing within five (5) working days of this Board hearing.

**BACKGROUND:**

The proposed Project consists of flood control improvements to Prado Basin and vicinity. The District, as a CEQA responsible agency, and pursuant to previous agreements entered into with the U.S. Army Corps of Engineers (USACE) will be acquiring right-of-way and approving construction within District right-of-way for this Project.

Pursuant to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), the County of Orange as the CEQA lead agency and the USACE as the NEPA lead agency have certified the Final Supplemental Environmental Impact Statement/Environmental Impact Report (SEIS/EIR) for the Prado Basin and Vicinity, Including Reach 9 and Stabilization of the Bluff Toe at Norco Bluffs in December 2001. The County of Orange also adopted certain environmental findings and a statement of overriding considerations in connection therewith. District staff has reviewed findings and concurs that the proposed project will result in potentially significant unavoidable impacts upon air quality during construction.

CEQA Guidelines Section 15096, requires the District, as a responsible agency, to consider the SEIS/EIR and make certain findings required by CEQA Guidelines Section 15091 for each significant effect of the project and make a statement of overriding considerations pursuant to Section 15093. As indicated in Resolution F2011-18, the District adopts the required findings, mitigation measures and a statement of overriding considerations in its role as a responsible agency under CEQA.

The USACE in consultation with District staff also prepared a Supplemental Environmental Assessment/CEQA Addendum (Addendum) to the SEIS/EIR dated March, 2011 to address minor technical project changes and demonstrate compliance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) for the Santa Ana River Flood Control Project Reach 9, Phase 2A Embankment project. This project is a project within the Prado Basin and Vicinity, Including Reach 9 and Stabilization of the Bluff Toe at Norco Bluffs Project and was previously analyzed in the SEIR/EIR. District Staff has reviewed the final Addendum to the SEIS/EIR and has made the determination that none of the conditions described in Section 15162 of the CEQA Guidelines calling for the preparation of a subsequent EIR have occurred. The Addendum has been prepared pursuant to Section 15164 of the CEQA Guidelines.

**FINANCIAL:**

N/A

JDS:rlp

1 Board of Supervisors

Riverside County Flood Control  
and Water Conservation District

2  
3 **RESOLUTION NO. F2011-18**  
4 **ADOPTING CEQA FINDINGS, MITIGATION MEASURES, AND A STATEMENT OF**  
5 **OVERRIDING CONSIDERATIONS FOR THE PRADO BASIN AND VICINITY, INCLUDING**  
6 **REACH 9 AND STABILIZATION OF THE BLUFF TOE AT NORCO BLUFFS PROJECT**

7 WHEREAS, on June 14, 2011, the Board of Supervisors of the Riverside County Flood Control  
8 and Water Conservation District (hereinafter referred to as the "Board") met to further consider the  
9 environmental impacts of the Prado Basin and Vicinity, including Reach 9 and Stabilization of the Bluff  
10 Toe at Norco Bluffs Project (hereinafter referred to as "Project"); and

11 WHEREAS, on November 28, 1989, the County of Orange, acting as lead agency under the  
12 California Environmental Quality Act (hereinafter referred to as "CEQA") relied on three Supplemental  
13 Environmental impact Statements prepared by the U.S. Army Corps of Engineers (hereinafter referred to  
14 as "USACE") for the Santa Ana Mainstem Project in 1980, 1985 and 1988 (hereinafter referred to as  
15 "FSEIS") in lieu of preparing an Environmental Impact Report and certified the FSEIS and adopted  
16 mitigation measures and a statement of overriding considerations; and

17 WHEREAS, on December 21, 1989, the Board acting as a responsible agency under CEQA,  
18 concurred with the County of Orange, certified the FSEIS, and adopted mitigation measures and a  
19 statement of overriding considerations (Resolution No. F89-40); and

20 WHEREAS, the USACE, acting as the Federal lead agency and the County of Orange acting as  
21 the lead agency under CEQA, subsequently in 2001 prepared a Supplemental Final Environmental Impact  
22 Statement/Environmental Impact Report (hereinafter referred to as the "SEIS/EIR") to the FSEIS entitled  
23 "Prado Basin and Vicinity, Including the Reach 9 and Stabilization of the Bluff Toe and Norco Bluffs  
24 Supplemental Final Environmental Impact Statement-Environmental Impact Report" (SCH No.  
25 97071087); and

26 WHEREAS, the Santa Ana River Flood Control Project Reach 9, Phase 2A Embankment project  
27 is a project within the Project and was analyzed in the SEIS/EIR; and  
28

FOR APPROVED COUNTY COUNSEL  
BY: *[Signature]*  
KARIN L. WATTS-BAZAN  
DATE: 6/16/11

1 WHEREAS, on December 19, 2001, the County of Orange adopted Resolution 01-16, certifying  
2 the SEIS/EIR and adopting mitigation measures and a statement of overriding considerations; and

3 WHEREAS, pursuant to CEQA, the County of Orange is the lead agency and is responsible for  
4 assuring that an adequate environmental analysis of the entire Project has been conducted; and

5 WHEREAS, pursuant to CEQA, the District is acting as a responsible agency for considering the  
6 SEIS/EIR determined to be adequate and certified by the County of Orange; and

7 WHEREAS, the USACE and the District, as CEQA lead agency, have prepared a Supplemental  
8 Environmental Assessment/CEQA Addendum (hereinafter referred to as "Addendum") to the SEIS/EIR  
9 dated March 25, 2011 to address minor technical project changes and demonstrate compliance with the  
10 Western Riverside County Multiple Species Habitat Conservation Plan (hereinafter referred to as  
11 "MSHCP") specifically for the aforementioned Santa Ana River Flood Control Project Reach 9, Phase 2A  
12 Embankment project; and

13 WHEREAS, the District, pursuant to previous agreements with the USACE is responsible for  
14 acquiring certain right of way including right of way for the Santa Ana River Flood Control Project Reach  
15 9, Phase 2A Embankment project; and

16 WHEREAS, the SEIS/EIR and Addendum, taken together, thoroughly address the environmental  
17 effects of the Santa Ana River Flood Control Project Reach 9, Phase 2A Embankment project; and

18 BE IT RESOLVED, FOUND, DETERMINED AND ORDERED by the Board of Supervisors of  
19 the Riverside County Flood Control and Water Conservation District, in regular session assembled on  
20 June 14, 2011, based upon the evidence and testimony presented on the matter, both written and oral,  
21 including the SEIS/EIR and Addendum that:

22 1. The Project is within the scope of the SEIS/EIR and the Addendum, and taken together, the  
23 environmental effects of the Project have been adequately addressed in the SEIS/EIR and the Addendum.

24 2. The following potential impacts associated with the Project are not significant:

- 25 - Geology
- 26 - Noise
- 27 - Land Use and Recreation

28

1           3.     The following impacts associated with the Project are potentially significant, but will be  
2 avoided or substantially reduced to a level of less than significance, by the identified mitigation measures:

3           A.     Water Resources and Hydrology

4           Potential Impacts: Sedimentation and turbidity may be caused by construction of  
5 flood control improvements within the Project area. Subsequent to construction,  
6 dewatering may be necessary to make repairs to the toe protection structure and to  
7 install and maintain the flood control structures in the Project area. Dewatering has  
8 the potential to increase turbidity within the river channel. Additional potentially  
9 significant effects include accidental release of toxic materials from construction  
10 vehicles, introduction of herbicide into river water flows, and groundwater  
11 contamination. The Board finds that the mitigation measures listed below will  
12 reduce the Project's impacts to a less than significant level.

13           Mitigation:

- 14           1.     Mitigation measures WR-1 through WR-4, in Section 6 of the Addendum,  
15 as described on Exhibit A attached hereto, are hereby incorporated by  
16 reference.
- 17           2.     The mitigation measures set forth in the SEIS/EIR, with regards to water  
18 quality and hydrology, as described on Exhibit B attached hereto, are  
19 hereby incorporated by reference.

20           B.     Biological Resources

21           Potential Impacts: The proposed Project will have potentially significant effects on  
22 several aspects of biological resources in the Project area. Significant effects that  
23 are mitigable to below significance will occur to sensitive wildlife and sensitive  
24 habitat types. The following summarizes each potentially significant effect.  
25 Construction of the Project will impact the least Bell's vireo and its Critical Habitat,  
26 due to: 1) some permanent and some temporary removals of critical habitat  
27 (cottonwood-willow riparian, willow-riparian, and riparian scrub); and 2)

1 construction noise, dust generation, and other disturbances. The Project will have  
2 potentially significant effects on the Santa Ana sucker during construction, as a  
3 result of temporary diversion of the stream channel, which would temporarily  
4 displace willow and arundo vegetation. Temporary increases in turbidity and  
5 downstream siltation and decreased flow or ponding would result from the  
6 construction work. These changes would affect the population of Santa Ana  
7 sucker.

8 Cumulative effects of Project construction on wildlife Species of Special  
9 Concern and other sensitive wildlife species would be potentially significant in  
10 light of the historical loss of habitat (specifically native riparian) throughout the  
11 region.

12 Without mitigation, the Project would have potentially significant long term  
13 effects on the least Bell's vireo and its Critical Habitat during maintenance and  
14 operational activities.

15 The Project may have significant effects on the population of Santa Ana  
16 suckers during controlled releases of 30,000 cfs of flood flows through that section  
17 of the river. These controlled releases would occur on average once every 83 years.

18 Sensitive habitats will be significantly affected by construction of the  
19 Project, including Cottonwood-Willow Riparian Woodland, Willow-Riparian  
20 Woodland and Riparian-Scrub/Herbaceous Riparian habitats. Permanent and  
21 temporary removals of these habitat types will occur in order to construct the three  
22 components of the project.

23 Construction effects on perennial stream habitat would be significant, due to  
24 temporary increases in turbidity and downstream siltation, and decreased water  
25 flow or ponding from construction activities within the stream channel. These  
26 temporary changes would affect aquatic plant and animal populations adapted to  
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1 clear, free-flowing river water. The Board finds that the mitigation measures listed  
2 below will reduce the Project's impacts to a less than significant level.

3 Mitigation:

- 4 1. Mitigation measures BR-16 through BR-28B and BR-28, in Section 6 of the  
5 Addendum, as described on Exhibit A attached hereto, are hereby  
6 incorporated by reference.
- 7 2. The mitigation measures set forth in the SEIS/EIR, with regards to  
8 Biological Resources, as described on Exhibit B attached hereto, are  
9 incorporated by reference.
- 10 3. Mitigation Measures EC-BR-1 through EC-BR-6 in Section 6 of the  
11 SEA/CEQA Addendum, as described on Exhibit A attached hereto, are  
12 hereby incorporated by reference, which were incorporated into the Project  
13 to further reduce Project impacts.

14 C. Cultural Resources

15 Potential Impacts: Buried cultural resources may be encountered during  
16 construction of the Project. The Board finds that the mitigation measures listed  
17 below will reduce the Project's impacts to a less than significant level.

18 Mitigation:

- 19 1. Mitigation measure EC-CR-1, in Section 6 of the Addendum, as described  
20 on Exhibit A attached hereto, are hereby incorporated by reference, was  
21 included as an update to mitigation measures in the SEIS/EIR.
  - 22 2. The mitigation measures set forth in the SEIS/EIR, with regards to Cultural  
23 Resources, as described on Exhibit B attached hereto, are hereby  
24 incorporated by reference, except to the extent and as modified by the  
25 Addendum attached hereto.
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1 BE IT FURTHER RESOLVED by the Board that the following impacts associated with the  
2 Project may not be fully mitigated despite the inclusion of all available mitigation measures and requires a  
3 statement of overriding considerations:

4 A. Air Quality

5 Potential Impact: The Project would generate daily NOx emission levels during  
6 construction substantially above the thresholds set for the South Coast Air Basin (SCAB),  
7 and construction would generate levels of PM<sub>10</sub> in excess of daily threshold levels. Daily  
8 emissions created during construction would be generated by operation of construction  
9 equipment, transportation of construction workers and materials both on and off site, and  
10 disturbance of soils within the Project area. Therefore, the construction related emission  
11 for this pollutant would be significant. The Board further finds that such impacts are of a  
12 limited, temporary nature, occurring only during construction, and that specific economic,  
13 technical and other considerations make infeasible any other mitigation measures and  
14 Project alternatives.

15 Mitigation:

- 16 1. Mitigation measures AQ-1 through AQ-24, in Section 6 of the Addendum, as  
17 described on Exhibit A attached hereto, are hereby incorporated by reference.
- 18 2. The mitigation measures set forth in the SEIS/EIR, with regards to Air Quality, as  
19 described on Exhibit B attached hereto, are hereby incorporated by reference.
- 20 3. Mitigation Measures EC-AQ-1 through EC-AQ-2 in Section 6 of the Addendum, as  
21 described on Exhibit A attached hereto, are hereby incorporated by reference,  
22 which were incorporated into the Project to further reduce Project impacts.

23 BE IT FURTHER RESOLVED BY THE BOARD that it has considered and rejected as infeasible  
24 the following alternatives identified alternatives in the SEIS/EIR and the Addendum:

- 25 A. Alternatives Considered but Eliminated. Section 2.4 of the SEIS/EIR describes a number  
26 of alternatives to the proposed Project that were considered but subsequently rejected for  
27 further evaluation. These alternatives were determined to be infeasible, would not meet  
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1 the purpose and need of the Project and the Project objectives, and/or would have  
2 increased environmental impacts compared to the preferred Project alternatives. For these  
3 reasons, the Board hereby rejects the alternative flood protection designs that were  
4 considered in the SEIS/EIR.

5 B. Alternative C2 SEIS/EIR: Reach 9 No Action/No Project (Phase II GDM Improvements).

6 Implementation of the No Action/No Project Alternative, as described in the SEIS/EIR  
7 would only result in the construction of those flood control features previously authorized.  
8 For Reach 9 of the Santa Ana River, the only previously authorized feature is the Green  
9 River Mobile Home Park levee. The preferred Project consists of flood protection work in  
10 Reach 9 Phase 2A. When compared to the preferred Project alternative, Alternative C2  
11 does not meet the federal objective to maximize contributions to the National Economic  
12 Development (NED). The preferred Project alternative meets all of the Project objectives.  
13 For the above reasons, the Board hereby rejects Alternative C2.

14 C. Previously Approved Design Alternative. The Previously Approved Design Alternative

15 addressed in the Addendum is defined as constructing the Reach 9 flood control  
16 improvements for the Upper Highway 91 Embankment and the Green River Housing  
17 Estates according to the plans presented in the SEIS/EIR. This alternative differs from the  
18 proposed Project primarily in the embankment methods. The Previously Approved Design  
19 Alternative consisted of using riprap and grouted stone embankment methods. The  
20 proposed Project improvements consist of grouted stone and sheet pile. The sheet pile  
21 reduces the project footprint and the associated environmental impacts. Therefore, the  
22 proposed Project is designed to provide the same level of flood protection as the  
23 Previously Approved Design Alternative, but with some modifications to the material  
24 composition and lengths of the embankment that further reduce the potential  
25 environmental impacts. For these reasons, the Board finds that the Previously Approved  
26 Design Alternative is not environmentally superior to the proposed Project, and the Board  
27 hereby rejects the Previously Approved Design Alternative.  
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1 BE IT FURTHER RESOLVED by the Board that it has balanced the benefits of the Project  
2 against the unavoidable adverse environmental effects thereof. The Board finds that the benefits of the  
3 Project, including but not limited to its benefits to provide flood protection for the existing State Route 91  
4 Freeway and the Green River Housing Estates outweigh the unavoidable, but temporary effects on air  
5 quality. Therefore, the Board finds the adverse environmental effects of the Project are "acceptable" in  
6 light of the following benefits.

7 Facts Supporting Finding:

- 8 A. The mitigation measures set forth above, as described on Exhibit A and Exhibit B attached  
9 hereto, are hereby incorporated by reference as fully set forth herein.  
10 B. The Project will provide protection along the Santa Ana River Mainstem.  
11 C. The Project will protect the existing State Route 91 Freeway from flooding hazards.  
12 D. The Project will protect the lives and properties of individuals residing in the Green River  
13 Housing Estates.  
14 E. The Project will provide the least amount of disturbance to biological habitat.

15 BE IT FURTHER RESOLVED by the Board that the aforementioned Santa Ana River Flood  
16 Control Project Reach 9, Phase 2A Embankment project is in compliance with the MSHCP and that the  
17 Board makes the following determinations related to said compliance:

- 18 a) This project is partially within the Criteria Area set forth in and established by the MSHCP  
19 and is specifically within Criteria Cells 1612, 1616 and 1702 which are part of the  
20 Temescal Canyon Area Plan.  
21 b) This project has been submitted to and reviewed by the Western Riverside County  
22 Regional Conservation Authority (RCA) pursuant to the Joint Project Review (JPR)  
23 process. Pursuant to a Criteria Consistency Review letter received from the RCA dated  
24 May 3, 2011, it was determined that this project is consistent with both the Criteria and  
25 other MSHCP requirements. See Joint Project Review # 11-04-19-01, dated May 3, 2011  
26 for the project in Appendix D of the Addendum.  
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- 1 c) This project is consistent with the Riparian/Riverine Area and Vernal Pools requirements  
2 of the MSHCP. Pursuant to Section 6.1.2 of the MSHCP, an assessment of the potentially  
3 significant effects on Riparian/Riverine Areas and Vernal Pools which includes  
4 identification and mapping of such areas located within the project boundaries is required.  
5 It has been determined that although the project area does not contain any vernal pools, the  
6 project area does include Riparian/Riverine Areas as defined by the MSHCP. It has also  
7 been determined that the project area does contain suitable habitat for least Bell's vireo, but  
8 not suitable habitat for Southwestern Willow Flycatcher, Western Yellow-billed cuckoo,  
9 Riverside fairy shrimp, Santa Rosa Plateau fairy shrimp, or the vernal pool fairy shrimp.  
10 Pursuant to Section 6.1.2, a Determination of Biologically Equivalent or Superior  
11 Preservation (DBESP) analysis of unavoidable impacts to Riparian/Riverine Areas has  
12 been completed and it has been determined by District staff that the project, with its design  
13 features and proposed compensatory measures, is biologically equivalent or superior to  
14 that under an avoidance alternative without these measures. A copy of the DBESP  
15 analysis was sent on April 14, 2011 to the U.S. Fish and Wildlife Service and the  
16 California Department of Fish and Game for a 60-day review/response period. In a letter  
17 dated May 20, 2011, the U.S. Fish and Wildlife Service and the California Department of  
18 Fish and Game concluded that construction of this project and mitigation measures  
19 provided in the DBESP, including those provided in the Addendum, meet the  
20 Riparian/Riverine Policy equivalency finding.
- 21 d) This project is consistent with the Narrow Endemic Plant Species requirements of the  
22 MSHCP. Pursuant to Section 6.1.3 of the MSHCP, habitat assessments and/or focused  
23 surveys for certain narrow endemic plant species are required for properties within mapped  
24 survey areas. The survey area maps included within the MSHCP have been reviewed and  
25 the project is partially located within the survey areas for San Diego ambrosia, Brand's  
26 phacelia, and San Miguel savory. A habitat assessment was conducted and it was  
27 determined that suitable habitat for San Diego ambrosia and San Miguel savory does not  
28

1 occur on the project site. Suitable habitat for Brand's phacelia was present; however, none  
2 were identified during focused surveys.

3 e) This project is consistent with the Urban/Wildlands Interface Guidelines established by the  
4 MSHCP. Pursuant to Section 6.1.4 of the MSHCP, projects in close proximity to the  
5 MSHCP Conservation Area are required to incorporate mechanisms to address indirect  
6 effects to the MSHCP Conservation Area. A portion of this project is adjacent to the  
7 MSHCP Conservation Area, and the project has been designed to address the guidelines  
8 set forth in Section 6.1.4. The project has incorporated certain design features and  
9 measures to ensure compliance with Section 6.1.4 of the MSHCP.

10 f) This project is consistent with the Database Updates/Additional surveys requirements of  
11 the MSHCP. Pursuant to Section 6.3.2 of the MSHCP, habitat assessments and/or focused  
12 surveys for certain additional plant and animal species are required for properties within  
13 mapped survey areas. The survey area maps have been reviewed and the project is  
14 partially within mapped survey area for the Burrowing Owl. Phase I and Phase II  
15 burrowing owl habitat assessments were conducted for the Burrowing Owl. Burrowing  
16 owls and burrows suitable for burrowing owl occupation were not observed during  
17 surveys. Therefore, no further surveys or conservation measures are required.

18 g) This project is consistent with the Guidelines for Facilities Within the Criteria Area and  
19 Public/Quasi-Public Lands. Specifically, the project shall implement the construction  
20 guidelines set forth in Section 7.5.3 of the MSHCP and the standard best management  
21 practices set forth in Appendix C of the MSHCP, where applicable.

22 BE IT FURTHER RESOLVED by the Board that the SEIS/EIR and the Mitigation Monitoring  
23 and Reporting Plan and the findings set forth herein are hereby adopted.

24 BE IT FURTHER RESOLVED by the Board that the Addendum and the environmental  
25 commitments set forth herein are hereby approved.

26 BE IF FURTHER RESOLVED by the Board that within five (5) working days of this Board  
27 hearing, the Clerk of the Board is directed to deliver the Notice of Determination for the Project to the  
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1 Office of the County Clerk and Recorder, who is hereby directed to file same, and the Clerk of the Board  
2 is further directed to deliver the Notice of Determination to the State Office of Planning and Research, all  
3 as required by law.

4  
5 ROLL CALL:

6 Ayes: Buster, Tavaglione, Stone, and Benoit  
7 Nays: None  
8 Absent: Ashley

9 The foregoing is certified to be a true copy of a resolution duly  
10 adopted by said Board of Supervisors on the date therein set forth.

11 KECIA HARPER-IHEM, Clerk of said Board

12 By:   
13 Deputy

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# **EXHIBIT A**

## 6. ENVIRONMENTAL COMMITMENTS

### 6.1 ENVIRONMENTAL COMMITMENTS

As discussed in the Section 4 analysis, the Proposed Action would not result in any significant impacts to air quality, biological resources, water resources and hydrology, earth resources, land use, aesthetics, recreation, noise, socioeconomics, transportation, safety and hazards, cultural resources, or public services and utilities. Of these resources, several areas could have potential short-term impacts on the environment and thus would require environmental commitments to further reduce impacts. The following environmental commitments have been incorporated into the proposed project for the purpose of minimizing environmental effects. Not all of these measures would apply specifically to the Reach 9 Phase 2A project, but are intended to mitigate for all Reach 9 project features (past, present and future). Updates and additional information are provided in brackets, and new commitments or measures that are specific to this project are prefaced with "EC-".

#### Air Quality

The following mitigation measures were included in the 2001 Final SEIS/EIR to reduce potential impacts to water resources and hydrology. [Mitigation measures AQ-1 through AQ-3 have been replaced by EC-AQ-1 presented below, and AQ-20 has been replaced by EC-AQ-2, also presented below].

- AQ-1** The project construction contractor shall retard diesel engine injection timing by two degrees before top center on all construction equipment that was manufactured before 1996, and which does not have an existing IC engine warranty with the manufacturer. The contractor shall provide a certification from a third-party certified mechanic prior to start of construction, stating the timing of all diesel-powered construction equipment engines have been retarded two degrees before top center.
- AQ-2** The project construction contractor shall use high-pressure injectors on all diesel engines that were manufactured before 1996, and which do not have existing IC engine warranties with the manufacturer. The contractor shall provide documentation of warranty and manufacture date or a certification from a third-party certified mechanic stating that all diesel construction equipment engines are utilizing high-pressure fuel injectors.
- AQ-3** The project construction contractor shall use Caterpillar pre-chamber diesel engines or equivalent, and perform proper maintenance and operation.
- AQ-4** The project construction contractor shall electrify equipment, where feasible.
- AQ-5** The project construction contractor shall restrict the idling of construction equipment to 10 minutes.
- AQ-6** The project construction contractor shall ensure that equipment will be maintained in proper tune to prevent visible soot from reducing light transmission through the exhaust stack exit by more than 20 percent for more than 3 minutes per hour and use low-sulfur fuel as required by SCAQMD regulation.
- AQ-7** The project construction contractor shall use catalytic converters on all gasoline equipment (except for small [2-cylinder] generator engines). If this measure is not implemented, emissions from gasoline equipment shall be offset by other means (e.g., Emission Reduction Credits).

- AQ-8 The project construction contractor shall cease construction during periods of high ambient ozone concentrations (i.e., Stage 2 smog alerts) near the construction area (SCAQMD, 1993).
- AQ-9 The project construction contractor shall schedule all material deliveries to the construction spread outside of peak traffic hours, and minimize other truck trips during peak traffic hours, or as approved by local jurisdictions.
- AQ-10 The project construction contractor shall use only solar powered traffic signs (no gasoline-powered generators shall be used).

The following measures will be implemented to reduce construction emissions of PM10:

- AQ-11 The project construction contractor shall apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more; soil stock piled for 2 days or more).
- AQ-12 The project construction contractor shall enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed stock piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.
- AQ-13 In areas where dewatering is not required, the project construction contractor shall water active grading/excavation sites at least twice daily.
- AQ-14 The project construction contractor shall increase dust control watering when wind speeds exceed 15 miles per hour for a sustained period of greater than 10 minutes, as measured by an anemometer. The amount of additional watering would depend upon soil moisture content at the time; but no airborne dust should be visible.
- AQ-15 The project construction contractor shall suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph (40 kph).
- AQ-16 The project construction contractor shall ensure that trucks hauling dirt on public roads to and from the site are covered and maintain a 50 mm (2 in) differential between the maximum height of any hauled material and the top of the haul trailer. Haul truck drivers shall water the load prior to leaving the site to prevent soil loss during transport.
- AQ-17 The project construction contractor shall ensure that graded surfaces used for off-road parking, materials lay-down, or awaiting future construction are stabilized for dust control, as needed.
- AQ-18 The project construction contractor shall sweep streets in the project vicinity once a day if visible soil material is carried to adjacent streets.
- AQ-19 The project construction contractor shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.
- AQ-20 The project construction contractor shall apply water three times daily, or apply non-toxic soil stabilizers according to manufacturers' specifications to all unpaved parking, staging areas, or unpaved road surfaces.
- AQ-21 The project construction contractor shall ensure that traffic speeds on all unpaved roads to be reduced to 15 mph (25 kph) or less.

The following measures will be implemented to reduce construction emissions of CO and ROC:

**AQ-22** Prior to the approval of plans and specifications, the USACE shall ensure that plans and specifications specify that all heavy equipment shall be maintained in a proper state of tune as per the manufacturer's specifications.

**AQ-23** Deleted. (Similar to AQ-5)

The following measure will be implemented to reduce potential cumulative impacts during construction:

**AQ-24** The USACE shall contact local jurisdictions, including jurisdictions affected by haul routes, prior to each phase of construction to identify other planned construction projects in the local vicinity. If other construction projects are identified in the local vicinity that would occur at the same time as construction for the project, the USACE shall coordinate with local officials to identify possible methods for reducing cumulative effects, including modifying construction schedules, modifying haul routes, modifying equipment mixes, and other reasonable and feasible measures that could reduce the magnitude of the combined effects of construction activities.

Implementation of the following additional environmental commitments by the Corps would further reduce the temporary construction emission air quality impacts. These air quality environmental commitments are as follows:

**EC-AQ-1** Use lower emitting off-road diesel-fueled equipment. All off-road construction diesel engines not registered under California Air Resources Board's (CARB's) Statewide Portable Equipment Registration Program, which have a rating of 50 horsepower (hp) or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, section 2423(b) (1) unless such engine is not available for a particular item of equipment. In the event a Tier 2 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with retrofit controls that would provide NOx and PM emissions that are equivalent to a Tier 2 engine. Equipment properly registered under and in compliance with CARB's Statewide Portable Equipment Registration Program is considered to comply with this mitigation measure. This measure does not apply to construction equipment that is active at the site for less than two weeks total duration and specific exceptions to these requirements may be allowed on a case by case basis in the determination of extreme financial difficulty for subcontractors that are using specialized self-owned construction equipment.

**EC-AQ-2** All unpaved construction roads shall be stabilized with a non-toxic soil stabilizer or soil weighting agent, with or without the use of geotextiles that can be determined to be both, as efficient, or more efficient for fugitive dust control as California Air Resources Board approved soil stabilizers, and shall not increase any other environmental impacts including loss of vegetation.

### **Biological Resources**

The following mitigation measures from the 2001 Final SEIS/EIR would be incorporated into contract specifications for the proposed project or implemented by the Corps to reduce potential impacts to biological resources.

**BR-16** Prior to construction, a monitoring program shall be developed and implemented by the USACE that entails surveys for least Bell's vireo and southwestern willow flycatcher in the



spring and early summer in the year prior to construction, as well as during the year of construction. [Surveys are being conducted by SAWA.]

- BR-16A** Within 1 year after initiation of construction activities, the USACE shall finalize a habitat management plan for the areas where the USACE and/or project sponsors have the legal right/jurisdiction. The FWS and CDFG will review the plan, which will address how the USACE and/or their sponsors will maintain or increase the baseline amount of riparian habitat, and funding. This plan will also address conservation goals and thresholds, monitoring and evaluation methodologies, and reporting and review procedures. [Update: Orange County Flood Control District has finalized the Habitat Management Plan.]
- BR-17** The construction contractor shall only clear vegetation associated with project construction during periods when the least Bell's vireo and southwestern willow flycatcher are not nesting (15 August through 28 February).
- BR-17A** Grading activities associated with project construction shall be kept to a minimum and existing root systems will be left intact to the extent possible.
- BR-18** For each acre of riparian/wetland habitat (excluding unvegetated perennial stream) that is temporarily disturbed during construction related activities (12.70 ac), the USACE shall contribute sufficient funds to the Santa Ana Watershed Association of Resource Conservation Districts (Trust Fund) [or other contractor] to:
- Remove one acre of *Arundo donax* from the upper Santa Ana River watershed and/or action area (for each acre affected)
  - Actively monitor and manage this acreage until riparian habitat is completely restored
    - Maintain this acreage *Arundo*-free for the life of the project [or until success criteria are met - possible revised approach is currently being coordinated with the USFWS].
- BR-18A** The USACE [or Sponsors] shall successfully restore each acre of riparian vegetation that is temporarily disturbed during construction-related activities (12.70 ac) and will keep all temporarily disturbed areas free of exotic plants until riparian vegetation is re-established. If the site has not begun to recover within 5 years (i.e., 50 percent of the disturbed areas are not vegetated with young riparian vegetation), then the site will be replanted with cuttings from native riparian species.
- BR-18B** The USACE [or Sponsors] shall maintain non-riparian areas that are temporarily disturbed or destroyed free of exotic plants for 8 years. In addition, the USACE shall use one of the following alternatives, or a combination thereof, to mitigate for each acre of non-riparian floodplain habitat (excluding perennial stream) that is permanently destroyed or isolated from the floodplain during construction related activities (6.88 ac):
- The USACE shall successfully create one acre of flood plain within the action area (for each acre affected). These areas will be kept free of exotic plants for 8 years; or
  - The USACE shall contribute sufficient funds to the Trust Fund [or other contractor] to:
    - Remove three acres of *Arundo donax* from the upper Santa Ana River watershed and/or action area for each acre of [non-]riparian vegetation that is permanently destroyed or isolated from the flood plain during construction-related activities
    - Actively monitor and manage this acreage
    - Maintain this acreage *Arundo*-free for the life of the project [or until success criteria are met - possible revised approach is currently being coordinated with the USFWS]
    - Conduct cowbird removal trapping in the vicinity of the restored habitat for the life of the project [or until success criteria are met - possible revised approach is currently being coordinated with the USFWS].

- BR-18C** The USACE shall use one of the following alternatives, or a combination thereof, to mitigate for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction related activities (9.39 ac):
- The USACE shall successfully create 3 acres of riparian vegetation within the action area (for each acre affected); or
  - The USACE shall contribute sufficient funds to the Trust Fund [or other contractor] to:
    - Remove 5 acres of *Arundo donax* from the upper Santa Ana River watershed and/or action area for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction-related activities
    - Actively monitor and manage this acreage;
    - Maintain this acreage *Arundo*-free for the life of the project [or until success criteria are met - possible revised approach is currently being coordinated with the USFWS]; and
    - Conduct cowbird removal trapping in the vicinity of the restored habitat for the life of the project [or until success criteria are met - possible revised approach is currently being coordinated with the USFWS].
- BR-19** The USACE or the County of Orange [Sponsors] shall implement a cowbird trapping program in Reach 9 or shall make a cash contribution to the Santa Ana River Conservation Trust Fund for that purpose. In lieu of a cash contribution, the USACE or the County of Orange shall conduct a cowbird trapping program for a period of 2 years during [Reach 9] project construction and 5 years following project completion. Trapping shall consist of fifteen monitored traps during the vireo and flycatcher egg-laying season (15 March to 30 July). This effort is viewed as supplementing on-going cowbird trapping activities in the Prado Basin. [The Corps funded four years of trapping efforts in Reach 9 and vicinity from 2002 through 2006, and awarded a contract in 2009 for an additional three years of trapping.]
- BR-20** The USACE shall monitor construction activities to assure that vegetation is removed only in the designated areas. Riparian areas not to be disturbed shall be flagged.
- BR-21** If any construction is to take place during the time of year when vireos are present, the construction contractor shall install noise barriers between construction areas and riparian habitat prior to March 1 and kept in place until all construction in the area is completed. [The Corps will continue to coordinate with the USFWS to determine whether noise barriers are necessary or prudent for the Reach 9 Phase 2A project, since the footprint required for construction of the barriers may result in additional habitat removal, further limiting the remaining available nesting area. Sound monitoring and vireo surveys will be conducted throughout the nesting season to determine if noise barriers or other modifications are warranted.]
- BR-22** To minimize impacts on the Santa Ana sucker population, in areas where dewatering is to take place, the construction contractor shall direct discharge water into a stilling basin and allowed to flow through existing vegetation and into the river downstream of the construction area.
- BR-23** During construction, the construction contractor shall implement measures to control sedimentation; these include recontouring, sandbagging, the development of stilling basins, and other appropriate erosion control measures developed on a site-specific basis.
- BR-24** During construction, riparian vegetation adjacent to de-watering areas shall be monitored by the USACE for signs of plant stress. Supplemental water shall be added to this vegetation.

- BR-25** In areas where de-watering is necessary, a permitted biologist shall be retained by the USACE to seine the area for Santa Ana suckers. If suckers are found, they shall be removed and relocated further upstream away from construction areas. [River diversions (surface de-watering) is not expected to be necessary for the Reach 9 Phase 2A project.]
- BR-26A** As construction is completed in a given area, the construction contractor shall hydroseed all disturbed upland areas with local native shrubs and groundcover. The mix of native species in the hydroseed shall be approved in advance by the Environmental Resources Branch of the USACE, Los Angeles District.
- BR-26B** The USACE shall successfully restore each acre of perennial stream that is temporarily disturbed during construction related activities. [As river diversion is not necessary for the Reach 9 Phase 2A project, restoration of the streambed would not be required.] Restoration [when required] will include:
- Replacement of pre-construction substrates and microhabitat features
  - Maintenance or re-establishment of natural channel morphology (e.g., stream meanders, pool-riffle complexes)
  - Maintenance or re-establishment of perennial flows
  - Verification that the structure and composition of the restored area is similar to pre-construction conditions.
- BR-26C** The USACE shall create and/or enhance one acre of perennial stream habitat within the Santa Ana River or its tributaries for each acre of unvegetated perennial stream that is temporarily or permanently disturbed during construction-related activities. [The Reach 9 Phase 2A project will temporarily and permanently affect less than 0.01 acre of aquatic (stream) habitat. (Other temporary impacts to "aquatic habitat" will occur at one culvert opening and not within the perennial stream.) It is anticipated that a stream restoration project currently planned for construction within the Reach 9 Phase 2B project area will suffice as mitigation for this and all other currently approved SARP features constructed within Reach 9.] Creation/enhancement activities could include but are not limited to the following:
- The development of pool-riffle complexes by placing clusters of various sized boulders within the river channel to provide limited cover and areas of reduced water velocity
  - The creation of potential sucker habitat below Prado Dam within one or more tributaries of the Santa Ana River
  - The creation of lateral stream habitats that are apparently essential for the survival of larval suckers.
- BR-28A** The USACE shall implement a "trap and haul" program to periodically trap Santa Ana suckers from existing pools downstream of existing drop structures and transport and release the fish in favorable habitat upstream of the Prado reservoir. Non-native predators of the sucker that are caught during trapping bouts will be destroyed rather than released.
- BR-28B** Construction of the upper Highway 91 embankment protection will occur only during daylight hours to minimize disturbances to wildlife species that move primarily at night.

The following additional environmental commitments would be incorporated into contract specifications for the proposed project to reduce potential impacts to biological resources.

- EC-BR-1** Upon development of final construction plans and prior to site disturbance, the Corps shall clearly delineate the limits of construction on project plans. All construction, site disturbance, and vegetation removal shall be located within the delineated construction boundaries. The storage of equipment and materials, and temporary stockpiling of soil

- shall be located within designated areas only, and outside of natural habitat areas. The limits of construction shall be delineated in the field with temporary construction fencing, staking, or flagging.
- EC-BR-2** Prior to construction activities and throughout the construction period, a Corps qualified biologist (or the environmental monitor) shall inspect the construction site and adjacent areas to determine if any raptors are nesting within 500 feet of the construction site. If active nests are found, the Corps biologist will coordinate with CDFG to determine appropriate avoidance or minimization measures.
- EC-BR-3** Prior to any ground-disturbing activities (e.g. mechanized clearing or rough grading) for all project related construction activities, a Corps qualified biologist (or environmental monitor) shall conduct a pre-construction sweep of the project site for terrestrial special-status, including MSHCP covered, wildlife species. During these surveys the biologist will:
- Inspect the project area for any sensitive wildlife species;
  - Ensure that potential habitats within the construction zone are not occupied by sensitive species (e.g., potential burrows/nests are inspected); and
  - In the event of the discovery of a non-listed, special-status ground-dwelling animal, recover and relocate the animal to adjacent suitable habitat within the project site at least 200 feet from the limits of construction activities.
- EC-BR-3** Prior to construction activities, a Corps qualified biologist (or the environmental monitor) shall conduct pre-construction training for all construction crew members. The training shall focus on required mitigation measures and conditions of regulatory agency permits and approvals (if required). The training shall also include a summary of sensitive species and habitats potentially present within and adjacent to the project site.
- EC-BR-4** The Corps' construction contractor will prepare a Spill Prevention and Contingency Plan. The Plan shall be implemented prior to and during site disturbance and construction activities. The plan will include measures to prevent or avoid an incidental leak or spill, including identification of materials necessary for containment and clean-up and contact information for management and agency staff. The plan and necessary containment and clean-up materials shall be kept within the construction area during all construction activities. Workers shall be educated on measures included in the plan at the pre-construction meeting or prior to beginning work on the project.
- EC-BR-5** The Corps biologist (or the environmental monitor) shall monitor construction activities to ensure compliance with environmental commitments.
- EC-BR-6** Upon completion of construction activities, the Corps shall mitigate for the removal of coast live oaks within the project area by replacing all removed oak trees at a ratio of 4:1. Any planted oak trees that do not survive the first two years will be replaced in-kind. At the end of the initial five year monitoring period, any oak trees that do not survive will then be replaced at a 10:1 ratio, with an additional one-year (minimum) plant establishment monitoring period. Replacement plantings shall be located within the project area as well as within other restoration areas located along the Santa Ana River Mainstem Project area and may consist of acorn plantings, potted nursery stock, or a combination of both. All plant propagules shall be collected within a five-mile radius and within 1,000 feet elevation of the project area. All planting locations, procedures, and results shall be evaluated by a qualified arborist/botanist.

The Corps shall develop and implement an Oak Resource Management Plan to be submitted for review by the USFWS and CDFG that is designed to meet the objectives of the successful establishment and long-term survival of replaced oak trees in the project area. This plan shall include the following:

- a. A map identifying locations where oak tree plantings occur, specifically targeting suitable soil types;
- b. A detailed schedule indicating when plantings will occur;
- c. A description of the irrigation methodology;
- d. Measures to control exotic vegetation at the planting locations;
- e. Certification of use of local propagules;
- f. Measures to provide protection from herbivory;
- g. Success criteria to include:
  - All oak plantings will exhibit a minimum of an 80% survivability rate without artificial irrigation for no less than one year after artificial irrigation is removed.
  - All oak trees shall be monitored for a minimum of five (5) years or until all success criteria as identified in the plan have been met. Individual oak trees that do not meet the success criteria shall be replanted and corrected prior to replanting.

### **Water Resources and Hydrology**

The following mitigation measures from the 2001 Final SEIS/EIR would be incorporated into contract specifications for the proposed project to reduce potential impacts to water resources and hydrology.

- WR-1** Prior to initiating construction, the construction contractor shall prepare an erosion control plan to control potential sedimentation and turbidity impacts. The erosion control plan shall include temporary measures such as sandbags and/or water bars and may include long-term measures such as revegetating the access road and soil borrow areas.
- WR-2** Prior to trenching, the construction contractor shall obtain a dewatering permit if the installation and maintenance of the sub-surface toe structure extends into the groundwater table.
- WR-3** The construction contractor shall obtain a National Pollution Discharge Elimination System (NPDES) construction stormwater permit prior to construction.
- WR-4** Prior to construction, the construction contractor shall prepare a pollution prevention plan to reduce the potential for accidental release of fuels, pesticides, and other materials. This plan shall include the designation of refueling locations, emergency response procedures, and definition or reporting requirements for any spill that occurs. Equipment for immediate cleanup shall be kept at the staging area for immediate use. This plan shall also include pesticide application activities such as storage, handling of herbicides, and application methods.

### **Recreation**

The following mitigation measure from the 2001 Final SEIS/EIR would be incorporated into contract specifications for the proposed project to reduce potential impacts to recreation.

- LU-2** The construction or maintenance contractor shall keep bike trails open at all times and provide detour alignments as necessary. The contractor shall provide signage to alert trail users of construction zones, and detours shall be provided along with flag personnel, and fencing as necessary for safety. Prior to construction or maintenance activity, the contractor shall obtain approval from the Manager, County of Orange, Public Facilities and Resources Department, Beaches and Parks, of detour plans that include a diagram and text describing the proposed detour and safety measures. After construction, the contractor shall restore the trail to original condition. Repairs shall be coordinated with County of Orange, Public Facilities and Resources Department, Supervising Maintenance Technician.

#### Noise

The following mitigation measure from the 2001 Final SEIS/EIR would be incorporated into contract specifications for the proposed project to reduce potential impacts to noise.

- N-4** In areas of noise sensitivity such as the residential uses at Green River Mobile Home Park and Green River Housing Estates, the construction contractor shall [monitor sound levels and, if necessary and feasible,] erect temporary noise barriers to limit direct line-of-sight noise impacts during construction.

The following additional environmental commitments would be incorporated into contract specifications for the proposed project to reduce potential impacts to noise.

- EC-N-1** Prior to issuance of a building permit and applicable maintenance activities, the construction contractor shall obtain a city of Corona noise variance per city of Corona Municipal Code Section 17.84.040 (H) – Noise Variance, for all noise sources exceeding city of Corona Municipal Code Section 17.84.040 (c) - Noise Standards.
- EC-N-2** If night work is approved, the construction contractor shall first obtain Riverside County approval for construction activities between the hours of 6:00 p.m. and 7:00 a.m. (June through September), per Ordinance No. 725, Chapter 1.16 of the Riverside County Municipal Code. The construction contractor shall also obtain city of Corona approval for construction activities between the hours of 8:00 P.M. and 7:00 A.M., per city of Corona Municipal Code Section 17.84.040 (d).
- EC-N-3** The construction contractor will be required to monitor sound levels and make modifications to equipment or procedures if necessary to reduce sound to acceptable or permitted levels.

#### Cultural Resources

The following environmental commitment is an update to the mitigation measure provided in the 2001 Final SEIS/EIR and would be incorporated into contract specifications for the proposed project to reduce potential impacts to cultural resources.

- EC-CR-1** Construction will be monitored by an archeologist meeting the Secretary of the Interior's Qualification Standards. In the event that previously unknown resources are found during construction, the Corps will comply with the requirements of 36 CFR 800.13.

### Traffic

The following environmental commitment would be incorporated into contract specifications for the proposed project to reduce potential impacts to traffic.

- EC-TR-1** The construction contractor shall coordinate with the city of Corona and prepare a Construction Traffic Control Plan and Implementation Program. The Traffic Control Plan must be prepared in accordance with Caltrans Manual on Uniform Traffic Control Devices and the WATCH Manual and must include but not be limited to the following issues:
- a) Timing of heavy equipment and building materials deliveries;
  - b) Potential redirecting construction traffic with a flag person;
  - c) Signing, lighting, and traffic control device placement if required;
  - d) Need for construction work hours and arrival/departure times outside regularly scheduled construction;
  - e) Access for emergency vehicles to the project site;
  - f) Pedestrian and bicycle safety from construction vehicle travel routes to the project site, avoiding residential neighborhoods to the maximum extent feasible;
  - g) Identification of safety procedures for exiting and entering the site access gate;
  - h) Compliance with Caltrans, Riverside County, and other relevant jurisdictions limitations on vehicle sizes, weights, and travel routes. In addition, the Corps' contractor shall obtain all necessary transportation and oversize load permits from Caltrans, Riverside County, and other relevant jurisdictions for roadway use; and
  - i) Identification of any construction activities that could impede upon the adjacent BNSF railroad lines and identify rail line crossings procedures for oversize vehicles. (This is not anticipated to occur.)

# **EXHIBIT B**



**MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA RIVER MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9**  
(Includes applicable mitigation measures from the 2001 Final SEIS/EIR and the 1988 GDM Phase II SEIS)

**Component A: Norco Bluffs**

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
WR-1	Prior to initiating construction, the construction contractor shall prepare an erosion control plan to control potential sedimentation and turbidity impacts. The erosion control plan shall include temporary measures such as sandbags and/or water bars and may include long-term measures such as revegetating the access road and soil borrow areas.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Prepare erosion control plan	Prior to construction
WR-2	Prior to trenching, the construction contractor shall obtain a dewatering permit if the installation and maintenance of the subsurface toe structure extends into the groundwater table.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Obtain De-watering Permit	During construction (prior to trenching)
WR-3	The construction contractor shall obtain a National Pollution Discharge Elimination System (NPDES) construction stormwater permit prior to construction.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Obtain NPDES Permit	Prior to construction
WR-4	Prior to construction, the construction contractor shall prepare a pollution prevention plan to reduce the potential for accidental release of fuels, pesticides, and other materials. This plan shall include the designation of refueling locations, emergency response procedures, and definition or reporting requirements for any spill that occurs. Equipment for immediate cleanup shall be kept at the staging area for immediate use. This plan shall also include pesticide application activities such as storage, handling of herbicides, and application methods.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Prepare Pollution Prevention Plan	Prior to construction
BR-1	The USACE shall develop and implement a monitoring program that entails surveys for least Bell's vireo and southwestern willow flycatcher in the spring and early summer in the year of construction.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Develop/implement Monitoring Program and Surveys	Prior to and during construction
BR-1A	The construction contractor shall keep grading activities associated with project construction to a minimum and existing root systems will be left intact to the extent possible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Minimize grading activities	During construction
BR-1B	The USACE shall develop and implement a monitoring program that entails surveys for bald eagles immediately prior to fall/winter construction near flowing water, and for golden eagles prior to initiating activities at Borrow Area #2. If eagles are foraging in the vicinity, the Corps will coordinate with the Contracting Officer Representative and FWS to develop appropriate avoidance measures.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Develop and implement Monitoring Program	Prior to construction
BR-2	The construction contractor shall clear vegetation associated with project construction within potential vireo or flycatcher habitat only during periods when the least Bell's vireo and southwestern willow flycatcher are not nesting (15 August through 28 February).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Time limit on vegetation clearing (August 15 to February 28)	During construction

MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-3	<p>For each acre of riparian/wetland habitat (excluding unvegetated perennial stream) that is temporarily disturbed during construction related activities (9.57 ha [23.67 ac]), the USACE shall contribute sufficient funds to the Santa Ana Watershed Association of Resource Conservation Districts (Trust Fund) to:</p> <ul style="list-style-type: none"> <li>• Remove one acre of <i>Arundo donax</i> from the upper Santa Ana River watershed and/or action area (for each acre affected)</li> <li>• Actively monitor and manage this acreage until riparian habitat is completely restored</li> <li>• Maintain this acreage <i>Arundo</i>-free for the life of the project.</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Contribute funds to SAWARCD Trust Fund	Prior to, during, and after construction
BR-3A	<p>The USACE shall successfully restore each acre of riparian vegetation that is temporarily disturbed during construction-related activities (1.85 ha [4.57 ac]) and will keep all temporarily disturbed areas free of exotic plants until riparian vegetation is re-established. If the site has not begun to recover within 5 years (i.e., 50 percent of the disturbed areas are not vegetated with young riparian vegetation), then the site will be replanted with cuttings from native riparian species.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Restore disturbed riparian habitat	After construction

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-3B	<p>The USACE shall maintain non-riparian areas that are temporarily disturbed or destroyed free of exotic plants for 8 years. In addition, the USACE shall use one of the following alternatives, or a combination thereof, to mitigate for each acre of non-riparian wetland habitat (excluding perennial stream) that is permanently destroyed or isolated from the floodplain during construction related activities (7.73 ha [19.1 ac]):</p> <ul style="list-style-type: none"> <li>• The USACE shall successfully create one acre of flood plain within the action area (for each acre affected). These areas will be kept free of exotic plants for 8 years; or</li> <li>• The USACE shall contribute sufficient funds to the Trust Fund to:                             <ul style="list-style-type: none"> <li>○ Remove three acres of <i>Arundo donax</i> from the upper Santa Ana River watershed and/or action area for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction-related activities</li> <li>○ Actively monitor and manage this acreage</li> <li>○ Maintain this acreage <i>Arundo</i>-free for the life of the project</li> <li>○ Conduct cowbird removal trapping in the vicinity of the restored habitat for the life of the project.</li> </ul> </li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Riparian restoration specifics	During and after construction

MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-3C	<p>The USACE shall use one of the following alternatives, or a combination thereof, to mitigate for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction related activities (1.39 ha [3.43 ac]):</p> <ul style="list-style-type: none"> <li>• The USACE shall successfully create 3 acres of riparian vegetation within the action area (for each acre affected); or</li> <li>• The USACE shall contribute sufficient funds to the Trust Fund to: <ul style="list-style-type: none"> <li>◦ Remove 5 acres of <i>Arundo donax</i> from the upper Santa Ana River watershed and/or action area for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction-related activities</li> <li>◦ Actively monitor and manage this acreage;</li> <li>◦ Maintain this acreage <i>Arundo</i>-free for the life of the project; and</li> <li>◦ Conduct cowbird removal trapping in the vicinity of the restored habitat for the life of the project.</li> </ul> </li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Riparian restoration specifics	During and after construction
BR-3D	<p>The USACE shall successfully restore each acre of perennial stream that is temporarily disturbed during construction related activities (0.28 ha [0.69 ac]). Restoration will include:</p> <ul style="list-style-type: none"> <li>• Replacement of pre-construction substrates and microhabitat features</li> <li>• Maintenance or re-establishment of natural channel morphology (e.g., stream meanders, pool-riffle complexes)</li> <li>• Maintenance or re-establishment of perennial flows</li> <li>• Verification that the structure and composition of the restored area is similar to pre-construction conditions.</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Restore perennial stream habitat	After construction

MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-3E	<p>The USACE shall create and/or enhance one acre of perennial stream habitat within the Santa Ana River or its tributaries for each acre of unvegetated perennial stream that is temporarily or permanently disturbed during construction-related activities. Creation/enhancement activities could include but are not limited to the following:</p> <ul style="list-style-type: none"> <li>• The development of pool-riffle complexes by placing clusters of various sized boulders within the river channel to provide limited cover and areas of reduced water velocity</li> <li>• The creation of potential sucker habitat below Prado Dam within one or more tributaries of the Santa Ana River</li> <li>• The creation of lateral stream habitats that are apparently essential for the survival of larval suckers.</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Create or enhance perennial stream habitat	After construction
BR-4	<p>The USACE or the County of Orange shall implement a cowbird trapping program along Norco Bluffs or shall make a cash contribution to the Santa Ana River Conservation Trust Fund for that purpose. In lieu of a cash contribution, the USACE or the County of Orange shall conduct a cowbird trapping program for a period of 2 years during project construction and 5 years following project completion. Trapping shall consist of fifteen monitored traps during the vireo and flycatcher egg-laying season (15 March to 30 July). This effort is viewed as supplementing on-going cowbird trapping activities in the Prado Basin.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified biologist)	Cowbird Trapping Program	During and after construction
BR-5	<p>Construction activities shall be monitored by the USACE to assure that vegetation is removed only in the designated areas. Riparian areas not to be disturbed will be flagged.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Construction monitoring	During construction
BR-6	<p>The construction contractor shall install a noise barrier prior to March 1 at the extreme downstream end of the access road to shield nesting vireos and flycatchers from excessive noise generated by construction vehicles and equipment entering and leaving the staging area.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Install noise barrier by February 28	During construction
BR-7	<p>To minimize impacts on the Santa Ana sucker population, the construction contractor shall divert the stream channel in Zone 3 away from the initial project construction area. The construction area shall then be de-watered to lower the water table. Discharge shall be directed into a stilling basin and allowed to flow through existing vegetation and into the river downstream of the construction area.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Divert stream channel (Zone 3)	During construction

SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9  
MITIGATION MONITORING AND REPORTING PROGRAM

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-8	During construction, the construction contractor shall implement measures to control sedimentation; these include recontouring, sandbagging, sediment basins, and other appropriate erosion control measures developed on a site-specific basis.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Implement sediment control measures	During construction
BR-9	During construction, the USACE shall monitor riparian vegetation adjacent to de-watering areas. Supplemental water shall be added to this vegetation as necessary to avoid water stress.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Monitor riparian vegetation in de-watering areas	During construction
BR-10	In areas where de-watering is necessary, a permitted biologist shall be retained by the USACE to seine the area for Santa Ana suckers. If suckers are found, they shall be removed and relocated further upstream away from construction areas.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified biologist)	Seine for S.A. suckers in de-watering areas	During construction
BR-10A	As construction is completed in a given area, the construction contractor shall hydrosed all disturbed upland areas with local native shrubs and groundcover. The mix of native species in the hydrosed shall be approved in advance by the Environmental Resources Branch of the USACE, Los Angeles District.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Hydrosed disturbed Upland areas	After construction
AQ-1	The project construction contractor shall retard diesel engine injection timing by two degrees before top center on all construction equipment that was manufactured before 1996, and which does not have an existing IC engine warranty with the manufacturer. The contractor shall provide a certification from a third-party certified mechanic prior to start of construction, stating the timing of all diesel-powered construction equipment engines have been retarded two degrees before top center.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Retard timing of diesel engines two degrees	During construction
AQ-2	The project construction contractor shall use high-pressure injectors on all diesel engines that were manufactured before 1996, and which do not have existing IC engine warranties with the manufacturer. The contractor shall provide documentation of warranty and manufacture date or a certification from a third-party certified mechanic stating that all diesel construction equipment engines are utilizing high-pressure fuel injectors.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Implement high pressure fuel injectors	During construction
AQ-3	The project construction contractor shall use Caterpillar pre-chamber diesel engines or equivalent, and perform proper maintenance and operation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use caterpillar pre-chamber diesel engines (or equivalent)	During construction
AQ-4	The project construction contractor shall electrify equipment, where feasible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Electrify equipment where feasible	During construction
AQ-5	The project construction contractor shall restrict the idling of construction equipment to 10 minutes.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Restrict engine idle time	During construction

MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
AQ-6	The project construction contractor shall ensure that equipment will be maintained in proper tune to prevent visible soot from reducing light transmission through the exhaust stack exit by more than 20 percent for more than 3 minutes per hour and use low-sulfur fuel as required by SCAQMD regulation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Maintain equipment in proper tune	During construction
AQ-7	The project construction contractor shall use catalytic converters on all gasoline equipment (except for small [2-cylinder] generator engines). If this measure is not implemented, emissions from gasoline equipment shall be offset by other means (e.g., Emission Reduction Credits).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use catalytic converters on gasoline equipment	During construction
AQ-8	The project construction contractor shall cease construction during periods of high ambient ozone concentrations (i.e., Stage 2, smog alerts) near the construction area (SCAQMD, 1993).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Halt construction during periods of high ozone	During construction
AQ-9	The project construction contractor shall schedule all material deliveries to the construction spread outside of peak traffic hours, and minimize other truck trips during peak traffic hours, or as approved by local jurisdictions.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Schedule construction material deliveries in off-peak periods	During construction
AQ-10	The project construction contractor shall use only solar powered traffic signs (no gasoline-powered generators shall be used).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use solar powered traffic signs	During construction
AQ-11	The project construction contractor shall apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more; soil stock piled for 2 days or more).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Application of nontoxic soil stabilizers	During construction
AQ-12	The project construction contractor shall enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed stock piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Enclose, cover, water, or apply soil stabilizers to stock piles	During construction
AQ-13	In areas where dewatering is not required, the project construction contractor shall water active grading/excavation sites at least twice daily.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Water active grading sites	During construction
AQ-14	The project construction contractor shall increase dust control watering when wind speeds exceed 15 miles per hour for a sustained period of greater than 10 minutes, as measured by an anemometer. The amount of additional watering would depend upon soil moisture content at the time; but no airborne dust should be visible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Increase dust control watering during wind speeds over 15 mph	During construction
AQ-15	The project construction contractor shall suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph (40 kph).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Suspend all earthwork during high wind periods	During construction

SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9  
MITIGATION MONITORING AND REPORTING PROGRAM

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
AQ-16	The project construction contractor shall ensure that trucks hauling dirt on public roads to and from the site are covered and maintain a 50 mm (2 in) differential between the maximum height of any hauled material and the top of the haul trailer. Haul truck drivers shall water the load prior to leaving the site to prevent soil loss during transport.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Cover trucks hauling dirt on public roads	During construction
AQ-17	The project construction contractor shall ensure that graded surfaces used for off-road parking, materials lay-down, or awaiting future construction are stabilized for dust control, as needed.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Stabilize surfaces for dust control	During construction
AQ-18	The project construction contractor shall sweep streets in the project vicinity once a day if visible soil material is carried to adjacent streets.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Street sweeping after soil hauling	During construction
AQ-19	The project construction contractor shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Install wheel washers	During construction
AQ-20	The project construction contractor shall apply water three times daily, or apply non-toxic soil stabilizers according to manufacturers' specifications to all unpaved parking, staging areas, or unpaved road surfaces.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Dust control of unpaved areas	During construction
AQ-21	The project construction contractor shall ensure that traffic speeds on all unpaved roads to be reduced to 15 mph (25 kph) or less.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Traffic speed control	During construction
AQ-22	Prior to the approval of plans and specifications, the USACE shall ensure that plans and specifications specify that all heavy equipment shall be maintained in a proper state of tune as per the manufacturer's specifications.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Plan check for vehicular tuning specifications	Prior to construction (plans & specs)
AQ-23	Deleted. (Similar to AQ-5)	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR			
AQ-24	The USACE shall contact local jurisdictions, including jurisdictions affected by haul routes, prior to each phase of construction to identify other planned construction projects in the local vicinity. If other construction projects are identified in the local vicinity that would occur at the same time as construction for the project, the USACE shall coordinate with local officials to identify possible methods for reducing cumulative effects, including modifying construction schedules, modifying haul routes, modifying equipment mixes, and other reasonable and feasible measures that could reduce the magnitude of the combined effects of construction activities.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Coordination with local jurisdictions to determine timing of other construction project hauling activities	Prior to and during construction



MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT, PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
N-1	Prior to the approval of plans and specifications, the USACE shall ensure that plans and specifications include a restriction of not more than 166 construction truck trips per day along Norco Drive and 316 construction truck trips per day on the streets designated for the haul route within the County of Riverside, and County of San Bernardino. Construction shall be monitored by qualified archaeologists. Unanticipated discoveries shall be coordinated and evaluated with the California State Historic Preservation Officer pursuant to 36 CFR 800.11.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Plan check for specification to restrict truck trips per day	Prior to construction (plans & specs)
CR-1		2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified archaeologist)	Construction monitoring by archaeologist	During construction

Component B: Prado Basin

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
I.A.	Incorporate measures to stabilize slopes on road, borrow areas, and other impacted soil into construction plans and specifications. Monitor implementation of these measures during construction. (Specific measures need to be identified)	1988 GDM Phase II SEIS	USACE and construction contractor	Plan check for specifications to stabilize slopes/Construction monitoring	Prior to and during construction
I.B.2	Design borrow areas to minimize turbidity (controls such as settling basins).	1988 GDM Phase II SEIS	USACE	Plan check for turbidity controls	Prior to construction
I.B.3	Utilize leakproof areas (impervious aprons) for lubrication and other toxic fluids. Leave no contamination.	1988 GDM Phase II SEIS	Construction contractor	Construction monitoring for equipment maintenance	During construction
I.B.4	Obtain and comply with all necessary water quality permits.	1988 GDM Phase II SEIS	Construction contractor	Obtain all water quality permits	Prior to construction
BR-11	The construction contractor shall only clear riparian (cottonwood-willow, willow, mulefat scrub) vegetation associated with project construction only during periods when the least bird's view and southwestern willow flycatcher are not nesting (15 August through 28 February). The USACE shall successfully restore each acre of perennial stream that is temporarily disturbed during construction related activities (2.6 ha [6.5 ac]). Restoration will include: <ul style="list-style-type: none"> <li>• Replacement of pre-construction substrates and microhabitat features</li> <li>• Maintenance or re-establishment of natural channel morphology (e.g., stream meanders, pool-riffle complexes)</li> <li>• Maintenance or re-establishment of perennial flows</li> <li>• Verification that the structure and composition of the restored area is similar to pre-construction conditions.</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Time limit on vegetation clearing (15 August through 28 February)	During construction
BR-11A		2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Vegetation restoration specifics	During and after construction
BR-11B	The USACE shall create and/or enhance one acre of perennial stream habitat within the Santa Ana River or its tributaries for each acre of unvegetated perennial stream that is temporarily or permanently disturbed during construction-related activities. Creation/enhancement activities could include but are not limited to the following: <ul style="list-style-type: none"> <li>• The development of pool-riffle complexes by placing clusters of various sized boulders within the river channel to provide limited cover and areas of reduced water velocity</li> <li>• The creation of potential sucker habitat below Prado Dam within one or more tributaries of the Santa Ana River</li> <li>• The creation of lateral stream habitats that are apparently essential for the survival of larval suckers.</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Habitat restoration specifics	After construction

MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-12	Construction activities shall be monitored by the USACE to assure that vegetation is removed only in the designated areas. Riparian areas not to be disturbed shall be flagged.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Construction monitoring	During construction
BR-13	The construction contractor shall install a noise barrier prior to March 1 along the access road east and southeast of the dam along the southwestern border of the Basin to shield nesting vireos from excessive noise generated by construction vehicles and equipment.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Install noise barrier	Prior to construction
BR-13A	The USACE shall redesign the drop structure and associated baffles at the gauging station below Prado Dam to minimize the risk to fish species of injury or death owing to collision while not precluding connectivity. If this redesign results in additional disturbances to habitat, then the USACE will contribute to the Trust Fund at a 1:1 ratio for each additional acre affected.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Redesign of drop structure, or contribution to Trust Fund	Prior to construction
BR-13B	The USACE shall roughen the surface of the low-flow portion of the concrete-lined outlet channel and revegetate along both sides of the channel with native trees.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Revegetate low-flow portion of outlet channel	After construction
BR-14	Prior to utilizing the borrow sites, the construction contractor shall place dirt berms between Borrow Sites 1 and 2 and the willow riparian forest to shield nesting vireos and flycatchers from excessive noise generated by heavy equipment.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Construct dirt berms between borrow sites and willow riparian forest	During construction
BR-14A	When construction is completed in a given area, the construction contractor shall hydroseed the completed dikes and all disturbed upland areas, including borrow sites, with local native shrubs and groundcover. The mix of native species in the hydroseed shall be approved in advance by the Environmental Resources Branch of the USACE, Los Angeles District.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Hydroseed new dikes and disturbed upland areas	After construction
BR-14B	The USACE shall schedule excavation in the eastern third of borrow site #1A to avoid possible impacts to nesting willow flycatchers. Construction-related activities in this area will not occur from April 29 to September 25 during each calendar year or at any other time while flycatchers are present in habitats adjacent to the borrow site.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE and construction contractor	Restrict construction when flycatchers are present	Prior to and during construction
BR-14C	The USACE has agreed to mow all areas that will be excavated during spring/summer months, prior to March 15, to preclude nesting of and impacts to grasshopper sparrows and other species of concern.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Mow areas prior to March 15	Prior to and during construction
BR-15	Deleted. (Same as WR-1)	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	N/A	N/A	N/A

MITIGATION MONITORING AND REPORTING PROGRAM  
 SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-15A	The USACE will investigate ways to facilitate wildlife movement over the dam, possibly including a ramp vegetated with native species. The USACE will coordinate with the FWS and CDFG on design and location of the corridor. The area between the dam and the downstream end of the new outlet channel will be revegetated, thereby providing additional cover for any wildlife that may be attempting to cross through the area. If necessary, the vehicle bridge over the outlet channel may be modified to be more conducive for wildlife crossing. Native upland vegetation could be planted at the approaches to the bridge, and soil could be placed on the surface.  Construction of the outlet channel will occur only during daylight hours to minimize disturbance to wildlife species that move primarily at night.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Maintain non-riparian areas free of exotic plants	During and after construction
II.J	Esthetic Treatment Plan. Stockpile topsoil from dike sites and borrow areas and reuse it. Seed and maintain d/s sides of dikes with forbs and grasses. Esthetically reshape borrow areas and reseed with native shrubland, native wetland or gosse foraging species, as appropriate. Scarify haul roads when retired from use.	1988 GDM Phase II SEIS	USACE	Review of Resource Use Plan	Update Resource Use Plan prior to future recreation plans.
II.G.1	Change land use category of 32 acres to category 1 (lowest use). Protect mitigation area.	1988 GDM Phase II SEIS	USACE	Review of O&M Manual	Provide input to O&M manual prior to completion of construction.
II.G.2	Phased use of Borrow Site #7 (divided into 3 sections and each section will be used until no additional suitable material is left or is practicable to remove).	1988 GDM Phase II SEIS	USACE	Review of Plans & Specs	Prior to construction (plans & specs) plus inspections during construction period.
II.G.3	Esthetic Treatment Plan. Each section of Borrow Site #2 will be restored as soon as possible after completion of activities between 15 October and 15 January. Restoration will include recontouring, respreading salvaged topsoil, fertilization, and seeding with appropriate seedmix(es).  Establishment of new oak woodlands near Prado Regional Park; replace 84 trees impacted by Hwy. 71 dike at 4:1 ratio. Irrigate and protect trees.  Note: This measure is no longer warranted due to SR 71 Dike redesign which eliminated all impacts to existing oak woodlands.	1988 GDM Phase II SEIS	USACE	Review plans and specs/monitor construction	Prior to construction (plans & specs) plus inspections during construction period. Monitor after construction.  N/A

MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
II.G.4	Avoid impacts to sycamore trees along north edge of Borrow Site No. 1.	1988 GDM Phase II SEIS	USACE and construction contractor	Review of Plans & Specs	Prior to construction (plans & specs) plus inspections during construction period.
II.G.5 (Part 1)	Establish 133 acres of willow woodland with understory above 505'. Note: This measure was superseded by the 1995 Cooperative Agreement between OCWD, USFWS, and USACE wherein \$1 million was contributed to the SAR Conservation Trust Fund in lieu of revegetation.	1988 GDM Phase II SEIS	N/A	N/A	COMPLETED
II.G.5 (Part 2)	Set aside \$450,000 for a monitoring program for the vireo and a management program for its nests.	1988 GDM Phase II SEIS	USACE and Orange County	Completed	COMPLETED
AQ-1	The project construction contractor shall retard diesel engine injection timing by two degrees before top center on all construction equipment that was manufactured before 1996, and which does not have an existing IC engine warranty with the manufacturer. The contractor shall provide a certification from a third-party certified mechanic prior to start of construction, stating the timing of all diesel-powered construction equipment engines have been retarded two degrees before top center.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Retard timing of diesel engines two degrees	During construction
AQ-2	The project construction contractor shall use high-pressure injectors on all diesel engines that were manufactured before 1996, and which do not have existing IC engine warranties with the manufacturer. The contractor shall provide documentation of warranty and manufacture date or a certification from a third-party certified mechanic stating that all diesel construction equipment engines are utilizing high-pressure fuel injectors.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Implement high pressure fuel injectors	During construction
AQ-3	The project construction contractor shall use Caterpillar pre-chamber diesel engines or equivalent, and perform proper maintenance and operation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use caterpillar pre-chamber diesel engines (or equivalent)	During construction
AQ-4	The project construction contractor shall restrict the idling of construction equipment to 10 minutes.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Electrify equipment where feasible	During construction
AQ-5	The project construction contractor shall restrict the idling of construction equipment to 10 minutes.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Restrict engine idle time	During construction
AQ-6	The project construction contractor shall ensure that equipment will be maintained in proper tune to prevent visible soot from reducing light transmission through the exhaust stack exit by more than 20 percent for more than 3 minutes per hour and use low-sulfur fuel as required by SCAQMD regulation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Maintain equipment in proper tune	During construction

MITIGATION, MONITORING AND REPORTING PROGRAM  
 SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
AQ-7	The project construction contractor shall use catalytic converters on all gasoline equipment (except for small [2-cylinder] generator engines). If this measure is not implemented, emissions from gasoline equipment shall be offset by other means (e.g., Emission Reduction Credits).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use catalytic converters on gasoline equipment	During construction
AQ-8	The project construction contractor shall cease construction during periods of high ambient ozone concentrations (i.e., Stage 2 smog alerts) near the construction area (SCAQMD, 1992).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Halt construction during periods of high ozone	During construction
AQ-9	The project construction contractor shall schedule all material deliveries to the construction spread outside of peak traffic hours, and minimize other truck trips during peak traffic hours, or as approved by local jurisdictions.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Schedule construction material deliveries in off-peak periods	During construction
AQ-10	The project construction contractor shall use only solar powered traffic signs (no gasoline-powered generators shall be used).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use solar powered traffic signs	During construction
AQ-11	The project construction contractor shall apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more; soil stock piled for 2 days or more).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Application of nontoxic soil stabilizers	During construction
AQ-12	The project construction contractor shall enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed stock piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Enclose, cover, water, or apply soil stabilizers to stock piles	During construction
AQ-13	In areas where dewatering is not required, the project construction contractor shall water active grading/excavation sites at least twice daily.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Water active grading sites	During construction
AQ-14	The project construction contractor shall increase dust control watering when wind speeds exceed 15 miles per hour for a sustained period of greater than 10 minutes, as measured by an anemometer. The amount of additional watering would depend upon soil moisture content at the time; but no airborne dust should be visible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Increase dust control watering during wind speeds over 15 mph	During construction
AQ-15	The project construction contractor shall suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph (40 kph).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Suspend all earthwork during high wind periods	During construction
AQ-16	The project construction contractor shall ensure that trucks hauling dirt on public roads to and from the site are covered and maintain a 50 mm (2 in) differential between the maximum height of any hauled material and the top of the haul trailer. Haul truck drivers shall water the load prior to leaving the site to prevent soil loss during transport.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Cover trucks hauling dirt on public roads	During construction
AQ-17	The project construction contractor shall ensure that graded surfaces used for off-road parking, materials lay-down, or awaiting future construction are stabilized for dust control, as needed.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Stabilize surfaces for dust control	During construction
AQ-18	The project construction contractor shall sweep streets in the project vicinity once a day if visible soil material is carried to adjacent streets.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Street sweeping after soil hauling	During construction

MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
AQ-19	The project construction contractor shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Install wheel washers	During construction
AQ-20	The project construction contractor shall apply water three times daily, or apply non-toxic soil stabilizers according to manufacturers' specifications to all unpaved parking, staging areas, or unpaved road surfaces.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Dust control of unpaved areas	During construction
AQ-21	The project construction contractor shall ensure that traffic speeds on all unpaved roads to be reduced to 15 mph (25 kph) or less.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Traffic speed control	During construction
AQ-22	Prior to the approval of plans and specifications, the USACE shall ensure that plans and specifications specify that all heavy equipment shall be maintained in a proper state of tune as per the manufacturer's specifications.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Plan check for vehicular tuning specifications	Prior to construction (plans & specs)
AQ-23	Deleted. (Similar to AQ-5)	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	N/A	N/A	N/A
AQ-24	The USACE shall contact local jurisdictions, including jurisdictions affected by haul routes, prior to each phase of construction to identify other planned construction projects in the local vicinity. If other construction projects are identified in the local vicinity that would occur at the same time as construction for the project, the USACE shall coordinate with local officials to identify possible methods for reducing cumulative effects, including modifying construction schedules, modifying haul routes, modifying equipment mixes, and other reasonable and feasible measures that could reduce the magnitude of the combined effects of construction activities.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Contact local jurisdictions to determine timing of other construction project hauling activities	Prior to and during construction
I.D.1	Use approved dust suppressants and water dirt haul routes and excavation/deposition areas frequently.	1988 GDM Phase II SEIS	Construction contractor	Construction monitoring	During construction
I.D.2	Obtain and comply with all necessary air quality permits.	1988 GDM Phase II SEIS	USACE	Obtain air quality permits	Prior to construction
N-3	Prior to approval of plans and specifications, the USACE shall ensure that plans and specifications include a restriction of not more than 316 construction truck trips per day on the streets designated for the haul route within the County of Riverside, County of San Bernardino, and City of Corona.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Review plans and specs.	Prior to construction (plans & specs)
I.F.	Place restrictions on days and hours of construction near residences as necessary to reduce noise impacts.	1988 GDM Phase II SEIS	USACE	Construction monitoring	During construction

MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
CR-2	If previously unknown cultural resources are found during construction of any feature of the Santa Ana River Project, construction in the area of the find shall cease until the requirements in 36 CFR 800 are met. This would include coordination with the California State Historic Preservation Officer, the Advisory Council on Historic Preservation, and appropriate Native American groups and/or other interested parties. It may require additional mitigation measures such as test and data recovery excavations, archival research, avoidance measures, etc.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Construction monitoring	During construction
CR-3	In accordance with Stipulation 6 of the Programmatic Agreement, a Historic Properties Management Plan shall be developed for the basin by a qualified cultural resource specialist. This document shall outline the appropriate management measures the USACE shall take subsequent to completion of the dam and spillway.  NHRP eligible Prado Dam has been documented in accordance with Historic American Engineering Record Standards. A copy of the documentation is on file with the Library of Congress, and the National Park Service. No further mitigation measures are required for the original Prado Dam structure itself.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Prepare Historic Properties Management Plan	Before completion of construction
CR-4	The USACE shall ensure that construction throughout the Basin is monitored by archaeologists meeting the Secretary of the Interior's Standards. Any finds shall be documented in accordance with the Programmatic Agreement. Particular attention will be made to protecting the historic cemetery near the borrow area.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified archaeologist)	Construction monitoring	During construction
CR-5	The USACE shall develop a plan to flood proof the Yorba Slaughter Adobe and the plan shall be made available for review by the California State Historic Preservation Officer, the Advisory Council on Historic Preservation, San Bernardino County Museum, and interested parties. The floodproof design shall be consistent with the historic setting of the structure and be designed as visually inconspicuous as possible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Prepare Flood Protection Plan	Prior to construction
CR-6	A test excavation and NHRP evaluation of historic archaeological sites affected by the interior dikes shall be conducted by a qualified archaeologist. These sites include CA-RIV-8091H (PB-69), PB-7, and PD-44. If any are determined to be NHRP eligible after consultation with the SHPO, a treatment plan shall be developed and implemented prior to construction. In addition, monitoring of construction by a qualified archaeologist shall be required during construction.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified archaeologist)	Conduct Test Excavation/Prepare treatment plan if necessary	Prior to construction
I.I.	Negotiate Memorandum of Agreement, including mitigation program design, for National Register eligible sites.	1988 GDM Phase II SEIS	USACE	Negotiate Memorandum of Agreement for eligible archaeological sites	Prior to construction



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SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
II.H.	Monitor excavation of Borrow Site No. 1 and gather samples of fossils present.	1988 GDM Phase II SEIS	USACE (implemented by a qualified paleontologist)	Construction monitoring	During construction
LU-1	Subsequent to construction of the Dike at Corona National Housing Tract, the construction contractor shall ensure that the northeast side of the dike is hydroseeded with local native shrubs and groundcover. Use flagmen and dip crossing where needed.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Hydroseed Dike at Corona National Housing Tract	After construction
II.E.		1988 GDM Phase II SEIS	Construction contractor	Review of construction specifications	During construction

**Component C: Reach 9**

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-16	<p>Prior to construction, a monitoring program shall be developed and implemented by the USACE that entails surveys for least Bell's vireo and southwestern willow flycatcher in the spring and early summer in the year prior to construction, as well as during the year of construction.</p> <p>Within 1 year after initiation of construction activities, the USACE shall finalize a habitat management plan for the areas where the USACE and/or project sponsors have the legal right/jurisdiction. The FWS and CDFG will review the plan, which will address how the USACE and/or their sponsors will maintain or increase the baseline amount of riparian habitat and funding. This plan will also address conservation goals and thresholds, monitoring and evaluation methodologies, and reporting and review procedures.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified biologist)	Prepare monitoring program for vireo and flycatcher	Prior to and during construction
BR-16A	<p>The construction contractor shall only clear vegetation associated with project construction during periods when the least Bell's vireo and southwestern willow flycatcher are not nesting (15 August through 28 February).</p> <p>Grading activities associated with project construction shall be kept to a minimum and existing root systems will be left intact to the extent possible.</p> <p>For each acre of riparian/wetland habitat (excluding unvegetated perennial stream) that is temporarily disturbed during construction related activities (7.4 ha [18.2 ac]), the USACE shall contribute sufficient funds to the Santa Ana Watershed Association of Resource Conservation Districts (Trust Fund) to:</p> <ul style="list-style-type: none"> <li>• Remove one acre of <i>Arundo donax</i> from the upper Santa Ana River watershed and/or action area (for each acre affected)</li> <li>• Actively monitor and manage this acreage until riparian habitat is completely restored</li> <li>• Maintain this acreage <i>Arundo</i>-free for the life of the project.</li> </ul> <p>The USACE shall successfully restore each acre of riparian vegetation that is temporarily disturbed during construction-related activities (7.1 ha [17.5 ac]) and will keep all temporarily disturbed areas free of exotic plants until riparian vegetation is re-established. If the site has not begun to recover within 5 years (i.e., 50 percent of the disturbed areas are not vegetated with young riparian vegetation), then the site will be replanted with cuttings from native riparian species.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (coordinated with the FWS and CDFG)	Finalize Habitat Management Plan	During and after construction
BR-17	<p>The construction contractor shall only clear vegetation associated with project construction during periods when the least Bell's vireo and southwestern willow flycatcher are not nesting (15 August through 28 February).</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Time limit on vegetation clearing (15 August to 28 February)	During construction
BR-17A	<p>Grading activities associated with project construction shall be kept to a minimum and existing root systems will be left intact to the extent possible.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Construction monitoring	During construction
BR-18	<p>For each acre of riparian/wetland habitat (excluding unvegetated perennial stream) that is temporarily disturbed during construction related activities (7.4 ha [18.2 ac]), the USACE shall contribute sufficient funds to the Santa Ana Watershed Association of Resource Conservation Districts (Trust Fund) to:</p> <ul style="list-style-type: none"> <li>• Remove one acre of <i>Arundo donax</i> from the upper Santa Ana River watershed and/or action area (for each acre affected)</li> <li>• Actively monitor and manage this acreage until riparian habitat is completely restored</li> <li>• Maintain this acreage <i>Arundo</i>-free for the life of the project.</li> </ul> <p>The USACE shall successfully restore each acre of riparian vegetation that is temporarily disturbed during construction-related activities (7.1 ha [17.5 ac]) and will keep all temporarily disturbed areas free of exotic plants until riparian vegetation is re-established. If the site has not begun to recover within 5 years (i.e., 50 percent of the disturbed areas are not vegetated with young riparian vegetation), then the site will be replanted with cuttings from native riparian species.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Cash contribution to SARC Trust Fund	Before completion of construction
BR-18A	<p>The USACE shall successfully restore each acre of riparian vegetation that is temporarily disturbed during construction-related activities (7.1 ha [17.5 ac]) and will keep all temporarily disturbed areas free of exotic plants until riparian vegetation is re-established. If the site has not begun to recover within 5 years (i.e., 50 percent of the disturbed areas are not vegetated with young riparian vegetation), then the site will be replanted with cuttings from native riparian species.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Restore riparian vegetation	After construction

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SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-18B	<p>The USACE shall maintain non-riparian areas that are temporarily disturbed or destroyed free of exotic plants for 8 years. In addition, the USACE shall use one of the following alternatives, or a combination thereof, to mitigate for each acre of non-riparian wetland habitat (excluding perennial stream) that is permanently destroyed or isolated from the floodplain during construction related activities (0.2 ha [0.4 ac]):</p> <ul style="list-style-type: none"> <li>• The USACE shall successfully create one acre of flood plain within the action area (for each acre affected). These areas will be kept free of exotic plants for 8 years; or</li> <li>• The USACE shall contribute sufficient funds to the Trust Fund to:               <ul style="list-style-type: none"> <li>○ Remove three acres of <i>Arundo donax</i> from the upper Santa Ana River watershed and/or action area for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction-related activities</li> <li>○ Actively monitor and manage this acreage</li> <li>○ Maintain this acreage <i>Arundo</i>-free for the life of the project</li> <li>○ Conduct cowbird removal trapping in the vicinity of the restored habitat for the life of the project.</li> </ul> </li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Riparian restoration specifics	During and after construction

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SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-18C	<p>The USACE shall use one of the following alternatives, or a combination thereof, to mitigate for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction related activities (3.6 ha [8.8 ac]):</p> <ul style="list-style-type: none"> <li>• The USACE shall successfully create 3 acres of riparian vegetation within the action area (for each acre affected), or</li> <li>• The USACE shall contribute sufficient funds to the Trust Fund to: <ul style="list-style-type: none"> <li>○ Remove 5 acres of <i>Arundo donax</i> from the upper Santa Ana River watershed and/or action area for each acre of riparian vegetation that is permanently destroyed or isolated from the flood plain during construction-related activities</li> <li>○ Actively monitor and manage this acreage;</li> <li>○ Maintain this acreage <i>Arundo</i>-free for the life of the project; and</li> <li>○ Conduct cowbird removal trapping in the vicinity of the restored habitat for the life of the project.</li> </ul> </li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Non-Riparian restoration specifics	During and after construction
BR-19	<p>The USACE or the County of Orange shall implement a cowbird trapping program in Reach 9 or shall make a cash contribution to the Santa Ana River Conservation Trust Fund for that purpose. In lieu of a cash contribution, the USACE or the County of Orange shall conduct a cowbird trapping program for a period of 2 years during project construction and 5 years following project completion. Trapping shall consist of fifteen monitored traps during the vireo and flycatcher egg-laying season (15 March to 30 July). This effort is viewed as supplementing on-going cowbird trapping activities in the Prado Basin.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified biologist)	Implement cowbird trapping program/or contribution to Trust Fund	During and after construction
BR-20	<p>The USACE shall monitor construction activities to assure that vegetation is removed only in the designated areas. Riparian areas not to be disturbed shall be flagged.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Construction monitoring	During construction
BR-21	<p>If any construction is to take place during the time of year when vireos are present, the construction contractor shall install noise barriers between construction areas and riparian habitat prior to March 1 and kept in place until all construction in the area is completed.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Install noise barriers by February 28	During construction
BR-22	<p>To minimize impacts on the Santa Ana sucker population, in areas where dewatering is to take place, the construction contractor shall direct discharge water into a stilling basin and allowed to flow through existing vegetation and into the river downstream of the construction area.</p>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Discharge water into stilling basin	During construction

MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-23	During construction, the construction contractor shall implement measures to control sedimentation, these include recontouring, sandbagging, the development of stilling basins, and other appropriate erosion control measures developed on a site-specific basis.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Implement sedimentation control measures/Construction monitoring	During construction
BR-24	During construction, riparian vegetation adjacent to de-watering areas shall be monitored by the USACE for signs of plant stress. Supplemental water shall be added to this vegetation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Construction monitoring	During construction
BR-25	In areas where dewatering is necessary, a permitted biologist shall be retained by the USACE to seine the area for Santa Ana suckers. If suckers are found, they shall be removed and relocated further upstream away from construction areas.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified biologist)	Seine for S.A. Suckers	During construction
BR-26	In order to allow construction work in the river at the upper Highway 91 bank stabilization area, the Green River Housing Estates, the strip mall near Weir Canyon Road, and minimally at the lower Green River Golf Course, the flow will be reduced to a minimum by the USACE and a channel will be cut by the construction contractor to divert the flow past the area of construction. Once construction is completed, the river will be allowed to return to its original channel.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Reduce river flow/cut a channel.	During construction
BR-26A	As construction is completed in a given area, the construction contractor shall hydroseed all disturbed upland areas with local native shrubs and groundcover. The mix of native species in the hydroseed shall be approved in advance by the Environmental Resources Branch of the USACE, Los Angeles District.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Hydroseed all disturbed upland areas	After construction
BR-26B	The USACE shall successfully restore each acre of perennial stream that is temporarily disturbed during construction related activities (1.42 ha [3.5 ac]). Restoration will include: <ul style="list-style-type: none"> <li>• Replacement of pre-construction substrates and microhabitat features</li> <li>• Maintenance or re-establishment of natural channel morphology (e.g., stream meanders, pool-riffle complexes)</li> <li>• Maintenance or re-establishment of perennial flows</li> <li>• Verification that the structure and composition of the restored area is similar to pre-construction conditions.</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Restoration specifics for perennial stream habitat	After construction

MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
BR-26C	<p>The USACE shall create and/or enhance one acre of perennial stream habitat within the Santa Ana River or its tributaries for each acre of unvegetated perennial stream that is temporarily or permanently disturbed during construction-related activities. Creation/enhancement activities could include but are not limited to the following:</p> <ul style="list-style-type: none"> <li>The development of pool-riffle complexes by placing clusters of various sized boulders within the river channel to provide limited cover and areas of reduced water velocity</li> <li>The creation of potential sucker habitat below Prado Dam within one or more tributaries of the Santa Ana River</li> <li>The creation of lateral stream habitats that are apparently essential for the survival of larval suckers. (Same as BR-22)</li> </ul>	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Restoration specifics for perennial stream habitat	During and after construction
BR-27	Deleted. (Same as BR-22)	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	N/A	N/A	N/A
BR-28	Deleted. (Unnecessary with implementation of BR-25)	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	N/A	N/A	N/A
BR-28A	The USACE shall implement a "trap and haul" program to periodically trap Santa Ana suckers from existing pools downstream of existing drop structures and transport and release the fish in favorable habitat upstream of the Prado reservoir. Non-native predators of the sucker that are caught during trapping bouts will be destroyed rather than released.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Implement "trap and haul" program for S.A. Suckers	After construction
BR-28B	Construction of the upper Highway 91 embankment protection will occur only during daylight hours to minimize disturbances to wildlife species that move primarily at night.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Contractor	Construction of upper Highway 91 embankment protection	During construction
III.G.2	Maintenance of approximately 1,100 acres of post-project 100-yr floodplain acquired in the canyon for open space and wildlife habitat values. Agricultural lands acquired in fee will not be leased back for agriculture.	1988 GDM Phase II SEIS	Orange County	Completed	COMPLETED
AQ-1	The project construction contractor shall retard diesel engine injection timing by two degrees before top center on all construction equipment that was manufactured before 1996, and which does not have an existing IC engine warranty with the manufacturer. The contractor shall provide a certification from a third-party certified mechanic prior to start of construction, stating the timing of all diesel-powered construction equipment engines have been retarded two degrees before top center.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Retard timing of diesel engines two degrees	During construction

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SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
AQ-2	The project construction contractor shall use high-pressure injectors on all diesel engines that were manufactured before 1996, and which do not have existing IC engine warranties with the manufacturer. The contractor shall provide documentation of warranty and manufacture date or a certification from a third-party certified mechanic stating that all diesel construction equipment engines are utilizing high-pressure fuel injectors.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Implement high pressure fuel injectors	During construction
AQ-3	The project construction contractor shall use Caterpillar pre-chamber diesel engines or equivalent, and perform proper maintenance and operation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use caterpillar pre-chamber diesel engines (or equivalent)	During construction
AQ-4	The project construction contractor shall electrify equipment, where feasible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Electrify equipment where feasible	During construction
AQ-5	The project construction contractor shall restrict the idling of construction equipment to 10 minutes.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Restrict engine idle time	During construction
AQ-6	The project construction contractor shall ensure that equipment will be maintained in proper tune to prevent visible soot from reducing light transmission through the exhaust stack exit by more than 20 percent for more than 3 minutes per hour and use low-sulfur fuel as required by SCAQMD regulation.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Maintain equipment in proper tune	During construction
AQ-7	The project construction contractor shall use catalytic converters on all gasoline equipment (except for small [2-cylinder] generator engines). If this measure is not implemented, emissions from gasoline equipment shall be offset by other means (e.g., Emission Reduction Credits).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use catalytic converters on gasoline equipment	During construction
AQ-8	The project construction contractor shall cease construction during periods of high ambient ozone concentrations (i.e., Stage 2 smog alerts) near the construction area (SCAQMD, 1993).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Halt construction during periods of high ozone	During construction
AQ-9	The project construction contractor shall schedule all material deliveries to the construction spread outside of peak traffic hours, and minimize other truck trips during peak traffic hours, or as approved by local jurisdictions.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Schedule construction material deliveries in off-peak periods	During construction
AQ-10	The project construction contractor shall use only solar powered traffic signs (no gasoline-powered generators shall be used).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Use solar powered traffic signs	During construction
AQ-11	The project construction contractor shall apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more, soil stock piled for 2 days or more).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Application of nontoxic soil stabilizers	During construction
AQ-12	The project construction contractor shall enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed stock piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Enclose, cover, water, or apply soil stabilizers to stock piles	During construction
AQ-13	In areas where dewatering is not required, the project construction contractor shall water active grading/excavation sites at least twice daily.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Water active grading sites	During construction

MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT: PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
AQ-14	The project construction contractor shall increase dust control watering when wind speeds exceed 15 miles per hour for a sustained period of greater than 10 minutes, as measured by an anemometer. The amount of additional watering would depend upon soil moisture content at the time; but no airborne dust should be visible.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Increase dust control watering during wind speeds over 15 mph	During construction
AQ-15	The project construction contractor shall suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph (40 kph).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Suspend all earthwork during high wind periods	During construction
AQ-16	The project construction contractor shall ensure that trucks hauling dirt on public roads to and from the site are covered and maintain a 50 mm (2 in) differential between the maximum height of any hauled material and the top of the haul trailer. Haul truck drivers shall water the load prior to leaving the site to prevent soil loss during transport.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Cover trucks hauling dirt on public roads	During construction
AQ-17	The project construction contractor shall ensure that graded surfaces used for off-road parking, materials lay-down, or awaiting future construction are stabilized for dust control, as needed.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Stabilize surfaces for dust control	During construction
AQ-18	The project construction contractor shall sweep streets in the project vicinity once a day if visible soil material is carried to adjacent streets.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Street sweeping after soil hauling	During construction
AQ-19	The project construction contractor shall install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Install wheel washers	During construction
AQ-20	The project construction contractor shall apply water three times daily, or apply non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking, staging areas, or unpaved road surfaces.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Dust control of unpaved areas	During construction
AQ-21	The project construction contractor shall ensure that traffic speeds on all unpaved roads be reduced to 15 mph (25 kph) or less.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Traffic speed control	During construction
AQ-22	Prior to the approval of plans and specifications, the USACE shall ensure that plans and specifications specify that all heavy equipment shall be maintained in a proper state of tune as per the manufacturer's specifications.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Plan check for vehicular tuning specifications	Prior to construction (plans & specs)
AQ-23	Deleted. (Similar to AQ-5)	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	N/A	N/A	N/A



MITIGATION MONITORING AND REPORTING PROGRAM  
SANTA ANA MAINSTEM PROJECT, PRADO BASIN, NORCO BLUFFS AND REACH 9

Number	Mitigation Measures	Source	Responsibility	Implementing Action	Timing
AQ-24	The USACE shall contact local jurisdictions, including jurisdictions affected by haul routes, prior to each phase of construction to identify other planned construction projects in the local vicinity. If other construction projects are identified in the local vicinity that would occur at the same time as construction for the project, the USACE shall coordinate with local officials to identify possible methods for reducing cumulative effects, including modifying construction schedules, modifying haul routes, modifying equipment mixes, and other reasonable and feasible measures that could reduce the magnitude of the combined effects of construction activities. In areas of noise sensitivity such as the residential uses at Green River Mobile Home Park and Green River Housing Estates, the construction contractor shall erect temporary noise barriers where feasible to limit direct line-of-sight noise impacts during construction.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE	Contact local jurisdictions to determine timing of other construction project hauling activities	Prior to and during construction
N-4		2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Erect temporary noise barriers in sensitive land use areas	During construction
CR-7	Archival research, test excavations and NRHP evaluations shall be conducted by a qualified archaeologist for historic site PB-145, the Alta Vista site. The USACE shall coordinate with the California State Historic Preservation Officer [following] these studies. If PB-145 is determined to be NRHP eligible, a treatment plan shall be developed and implemented in accordance with the Programmatic Agreement.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified archaeologist)	Conduct archival research, test excavations and NRHP evaluations/Coordinate with CSHP officer	Prior to construction
CR-8	Monitoring of construction by a qualified archeologist shall be required during construction.	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	USACE (implemented by a qualified archaeologist)	Construction monitoring	During construction
III.1	Negotiate Memorandum of Agreement, including mitigation program design, for National Register eligible sites.	1988 GDM Phase II SEIS	USACE	Negotiate MOA for National Register eligible sites	Prior to construction
LU-2	The construction or maintenance contractor shall keep bike trails open at all times and provide detour alignments as necessary. The contractor shall provide signage to alert trail users of construction zones, and detours shall be provided along with flag personnel, and fencing as necessary for safety. Prior to construction or maintenance activity, the contractor shall obtain approval from the Manager, County of Orange, Public Facilities and Resources Department, (Harbors, Beaches and Parks, of detour plans that include a diagram and text describing the proposed detour and safety measures. After construction, the contractor shall restore the trail to original condition. Repairs shall be coordinated with County of Orange, Public Facilities and Resources Department, (Harbors, Beaches and Parks.) Supervising Maintenance Technician (Chief, Maintenance Systems).	2001 Prado Basin, Reach 9, Norco Bluffs SEIS/EIR	Construction contractor	Review of construction specifications/Keep bicycle trails open and provide for detours	During and after construction
III.E	Avoid closing bridges. Avoid reducing traffic capacity on two adjacent bridges simultaneously. Use signing and flagmen.	1988 GDM Phase II SEIS	USACE	Construction monitoring	During construction

[ ] Text in brackets is corrected from FSEIS/R.