



U.S. Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011
(760) 431-9440
FAX (760) 431-5902 + 9618



California Department of Fish & Game
Eastern Sierrra Inland Deserts Region
3602 Inland Empire Blvd., Ste C-220
Ontario, California 91764
(909) 484-0459
FAX (909) 481-2945

WCCA GB Attachment
Item XIII
10/6/10

In Reply Refer To:
FWS-WRIV-08B0408-10TA0954

SEP 20 2010

Josephine R. Axt, Ph.D.
Chief, Planning Division
U.S. Army Corps of Engineers, Los Angeles District
P.O. Box 532711
Los Angeles, California 90053-2325

Attention: Ms. Hayley Lovan (CESPL-PD-RN)

Subject: Draft Supplemental Environmental Assessment and Addendum to Environmental Impact Report 583 for Santa Ana River Flood Control Project Reach 9, Phase 2A Embankment, Riverside County, California (SCH #2010084008)

Dear Ms. Axt:

The U.S. Fish and Wildlife Service (Service) and the California Department of Fish and Game (Department), hereafter collectively referred to as the Wildlife Agencies, have reviewed the Draft Supplemental Assessment and Addendum to Environmental Impact Report (Draft SEA/EIR), dated August 2010, for the above referenced project. The Draft SEA/EIR addresses environmental impacts associated with changes in the design of the Upper Highway 91 Embankment and the Green River Housing Estates Embankment made since the projects were originally analyzed in the *Final Supplemental Environmental Impact Statement/Environmental Impact Report for Prado Basin and Vicinity, Including Reach 9 and Stabilization of the Bluff Toe at Norco Bluffs* (2001 SEIS/EIR).

The proposed project is located within Reach 9 of the Santa Ana River, which extends approximately 7.4 miles between Prado Dam, Riverside County and Weir Canyon Road Bridge, Orange County. As part of the Santa Ana River Mainstem Project (SARP) a total of 1,100 acres of floodplain within Reach 9 ("Habitat Management Area"), including a portion of the project area, was to be "operated and maintained for open space and wildlife habitat values" by the County of Orange (Corps 1988). Particular to the project area, "54 acres (ac) of riparian woodland located between the gauging station and the Green Meadows development" was anticipated to be preserved within the Habitat Management Area" (County of Orange 1994, 2000, 2002).

The proposed project site is also located within the plan area for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). On June 22, 2004, we issued a section

10 (a)(1)(B) permit for the MSHCP. The MSHCP established a multiple species conservation program to minimize and mitigate habitat loss and the incidental take of covered species in association with activities covered under the permit. The Riverside County Flood Control and Water Conservation District is a Permittee of the MSHCP and is therefore subject to the requirements of the plan.

Our primary concerns with the project, as currently proposed, are the extent of impacts to riparian vegetation and oak woodlands, wildlife movement paths, consistency with the requirements of the MSHCP and habitats conserved within the Habitat Management Area. The Wildlife Agencies offer the following specific comments and recommendations based on our review of the Draft SEA/EIR, and our knowledge of biological resources in Reach 9 of the Santa Ana River.

1. *Riparian Vegetation.* The current estimate of direct impacts to riparian woodland and scrub is 19.25 ac (5.67 permanent, 13.58 temporary). We commend the Corps for pursuing the use of sheet pile protection to reduce impacts associated with construction of the Green River Housing Estates Embankment by avoiding the need to divert the active channel; however, impacts to riparian woodland are still greater than the 16.20 ac of impact anticipated in the 2001 SEIS/EIR. This is due primarily to an increase in the extent of riparian vegetation within the project area, an increase in length of the proposed embankments, and a shift in the location of the Upper Highway 91 Embankment to the north. The Upper Highway 91 Embankment will be extended a total of 240 feet beyond what was originally anticipated and now includes an access road that passes through riparian woodland. The shift to the north is likely to accommodate the future widening of State Route 91, although there is no mention of this project in the document. The Green River Housing Estates Embankment will be extended 900 feet beyond what was originally anticipated. These changes in the design do not appear to be reflected in the Project Design Comparison included in the Biological Resources Technical Report for the project (Draft SEA/EIR, Figure 3 of Appendix C). The Final SEA/EIR Addendum should clarify the need for the additional embankment protection and any new information collected since 2001 that contributed to the design modification. Given that sheet pile was considered a feasible alternative to grouted stone embankment for a portion of the project, we recommend the Final SEA/EIR Addendum evaluate the use of sheet pile for the Upper Highway 91 Embankment to further reduce impacts to riparian woodlands.

The 404(b)(1) Evaluation for the SARP (Draft SEA/EIR, Appendix B) concluded there would be no change in river drainage patterns as a result of Reach 9 improvements; however, the modified Upper Highway 91 Embankment appears to curve sharply at its western extent. Protection of the northern bank of the channel has already been planned as part of the Santa Ana River Interceptor Line (SARI) Protection/Relocation Project (Draft SEA/EIR, page 5-1) and is an indicator of anticipated deflection of flows to the northern bank of the channel. If the drainage pattern is altered by the embankment, we are concerned the current extent of the floodplain will be reduced and riparian woodland

downstream may not receive adequate flood flows to be maintained over the long term. The Final SEA/EIR should address potential changes in drainage patterns associated with implementation of the proposed project and how this will affect the extent of riparian woodland within Reach 9 over time.

2. Oak Woodlands. The Draft SEA/EIR does not provide sufficient information to allow for a determination that impacts to oak woodlands would be less than significant after mitigation. The proposed project will impact up to 45 coast live oak trees ranging from 1 inch to 30 inches in diameter at breast height. To compensate for anticipated impacts, oaks will be replaced at a 10:1 ratio and monitored for a minimum of 5 years. Trees that will be impacted may be upwards of 100 years old and are not readily replaced. A five year monitoring program is not adequate to ensure the long-term survival of oak woodlands. We recommend the Final SEA/EIR include the development and implementation of a specific oak woodlands restoration plan that is designed to meet the objectives of the successful establishment and long-term survival of riparian oak woodland habitat. The plan should include: (a) the location of the mitigation site; (b) a schematic depicting the mitigation area; (c) identification of suitable locations, soils, aspect, etc.; (d) time of year that the planting will occur; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) use of local propagules; (h) protection from herbivory; (i) success criteria; (j) a detailed monitoring program; and (k) contingency measures should the success criteria not be met. Specific oak woodland success criteria should be monitored for a minimum of 10 years and should be extended an additional five years where replacement plantings are required.
3. MSHCP. The Draft SEA/EIR concludes the proposed project is consistent with the MSHCP and includes an evaluation of MSHCP compliance (Appendix D). The MSHCP defines a Criteria Area that represents the area from which the Additional Reserve Lands will be assembled. The Criteria Area is divided into numbered cells with associated written criteria that describe the conservation expected within individual cells or cell groups (MSHCP section 3.2.3). The evaluation of MSHCP compliance acknowledges portions of the proposed project area are located within an MSHCP criteria cell which would contribute to the assembly of Proposed Constrained Linkages 1 and 2 but does not discuss project effects on the MSHCP conservation strategy or reserve assembly. In addition, the proposed project does not ensure the continued function of Proposed Constrained Linkages 1 and 2 (see Wildlife Movement section below).
4. Wildlife Movement. The Draft SEA/EIR concludes the proposed project will not result in significant impacts to wildlife movement (page 4-13). This conclusion is based on 1) the incorporation of project design features that are intended to provide for wildlife connectivity between Reach 9 and Fresno Canyon, and 2) implementation of mitigation measures provided in the 2001 SEIS/EIR. The document does not include an analysis of the direct and indirect effects to wildlife movement or a discussion of how effects on

wildlife movement have been reduced below significance through avoidance, minimization, and mitigation measures.

The U. S. Geological Survey (USGS) recently completed a study for the California Department of Transportation to evaluate connectivity across CA-91 for carnivores. Preliminary results indicate five culverts that pass under CA-91 in the immediate vicinity of the proposed project (No. 33, 36-39, located on enclosure) are used to a greater or lesser extent by bobcats and/or coyotes. Proposed Constrained Linkage 1 is located in the vicinity of culvert 33 and Proposed Constrained Linkage 2 is located in the vicinity of culverts 38 and 39. In addition, carnivores currently have access around the Green River Housing Estates and between Reach 9 and Prado Basin (south of the new Prado Dam outlet structure). The Final SEA/EIR Addendum should discuss how each of these movement paths, including Proposed Constraint Linkages 1 and 2, will be affected by the proposed project. For example, although culverts 33, 36, and 39 will not be altered by the project, it is not clear if animals will be able to cross the proposed infrastructure to access remaining habitats within Reach 9. Culverts 37 and 38 will be extended through the Upper Highway 91 Embankment and a switch back ramp will be built into the embankment below culvert 38; however, the Draft SEA/EIR draws no conclusions regarding the future use of these culverts by wildlife. The switch back ramp is proposed to compensate for anticipated bed degradation along the embankment over time. Bed profile modeling conducted to determine requirements for protection of the Santa Ana River Interceptor estimated that upwards of 26 feet of the Santa Ana River near Prado Dam will be down cut due to lack of sediment replenishing the area (Chang 2008). Anticipated bed degradation and drainage patterns relative to anticipated wildlife movement pathways should be disclosed in the Final SEA/EIR. Wildlife movement through Proposed Constrained Linkage 2 may be prohibited by a switch back ramp that exits into the active channel. Profile figures, similar to those provided in the 2001 SEIS/EIR (Appendix D-23-35) would facilitate the evaluation of potential impacts to wildlife movement.

Conclusions regarding post-project wildlife movement pathways relative to the current condition should be evaluated with post-construction monitoring. We recommend post-project movement pathways are evaluated following the methods implemented by USGS for "Carnivore Movement Monitoring Project for State Route 71/91". Based on the results of post-construction monitoring, modifications to movement pathways should be implemented as necessary to ensure impacts to wildlife movement associated with the project are insignificant.

5. Habitat Management Area. The Draft SEA/EIR anticipates permanent impacts to approximately 10.5 acres within Reach 9, a portion of which are located within the Habitat Management Area, including an area of riparian woodland that was anticipated to be preserved. In addition, areas behind the proposed embankment structures and access road that are permanently fragmented and isolated from the floodplain should be identified as part of the permanent impact area. Impacts of the reduction in open space and habitats

associated with this project and other components of the SARP on the Habitat Management Area should be evaluated as part of the cumulative impacts of the project on biological resources. We recommend the Corps identify additional areas that will be incorporated into the Habitat Management Area to offset the cumulative permanent losses associated with construction of SARP.

We appreciate the opportunity to comment on the Draft SEA/EIR for the Santa Ana River Flood Control Project Reach 9, Phase 2A Embankment Project and are available to work with you to address our concerns. Should you have any questions regarding this letter, please contact Christine Medak of the Service at (760) 431-9440 extension 298 or Robin Maloney-Rames of the Department at (909) 980-3818.

Sincerely,



Kennon A. Corey
Assistant Field Supervisor
U.S. Fish and Wildlife Service

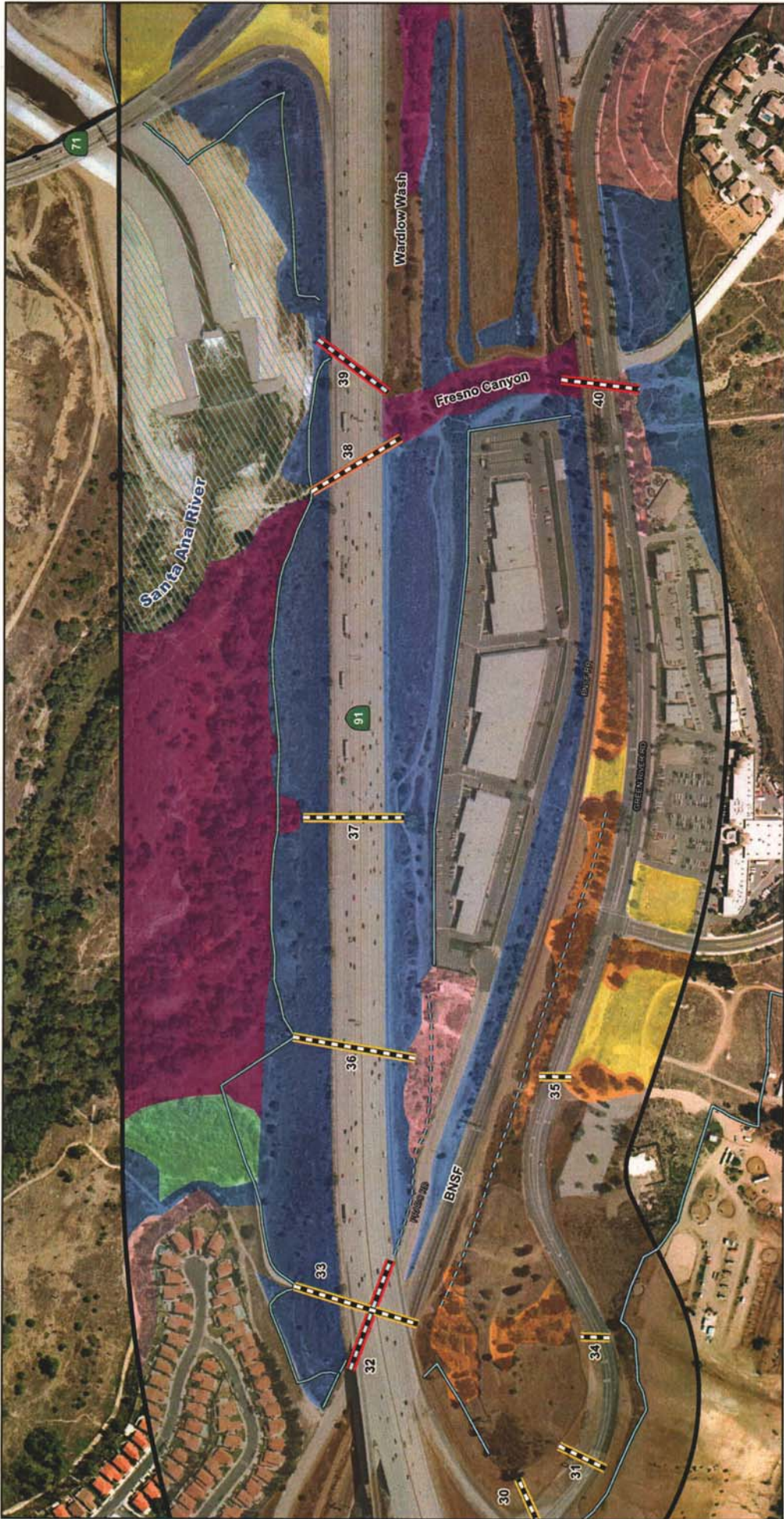


Jeff Brandt
Senior Environmental Scientist
California Department of Fish and Game

Enclosure (1)

Literature Cited

- Chang, H.H. 2008. Hydraulic Requirements for SARI Pipeline Protection along Channel Bank and at River Crossing of the Santa Ana River below Prado Dam. Prepared for County of Orange Resources and Development Management Department, Santa Ana, California.
- County of Orange. 1994. Santa Ana River Canyon Habitat Management Plan. Prepared for U.S. Army Corps of Engineers, Los Angeles District. Volume I, page 5-5.
- County of Orange. 2000. Santa Ana River Canyon Habitat Management Plan. Prepared for U.S. Army Corps of Engineers, Los Angeles District. Volume I, page 5-7
- County of Orange. 2002. Santa Ana River Canyon Habitat Management Plan. Prepared for U.S. Army Corps of Engineers, Los Angeles District. Volume I, page 5-10



LEGEND

- Biological Study Area
- Culvert (with ID#)
- Overcrossing (with ID#)
- Undercrossing (with ID#)
- * ID #'s are from the SR-91 CIP Comprehensive Wildlife Corridor Analysis Report

Wildlife Crossings

- Small
- Medium
- Large

Vegetation Communities

- Coastal Scrub
- Non-Native Grassland
- Emergent Wetland
- Southern Cottonwood-Willow Riparian Forest
- Non-Native Woodland
- Non-Native Vegetation, Developed Areas, or Unvegetated
- Disturbed Habitat-Dirt Roads and Paths
- Urban/Developed-Paved Roads and Structures
- Non-Vegetated Channel, Floodway, Lakeshore Fringe

Scale: 0, 150, 300 FEET

North Arrow: [North Arrow Symbol]

Inset Map: Detail Area showing the project location within Riverside County, San Bernardino County, and Orange County.

SR-91 Corridor Improvement Project
 Potential Wildlife Crossings
 12-09-09, R14-031818.91
 08-Riv-91-R0-00R13.04
 08-Riv-15-35-6445.14
 EA 07540