

November 18, 2013

Josephine R. Axt, Ph.D.; Chief, Planning Division;
U.S. Army Corps of Engineers; Los Angeles District;
P.O. Box 532711;
ATTN: Ms. Erin Jones, CESPL-PD-RN;
Los Angeles, California 90053-2325

Via Email: comments.lariverstudy@usace.army.mil

Regarding: Los Angeles River Ecosystem Restoration Integrated Feasibility Report

Dear Dr. Axt,

On behalf of the California Chapter of The Nature Conservancy, thank you for the opportunity to comment on the Los Angeles River Ecosystem Restoration Integrated Feasibility Report: Feasibility Study and Environmental Impact Statement/Environmental Impact Report.

The Nature Conservancy (Conservancy) is an international non-profit organization dedicated to conserving the lands and waters on which all life depends. Our on-the-ground work is carried out in all 50 states and in 34 foreign countries and is supported by approximately one million members. To date, we have helped conserve more than 117 million acres (including 1.2 million acres in California) and 5,000 river miles around the world. We have been engaged in the protection and management of natural resources across the U.S. for many years. In fact, we sponsor more projects with the US Army Corps of Engineers than any other non-profit organization.

The foundation of the Conservancy's work is our commitment to using the most up-to-date conservation science information and methodologies to guide decision-making. Our tools and methods have been widely adopted by other organizations and agencies that engage in ecosystem restoration. As a science-based organization with on-the-ground experience, the Conservancy carefully reviewed the "Area with Restoration Benefits and Opportunities for Revitalization" (ARBOR) Study. Our comments are focused on the habitat restoration, biological diversity, wildlife, and ecological benefits covered in the Study.

ARBOR arrives at a time when the global significance of the mediterranean biome is well-recognized. Mediterranean-climate regions have high levels of species richness and endemism and are found in only five places on Earth: the Mediterranean Basin, the western cape of South Africa, southwestern Australia, the central coast of Chile, and California and northern Baja California. While mediterranean-climate regions cover only 2.2 percent of Earth's land surface, they contain 20 percent of all known plant species. Unfortunately, mediterranean ecosystems are also among the most threatened on Earth. Because they are characterized by hot, dry summers and mild, wet winters, mediterranean-climate regions are attractive places for human settlement. Many have been heavily urbanized and now face grave problems such as habitat destruction, degradation, and fragmentation. More than 41 percent of the mediterranean biome has been converted to farmland and urban uses, and only 5 percent of its natural area has been protected.

In Greater Los Angeles, the valleys have been developed for residential, commercial and industrial use and many natural riparian corridors have been channelized. However, we found in our 2013 Assessment of the region's biological diversity, important ecological values remain as do opportunities for ecological restoration that will benefit nature and people. This science-based assessment demonstrated that the areas of greatest restoration potential are the region's riparian corridors, the foothills, and water retention/flood control basins, including the soft-bottom portion of the Los Angeles River.

Restoration of the Los Angeles River will be of particularly high value, because its flows are vital to the region's hydrological and groundwater health and to the riparian plant communities along its course. These riparian plant communities are, in turn, essential to the existence of many of the region's distinctive species of birds, mammals, reptiles, amphibians, insects, spiders and other invertebrates. As the Study notes, the Los Angeles River was once populated with native fish and amphibians. Songbirds, seabirds, and water fowl found nesting sites and food sources there, and many animals large and small used the channel and riparian zone as a natural corridor for movement. Restoring the Los Angeles River will be a necessary component of the restoration of nature and of nature's benefits to people in the nation's second largest metropolitan area. Its restoration is also a matter of global significance due to the scarcity of mediterranean riparian habitat.

In closing, the Conservancy supports the extensive habitat restoration envisioned in ARBOR, including the proposal to restore the 11-mile soft-bottom portion of the Los Angeles River, Valley Foothill Riparian Strand, and Freshwater Marsh Habitat. The restoration of habitat and wildlife linkages will reconnect habitats along the river and throughout the region, which would leader to broader biodiversity gains. As stated in the attached Appendix, it is essential that plants and both invertebrate and vertebrate wildlife species, such as insects, fish, amphibians, reptiles, birds, and mammals, be included in the ecosystem restoration plan. While each of the alternatives (10, 13, 16, and 20) detailed in the Study offers restoration benefits, our evaluation indicates that Alternative 20 will provide the greater biological diversity and ecosystem function restoration benefits.

We commend the U.S. Army Corps of Engineers and the City of Los Angeles on this comprehensive study of the Los Angeles River's ecosystem restoration potential. Thank you again for the opportunity to provide comments on the Los Angeles River Ecosystem Restoration Integrated Feasibility Report. Please direct questions to Shona Ganguly, External Affairs Manager, at sganguly@tnc.org or please call 213-327-0104 extension 14207.

Sincerely,

A handwritten signature in black ink that reads "Alfredo B. Gonzalez". The signature is written in a cursive, flowing style.

Alfredo Gonzalez
Regional Director, South Coast & Deserts
The Nature Conservancy

Addendum to The Nature Conservancy's Comments on the Army Corps of Engineers' Los Angeles River Ecosystem Restoration Integrated Feasibility Report

Appendix A: Scope, Geography, and Restoration

Geography The Report appropriately focuses on the approximately 11-mile long reach of the River, which extends from the US Army Corps of Engineers Headgate to First Street. The entire River is 51 miles long and the original study area encompassed a 32 mile stretch from the confluence of Bell and Calabasas Creeks at Owensmouth Boulevard in the northwestern San Fernando Valley to Washington Street near the border between the City of Los Angeles and Vernon. The ARBOR selected reach has the River's longest sections of soft bottom and connections to important tributaries and two relatively large riverside properties that could be restored to function as floodplain and wildlife habitat (Taylor Yard and Piggyback Yard). Other areas within the watershed that deserve greater attention include the Sepulveda Basin and the linkage between the northern Verdugo Hills and Big Tujunga Creek (from approximately Green Verdugo Reservoir to the Angeles National Golf Club). While these stretches require consideration in a distinct project, they are integrally important to the restoration of an ecologically functional Los Angeles River.

Scope The Project's stated planning objectives are appropriately directed towards habitat protection and restoration plus increased connectivity with large, core habitat areas nearby, all of which will protect and restore biological diversity. The stated objectives are (see ES.5 on page xxiii):

1. Restore Valley Foothill Riparian Strand and Freshwater March Habitat: Restore Valley Foothill Riparian wildlife habitat types, aquatic freshwater marsh communities, and native fish habitat within the ARBOR reach throughout the period of analysis, including restoration of supporting ecological processes and biological diversity, and a more natural hydrologic and hydraulic regime that reconnects the river to historic floodplains and tributaries, reduces velocities, increases infiltration and improves natural sediment processes
2. Increase Habitat Connectivity: Increase habitat connectivity between the river and the historic floodplain and increase nodal connectivity for wildlife between restored habitat patches and nearby significant ecological zones such as the Santa Monica Mountains, Verdugo Hills, Elysian Hills and San Gabriel Mountains within the ARBOR reach throughout the period of analysis.
3. Increase passive recreation: include recreation that is compatible with the restored environment in the ARBOR reach throughout the period of analysis.

Objectives 1 and 2 will directly contribute to protection and restoration of biological diversity. The portion of Objective 1 dedicated to restoration of a more natural hydrologic and hydraulic regime will also contribute to flood risk management. For nearly a century, the primary objective of Army Corps of Engineers projects was flood risk management through channelization and hard barriers. The Corps has expanded its means to reaching these hydrologic and hydraulic objectives in the four alternatives featured in the Report that will also restore processes and features that directly contribute to and in some cases are necessary for the restoration of viable populations of some native species. Those methods also provide "green infrastructure" benefits for people.

More specific information about the benefits sought, and especially about the benefits expected from different actions, are missing from this Report and would be helpful, perhaps crucially so, in guiding decisions about which alternative to pursue. There is little evidence in the Report that any of the alternatives discussed would be sufficient to restore viable populations of native fish to the Los Angeles River. We recommend that either

information on additional steps that would be necessary to accomplish this be added to the Report along with a brief analysis of the cost and practical possibilities of this occurring OR that this objective be dropped.

Moreover, there is very little specific information on restoring habitat for migratory and resident birds was included in the Report. The ARBOR section of the Los Angeles River already harbors impressive numbers of waterfowl (mostly migratory) and some birds that nest, shelter and forage in riparian vegetation, particularly during certain periods of the year. The actions selected and taken could be more beneficial and cost-effective (efficient) if guided by clearer analysis of which species were most likely to benefit, and how habitats and other resources most suited and important to them could be restored. For example, some species of wading birds, ducks, geese and other waterfowl are favored by certain water depths and by certain substrates (e.g. fine muds v. sands), and a focus on enhancement or restoration of these features could make a significant difference in whether the project actually attracts targeted species and how many individuals the restored section of the River then supports or hosts during migratory visits. Because birds attract interest and attention not only from serious birdwatchers but from many more people with interest in the world around them, efforts that bring significant numbers of birds, especially species less familiar than the pigeons, crows and English sparrows common in urban environments, could garner far greater public interest and support for this project and other conservation work.

Restoration & Biodiversity Protection Alternative 20 (RIVER) makes the most provisions for biodiversity protection and restoration compared to Alternatives 10, 13, and 16, particularly because of the additional connections it would provide to nearby core protected areas, and the direct links it would make with re-created wetland/floodplain habitat in the Piggyback Yards and the Los Angeles State Historic Park (Cornfields). Alternative 20 also provides the highest number of habitat units restored and the highest number and quality of ecosystem connections re-established—the factors most closely aligned with the protection and maintenance of biological diversity and ecosystem functions. Importantly, Alternative 20 includes restoration of the Verdugo Wash confluence and the Cornfields site, in addition to reaches 1-7 (connecting Pollywog Park, Bette Davis Park, Ferraro Fields, Upstream Glendale Narrows, Los Feliz, Bowtie Parcel, Downstream Glendale Narrows/Arroyo Seco, Main Street, and First Street).

The re-created wetland/floodplain area of the Piggyback Yards and the Cornfields site will provide new riparian habitat and significant flood risk reduction via green infrastructure. It will also provide significant flood risk reduction via green infrastructure (i.e. the use of natural systems such as restored flood plain capable of supporting healthy native vegetation, rather than artificial, hardscape solutions). Restoration of these two sites will also bring nature into areas of Greater Los Angeles now particularly lacking in open space and native habitats.

Alternative 20 includes actions designed to link habitats along the Los Angeles River to the Santa Monica Mountains and San Gabriel Mountains and to restore floodplain habitat (and floodplain function) to the Taylor Yard, as does Alternative 13. However, Alternative 20 alone includes actions to link Verdugo Wash and the Verdugo Hills (through restoration around the confluence of the Los Angeles River and Verdugo Wash). In Alternatives 13, 16 & 20 connection to the San Gabriel Mountains would be made through restoration around the confluence of the Los Angeles River and Arroyo Seco which flows from the San Gabriel Mountains north of Pasadena and Altadena. However, the Los Angeles River – Arroyo Seco confluence is in a very highly developed, busy location, surrounded by major roads and rail lines and may remain difficult to reach for many animals. In Alternative 20, a second connection to the San Gabriel Mountains through the Verdugo Hills will be started, but additional work to connect the northern Verdugo Hills with the San Gabriel Range through Big Tujunga Creek will probably be necessary for this corridor to function for most terrestrial animals (many bird

species, some flying insects and some plants with good long-distance fruit/seed dispersal mechanisms may be able to cross the gap that now exists there). Likewise, while Alternative 13 would restore habitat to the Piggyback Yards only Alternatives 16 and 20 would eliminate the physical barrier between the Los Angeles River and the Piggyback Yards and thereby allow the Piggyback Yards area to function as floodplain and reduce flood risk.

We recommend that more information is provided on the habitat and biological diversity values in any of the areas the project Alternatives would link with (Santa Monica Mountains, San Gabriel Mountains, Elysian Hills, Verdugo Hills, etc.) in the final version of the Study. For example, although the Santa Monica Mountains are highly fragmented by residential and other urban developments, they still contain habitat and biodiversity values. The Verdugo Hills contain roughly 14 square miles of habitat including park lands totaling 4,000 acres owned and protected by the City of Burbank, City of Glendale, City of Los Angeles, California Department of Parks and Recreation (Verdugo Mountains State Park) and the Santa Monica Mountains Conservancy. Geologically a part of the Transverse Ranges, the Verdugos (sometimes called Verdugo Hills, sometimes Verdugo Mountains) are relatively low and largely covered with chaparral vegetation on slopes and more mesic canyon and riparian woodlands in canyons and along waterways. The San Gabriel Ranges to the north reach much greater elevations (over 10,000 feet) and host a wider variety of vegetation types ranging from coastal sage scrub in the lowlands to montane coniferous forests and meadows along the crest of the range and descending to Joshua Tree woodland and creosote scrub on the drier, inland side. The San Gabriel Range is part of a sprawling network of protected habitat of continental and global significance, connected with the San Bernardino and Peninsular Ranges to the east and south, the Santa Susana Range to the west and the Tehachapi Range to the north/northeast which in turn link to the Sierra Nevada. It supports a National Forest – parts of which would become part of a new National Recreation Area under a proposal now being given serious consideration – as well as state and local park and preserve lands. The San Gabriels host a wide variety of animals, including black bears, puma and many other mammals, reptiles, amphibians, fish, and birds. It would be particularly useful to know more about whether there are any species endemic to the region, or whose numbers are suspected of having dramatically decreased as a result not only of the destruction of habitat in the region, but of the severing of links between the various ranges (Santa Monicas, Verdugos, San Gabriel Mountains) that still harbor large areas of habitat.

Appendix B: Water Resources/Hydrology

Water Resources Sections 3.5 and 5.4 of the Report recount the fact that the river is in a relatively polluted state in an urban area, mostly supplied by sewage treatment plant outflows in dry weather, engorged by precipitation in rain events because few open areas are left to absorb the water.

Hydrology and Hydraulics The opening sections of the Report (page 1) state the purpose of the study and reflect the U.S. Army Corps of Engineers' core mission of flood risk.

It is important to note up front that the primary premise from the hydrology and hydraulics perspective is that any ecosystem project evaluated in this study must not negatively impact the flood risk management function of the system. This means any effort to alter the existing Los Angeles River channel must provide mitigation to offset any loss of conveyance.

The premise is in conflict with the presence of vegetation in the river channel, which slows flow, raises water levels, and presents increased risks of flooding where the channel's concrete channel and levees are not adequate. The Report notes that several segments within the 11-mile reach considered for improvement are

currently not adequate to contain 100-year floods.¹ The channel construction, according to the Report, was based on originally defective design criteria (page 38-39).

The Report then identifies four selected alternatives that were analyzed compared to the Existing Conditions to determine their impacts on the flood control function of the channel. Two factors to evaluate the effects of alternatives:

One of the critical constraints for this ecosystem restoration study was that the proposed alternatives would have no impact on the flood control functions of the Los Angeles River Channel. In addition to the impacts on flood control, it is imperative the proposed alternatives do not create any adverse conditions related to high velocities. Since the proposed alternatives are quite elaborate and extensive, the COE needed an efficient process for determining impacts and feasibility for each of the proposed alternatives. To evaluate the hydraulic Impacts, it was decided to base the impacts on two factors; the change in maximum water surface elevation and the maximum velocity. (page 31)

The Report evaluates maximum velocities for maintenance of vegetation and sets standards for soft bottomed, unlined sections of the river. In all of the Reaches covered by the Study, and for all of the Alternatives, velocities are typically greater than 8 feet per second. Because the original design of the channel was undersized (and FEMA has not recognized that fact), and because vegetation elevates flooding risk by restricting the velocity of flow, we have some concern that restoration efforts that increase the amount of vegetation in the river channel may be resisted despite the Corps' finding that "any of the four alternatives can work hydraulically given the constraint on maintaining vegetation to acceptable limits" (page 42). We would like additional clarification on whether any additional armoring will be requested downstream to compensate for increases in vegetation, and whether the Corps will retain the prerogative to remove vegetation that it considers interfering with swift flows during flooding events. This clarification could also help catalyze restoration efforts by nongovernmental organizations inclined to assist with Los Angeles River restoration and counter the idea that the need to manage flood risk will inadvertently or eventually undo their efforts.

Appendix C: Additional Recommendations (Geology, Seismology, Soils, Minerals, and Wildlife)

Study Area The heavily vegetated portion of the river continues past the Glendale Freeway (SR-2) all the way to the Golden State Freeway (Interstate 5), whereas in Section 3.5 on page 3-33, lines 10-12, the Report erroneously states, "*The River is mostly confined to a concrete-lined channel surrounded by urbanized areas and much of it is virtually devoid of any natural vegetation. Exceptions include Reaches 4-6 in the study area, roughly from Brazil Street to the Glendale Freeway.*" The 2.34 mile reach of the river between the SR-2 and I-5 is described in the study as Reach 6 on page 2-13, where it is stated, "*Sediment deposited in the channel has formed sand bars/islands, which have become stabilized as the root systems of the many trees and other vegetation have trapped sediment.*" Also, page 3-35 lines 3-4 state: "*Riparian communities continue south throughout the reaches and stop just upstream of the I-5 overpass, where the channel bed becomes concrete once again.*" Finally, it should be noted that there is also vegetation in Reach 2, and while the study states on page 2-9 lines 1-2 that Reach 2 "is not as densely vegetated as areas farther downstream in Reaches 4 to 6", it nonetheless contains some vegetation—"Sediment deposited in the channel has formed sand bars/islands,

¹ On page 15 of Appendix E, the Report notes: It is important to note there are several locations within the ARBOR reach where the probability of flows breaking out from the channel within the ecosystem project area is greater than 1% in any given year (equivalent to the 100-yr flood), i.e., the channel has less than 100-yr level of protection in some locations.

which have stabilized as the root systems of the many trees and other vegetation in the channel have trapped sediment over time” (page 2-8, lines 10-11). Therefore mischaracterization of this section of the river as “virtually devoid of any natural vegetation” should be corrected.

Nomenclature/Categorization In Section 3.1 on page 3-7, Figure 3-3, the San Rafael Hills are mislabeled as the Repetto Hills. The Repetto Hills are separate and distinct and located to the south and southeast of the San Rafael Hills.

In response to the section on perennial grasslands, if the dominant species are not perennial, this habitat type would be better categorized as “Annual Grassland”, “Invasive Annual Grassland”, “Non-native Annual Grassland”, or even “California Grassland”. On page 3-33, lines 40-42, the Report describes, “*Perennial Grassland Dominant species include introduced annual grasses such as wild oats, bromes, and fescues. Non-native forbs including filaree and clovers may be present. Native species may also be present.*”

A question about the differences between the “Low Density Urban” and “Pasture Agricultural” categories arises from page 3-34, lines 8-9: “*Low Density Urban This is composed of urban uses such as parks, recreational fields, golf courses, and other such urban open space areas.*” Given that this category undoubtedly has significant portions of it covered by grass, clarification is needed about difference between this category and “Pasture Agricultural” category listed above on page 3-33 line 38 and if it is based on a management difference.

Vegetation & Invasive Species The justification that there are limited funds to maintain vegetation in the channel and therefore the invasive species should be removed seems to be at the crux of the whole restoration debate for the Los Angeles River. On page 3-34, lines 11-16, the Report explains, “*Vegetation within the River channel can inhibit the channel’s capacity to convey floodwaters. The channel is designed to be maintained free of vegetation to avoid impacts to flood conveyance and channel structures. However, lack of funds for maintenance has resulted in substantial vegetation growing within the channel. Due to limited funds available to maintain vegetation in the channel, USACE has focused on removing non-native vegetation using both herbicide and mechanical means. Non-native plants often out-compete natives, degrading the ecological vitality and productivity of native habitats.*”

It is difficult to recommend restoration best practices without knowing how management is currently influencing the habitat present. More information about when and exactly what the Corps has done recently with regard to “occasional mechanical removal” of riparian habitat for this reach and the rest of the river would be helpful. The Report alludes to non-native removal efforts and “mechanical removal,” but does not elaborate as seen on page 3-34, lines 25-26: “*Several small patches of riparian habitat are located within the River channel and are subject to occasional mechanical removal by the USACE, with most recent efforts focused on non-native removal.*” and lines 38-39: “*Vegetation growth at Verdugo Wash has become a concern for inhibiting water flow and all vegetation is periodically mechanically removed in Reach 3.*”

There is also limited quantitative data in the Report on species, vegetation, and degradation in these reaches, particularly on page 3-34, line 30: “*Staging areas between Forest Lawn Drive and Zoo Drive are bordered by perennial invasive grasses*” and on page 3-34, line 44: “*overall, vegetation is limited and degraded in these reaches.*” Information is also needed on the “weedy species” as well as quantitative measurement of cover that is mentioned on page 3-35, line 21-23: “*Any vegetation within the main River channel is composed of weedy species that have become rooted in the cracks of the channel walls or hummocks of vegetation that grow on the minimal accumulated sediment and wash out with high flows.*”

Wildlife Species The sections on the species along the Los Angeles River need elaboration, clarification, and more research. The bat species need to be specifically named, rather than the allusion on page 3-39, line 6-7: “*and several species of bats (CDFW 1993).*” (The CDFW study is not easily available online, which makes verification difficult.) Also, only the common urban species of birds are listed (page 3-39, lines 9-22). There are many species of birds that have been sighted at the Los Angeles River and recorded at the CNDDDB and ebird that are not listed here, nor is there an accounting here of the total number of birds that have been seen along the river, despite the fact that this should be in the hundreds. Also, the work of the foremost bird expert in Los Angeles (Kimball Garrett) should be cited in this section. More waterfowl and shorebirds should be listed as well. We recommend that the section include additional and more thorough information and references.

The section on “Special Status Species” (page 3-40, line 14) should include information about special status natural communities. In addition, special status species should include all 898 taxa of Special Animals and all fully-protected animals as defined by the California Department of Fish and Wildlife:

<http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/spanimals.pdf>,

http://www.dfg.ca.gov/wildlife/nongame/t_e_spp/fully_pro.html

If these were to be considered as “Special Status Species” by this study (as they should be), then the list of special status species detected within the study area on the river grows longer to include:

- Willow Flycatcher
- White-tailed Kite
- Yellow Warbler, and a number of other species

We disagree with the language in the statement that indicates that “only three bird species have the potential to occur in the project area” as stated on page 3-40, lines 29-33: “*There are a total of 28 special status wildlife species with the potential to occur in the greater Los Angeles Basin (Appendix G). However, of these, only three bird species have the potential to occur in the project area, including high potential for least Bell’s vireo (*Vireo bellii pusillus*), and low potential for both the southwestern willow flycatcher (*Empidonax trailliiextimus*) and coastal California gnatcatcher (*Polioptila californica*).*” It is highly likely that there are other species that have this potential, particularly if the river and its habitats were to be enhanced through restoration. It also suggests that these areas have been thoroughly surveyed, which may or may not be the case. A more accurate statement would be: “However, of these special status species, only one has been recorded within the project area in recent years—the Least Bell’s Vireo.” Furthermore, in reference to page 3-40, the common names of bird species should be capitalized. This is the preferred format, and it avoids confusion when using common names (reference <http://www.worldbirdnames.org/rules-caps.html>).

The Report makes assumptions about certain species not occurring within the study area, when there is documentation to the contrary. For example, Willow Flycatcher occurrences within the study area have been documented in ebird, even though the Report states on page 3-40, lines 41-43 that “*the most recent documented occurrence of the southwestern willow flycatcher was over 13 miles west of the project area in the Angeles National Forest.*” Also, while the California gnatcatcher may not nest in the acre of Coastal Scrub habitat found within the study area, this acre is close to known gnatcatcher habitat in the Santa Monica Mountains. On page 3-40, lines 43-44, the Report states, “*The gnatcatcher, which generally occupies coastal scrub habitat, is unlikely to occur since there is less than 1 acre of this habitat type in the corridor.*” However, there is a record in ebird for California gnatcatcher from this spring (2013) in the bird sanctuary in Griffith Park, and individuals may intermittently use the remnant fragments of scrub habitat along the river.

The following statement from page 3-42, lines 12-16 about the blockage of wildlife passage is overly broad and requires citation and justification: “*The combination of the River channel and the adjacent highways and development has effectively created a blockage to the wildlife movement that would have historically occurred between the Santa Monica Mountains to the west and Verdugo Mountains and San Gabriel Mountains to the east. Additional development further blocks wildlife passage between the Verdugo Mountains and the much larger Angeles National Forest.*” Our concern here reflects our desire for better understanding of wildlife movement in Los Angeles. In absence of a study done to quantify movement of wildlife through these areas, we do not know which species are restricted in their movements and which species may be moving through the urban environments to get to larger patches of habitat. These movements are very species-specific, and generalizations like the statement above could inadvertently add to the mistaken belief that “there is no nature in Los Angeles,” a notion this report endeavors to dispel.

The central concern that emerged from a review of Section 4.9 is the exclusion of invertebrate species and plants from the species that were evaluated. On page 4-30, lines 21-22, the Reports describes, “*Over 175 species were evaluated in CHAP for the LA River Ecosystem Restoration Study including fish, amphibians, reptiles, birds, and mammals.*” Also, only 35 of the 175 species were not birds. The main issues with this focus is that many of the species that carry out ecological functions are not vertebrates – and these “key Ecological Functions” are part of the CHAP methodology. It is also curious that many of the bird species evaluated in the CHAP were not mentioned in the section on wildlife, despite the fact that they have been recorded (on e-bird) within the study area on the river. These include:

- Hooded Oriole
- Bullock’s Oriole
- Lazuli Bunting
- Blue Grosbeak
- Western Tanager
- several species of woodpeckers and owls
- Cinnamon Teal
- Ring-necked Duck
- Northern Pintail
- Sharp-shinned Hawk
- Osprey
- Great Blue Heron
- Spotted Sandpiper
- Black Necked Stilt

From a review of Section 5.5, Alternative 20 is the most beneficial for wildlife, because there is a significant increase in areas targeted for restoration compared to the other alternatives. This increased target area renders it the most expansive and transformative restoration alternative with 288 acres of valley foothill riparian habitat restoration, 46 acres of freshwater marsh creation, and open water habitat creation (from the expansion of the soft river bottom to its maximum potential along Reaches 5, 6, and 8) (page 5-55, line 35-38).