

# San Timoteo Creek Habitat Enhancement Project

A Cooperative Effort among  
City of Loma Linda  
City of Redlands  
County of San Bernardino

## Environmental Assessment

*Prepared For:*  
U.S. Environmental Protection Agency

*Submitted By:*  
City of Loma Linda  
25541 Barton Road  
Loma Linda CA 92354

**February 2007**



## **Abstract**

The U.S. Environmental Protection Agency (EPA) has awarded a grant to the City of Loma Linda proposing to preserve and enhance the native habitat along a portion of San Timoteo Creek corridor. The project covers approximately 6.58 linear miles of San Timoteo drainage way. Stretching roughly from the confluence of the Santa Ana River to the Riverside County line, an important facet of this enhancement effort is that it involves multiple agencies with generally aligned interests. Since the subject area extends through three primary jurisdictions, the City of Loma Linda, the City of Redlands, and the County of San Bernardino, all are stakeholders and have a direct bearing on the project scope and outcome.

The cities and the County are project applicants and the City of Loma Linda is the lead agency for CEQA. The EPA is lead agency for NEPA and requires this Environmental Assessment (EA) be prepared for the expenditure of grant funds.

Funds will be used for:

- Property Acquisition;
- Development of an Enhancement Plan; and
- Implementation of an Enhancement Plan

This Environmental Assessment (EA) focuses on the overall concept of the proposed Enhancement Project and identifies impacts specific to the acquisition and revegetation of properties in order to carry out the project.

The project would require easement rights, common use agreements and acquisition of some properties owned by private owners, the City of Loma Linda, the City of Redland or the San Bernardino County Flood Control District.



**EA for San Timoteo Creek Habitat Enhancement Program**  
**Table of Contents**

Cover Sheet

Abstract ..... i

Appendices ..... v

List of Figures ..... vi

List of Tables ..... vi

List of Abbreviated Terms ..... vii

Chapter 1 Purpose and Need ..... 1

1.1 Project Purpose ..... 1

1.2 Project Need ..... 13

1.3 Project Background ..... 15

Chapter 2 Project Alternatives ..... 23

2.1 Alternative Development Process ..... 23

2.2 Project Alternatives ..... 23

2.2.1 “No Build” Alternative ..... 24

2.2.2 Build Alternative [1]: Habitat Enhancement and Enhancement in Loma Linda and Redlands  
..... 25

2.2.3 Build Alternative [2]: Habitat Preservation in Focus Area 3 within City of Redlands ..... 28

2.2.4 Build Alternative [3]: Open Space and Recreational Use along the San Timoteo  
Creek ..... 23

2.3 Project Alternatives Summary ..... 30

2.4 Environmentally Superior Alternative ..... 31

2.5 Alternatives Considered and Withdrawn ..... 32

Chapter 3 Affected Environment, Environmental Consequences, and Mitigation Measures ..... 35

3.1 Hydrology, Water Quality, Stormwater Runoff ..... 35

3.2 Hazardous Waste/Materials ..... 36

3.3 Air Quality ..... 37

3.4 Noise ..... 37

3.5 Energy ..... 37

3.6 Wetlands and Other Waters of the United States ..... 38

3.6.1 Affected Environment ..... 39

3.6.2 Permanent Impacts ..... 34

3.6.3 Cumulative Impacts ..... 40

3.6.4 Mitigation Measures ..... 40

3.7 Vegetation ..... 40

3.7.1 Affected Environment ..... 41

3.7.2 Permanent Impacts ..... 42

3.7.3 Temporary Impacts ..... 43

3.7.4 Cumulative Impacts ..... 43

3.7.5 Mitigation Measures ..... 43

3.8 Wildlife ..... 44

3.8.1 Affected Environment ..... 44

3.8.2 Permanent Impacts ..... 47

3.8.3 Cumulative Impacts ..... 48

3.8.4 Mitigation Measures ..... 48

---

3.9	Threatened and Endangered Species .....	48
3.9.1	Affected Environment .....	48
3.9.2	Permanent Impacts .....	54
3.9.3	Cumulative Impacts .....	55
3.9.4	Mitigation Measures .....	55
3.10	Floodplains .....	55
3.11	Coastal Zone .....	55
3.12	Wild and Scenic Rivers.....	55
3.13	Non-Section 4(f) Parks, Recreational Areas, Wildlife and Waterfowl Refuges.....	55
3.14	Land Use, Planning, and Growth.....	56
3.15	Farmlands/Agricultural Lands .....	57
3.16	Community Impacts (Social, Economic) and Environmental Justice.....	57
3.17	Utilities/Emergency Services.....	58
3.18	Traffic Transportation/Pedestrian and Bicycle Facilities .....	58
3.19	Visual/Aesthetics .....	58
3.20	Cultural Resources .....	58
3.21	Unavoidable Adverse Impacts .....	54
Chapter 4 List of Preparers .....		61
Chapter 5 References.....		63

## **Appendices**

Appendix A	Coordination and Consultation
Appendix B	Summary of Relocation Benefits
Appendix C	Evaluation of the Potential of San Timoteo Creek for Revegetation with Native Riparian Species, June 2004
Appendix D	San Timoteo Creek Habitat Enhancement Program Phase I Environmental Site Assessment, April 2004
Appendix E	San Timoteo Creek Project Proposed Revegetation Plan
Appendix F	USFWS Correspondence
Appendix G	Archaeological Information Center Correspondence

## List of Figures

Figure 1: Regional Map .....	3
Figure 2: Vicinity Map.....	4
Figure 3: Project Focus Area Boundaries .....	5
Figure 4: USACE Mitigation Sites (Figures 4a-4c) .....	6
Figure 5: City of Loma Linda Parcels.....	11
Figure 6: City of Redlands Parcels .....	14
Figure 7: Completed Flood Control Improvements .....	17
Figure 8: Location of Soil Sampling Points.....	19

## List of Tables

Table 1: Existing Land Uses and Zoning.....	26
Table 2: Potential Benefit and Constraint Analysis for the Project Alternatives.....	29
Table 3: Special-Status Plant Species with the Potential to Occur Along San Timoteo Creek .....	49
Table 4: Sensitive Wildlife Species with the Potential to Occur Along San Timoteo Creek .....	50

## List of Abbreviated Terms

Caltrans	California Department of Transportation
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CTAP	Cooperative Training and Assistance Program
EPA	U.S. Environmental Protection Agency
MSHCP	Multi-Species Habitat Conservation Plan
NCCP	Natural Communities Conservation Planning
NEPA	National Environmental Policy Act
NRHP	National Register of Historic Places
RWQCB	Regional Water Quality Control Board, Santa Ana Region
SAWPA	Santa Ana River Water Project Authority
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
SBCFCD	San Bernardino County Flood Control District





# Chapter 1 Purpose and Need

---

## 1.1 Project Purpose

The goal of this inter-jurisdiction project is to enhance and augment the habitat along portions of San Timoteo Creek. Strategies include land acquisition to expand the width of the corridor as possible, and the establishment of appropriate stream corridor vegetation that will enhance the overall habitat capability.

This project covers approximately 6.58 linear miles of San Timoteo drainage way (see Figure 1 Regional Map). Stretching roughly from the confluence of the Santa Ana River to the Riverside County line, an important facet of this enhancement effort is that it involves multiple agencies with generally aligned interests (see Figure 2-Vicinity Map). Because the subject area extends through primary jurisdictions, the City Loma Linda, the City of Redlands, and the County of San Bernardino are all stakeholders and have direct bearing on the project scope and outcome.

The United States Army Corps of Engineers (USACE) has constructed flood control structures along most of the lower reaches of San Timoteo Creek. As part of the San Timoteo Creek 3B USACE project, mitigation in the form of revegetation has occurred along the north creek banks. The local sponsor of the project, the San Bernardino County Flood Control District (SBCFCD) is responsible for the revegetation and habitat maintenance. The proposed project would supplement and enhance the environmental corridor created as mitigation of the major flood project for the USACE by enhancing habitat on the south side of the creek banks. The proposed project does not overlap any USACE project mitigation areas that are on the north side of the creek (see Figures 4a, 4b, and 4c).

Three distinct areas associated with the enhancement project have been identified. These focus areas are illustrated in Figure 3 and described below. Focus Area Three is outside (upstream of) the footprint of the USACE mitigation area and will include preservation of existing habitat. Focus Areas One and Two supplement the USACE mitigation area by extending habitat enhancement efforts to the south side of the creek. Enhancement for Focus Areas One and Two will occur on the south side of San Timoteo Creek. The enhancement will be non-contiguous, occurring at intervals within the project boundaries and located on land owned by the Flood Control District and the City of Loma Linda. The enhancement will be setback from the south bank of the creek a minimum of 20 feet and will vary from 20 to 50-foot wide. The proposed project is intended to complement the USACE project by providing for additional habitat enhancement within the creek corridor.

### Focus Area One

Focus Area One in Loma Linda, is San Timoteo reach from the Gage Canal to the Barton Bridge crossing (see Figure 3). Funding will be applied to acquiring and environmentally enhancing select parcels adjoining the already completed USACE floodway project. Eleven properties have been identified for fee or easement acquisition and these, in addition to several sites owned by the City of Loma Linda and the County of San Bernardino, will become a part of the project. The focus of the effort in this area will be to widen the potential habitat margin with a series of expanded planting nodes along the main drainage-way that will enable the establishment of a mixture of riparian and upland native vegetation. It is anticipated that these expanded areas will strengthen the wildlife habitat potential for the corridor, primarily for avian species. A key component of this enhancement is the coordination with other local property owners, including Loma Linda University, to ensure the compatibility of the habitat with the character and uses of adjacent properties. It is anticipated that Focus Area One funding can be accomplished through a combination of “in kind” support, City of Loma Linda funds and EPA funds.

### Focus Area Two

Focus Area Two is situated immediately to the east of Focus Area One, stretching from the Barton Bridge to San Timoteo Canyon Road to the east as shown in Figure 3. Focus Area Two will involve the enhancement of land along this reach of San Timoteo Creek, between the USACE project and the anticipated Caltrans Cooperative Training and Assistance Program (CTAP) roadway project. The CTAP project is still in the planning phase and the project timeline, projected at about ten years, limits the potential impact of the EPA grant on this project. The precise route, which has not yet been determined, may affect the location of the proposed wildlife corridor. Thus the EPA grant presents an opportunity for the planning departments of the cities of Loma Linda and Redlands to participate in the route decision, representing the interests of the wildlife corridor in the planning process. Three properties covering less than half acre and lying within the City of Loma Linda south of California Street are being considered for acquisition. Other properties under private ownership would be required for easements or common use permits.

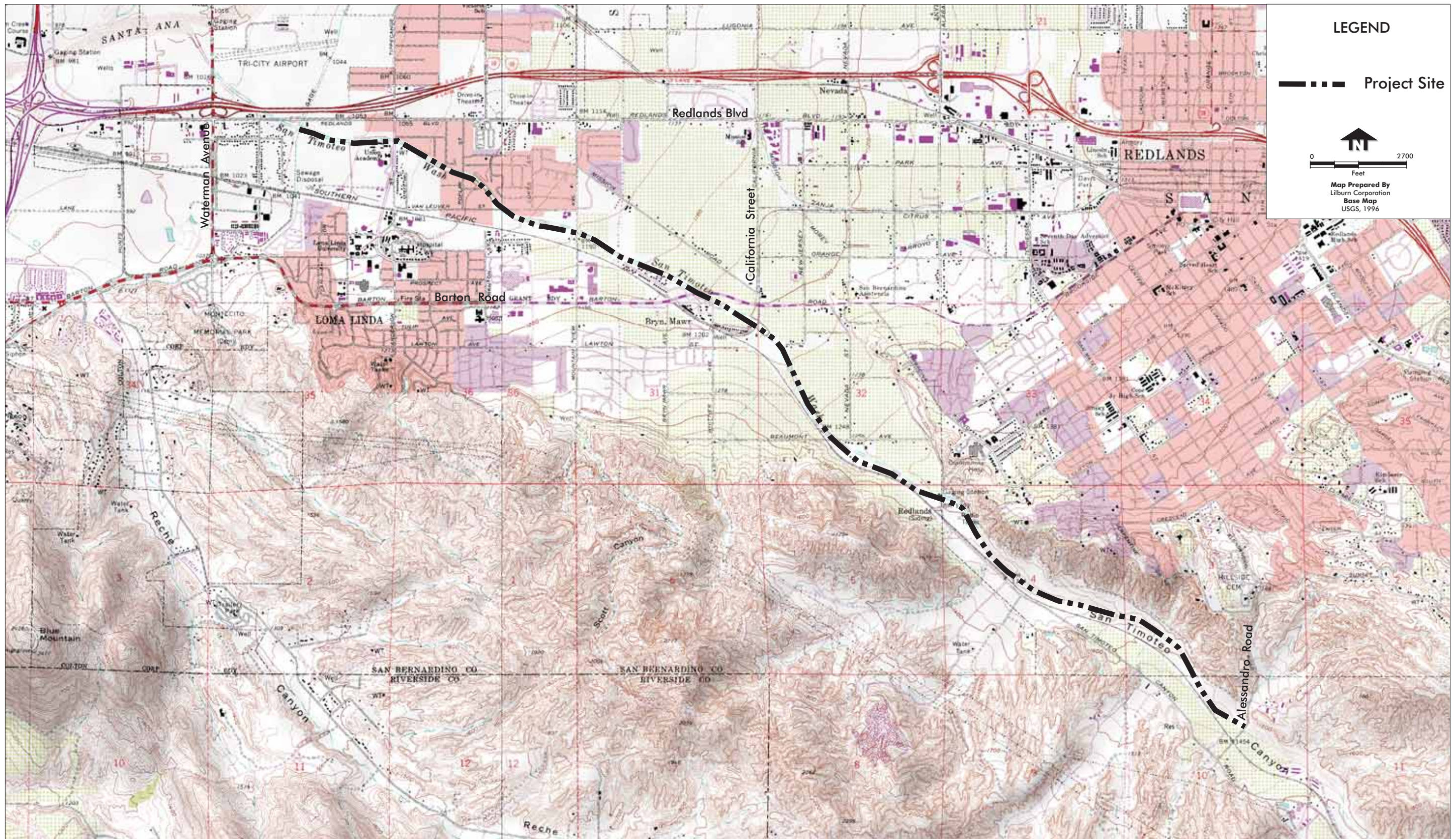
The key component of this part of the project will be coordination with the CTAP project to assure the best possible alignment and to coordinate schedules. Funding for the planning portion of Focus Area Two is anticipated to come from in kind fees, and State (Caltrans) and County matching funds. The enhancement work in Focus Area Two will not be funded at this time, as it will be performed in conjunction with the CTAP project at a later date. This effort will be in addition to the required USACE habitat mitigation work and will expand the habitat area within



## Regional Map

San Timoteo Creek - Habitat Enhancement Project  
 Cities of Loma Linda and Redlands  
 San Bernardino County, California

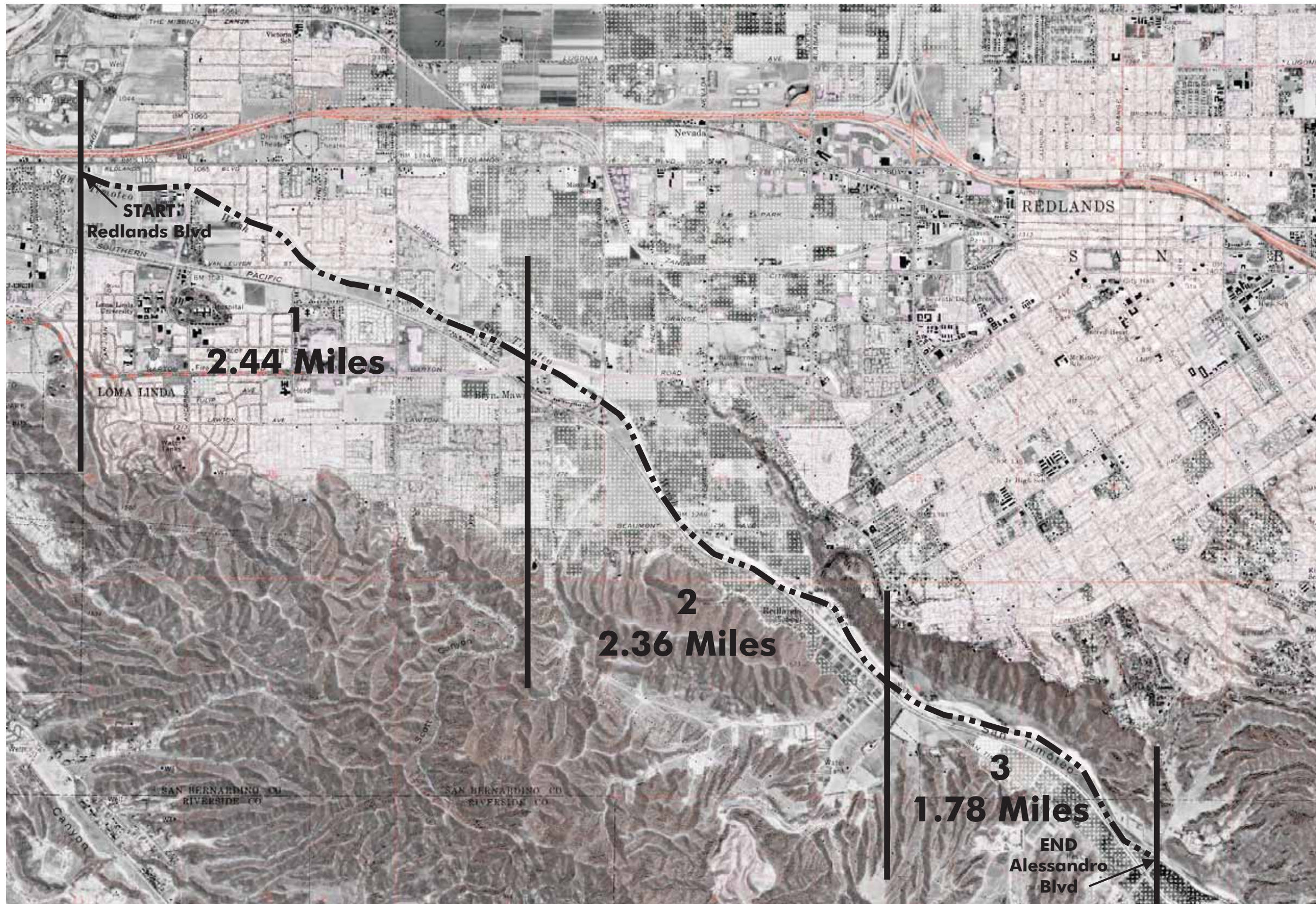




### Vicinity Map

San Timoteo Creek - Habitat Enhancement Project  
 Cities of Loma Linda and Redlands  
 San Bernardino County, California





**LEGEND**

**1** Focus Areas

--- Limits of Enhancement Project

0 4400  
Feet

Map Prepared By  
Lilburn Corporation  
Base Map  
USGS, 1996

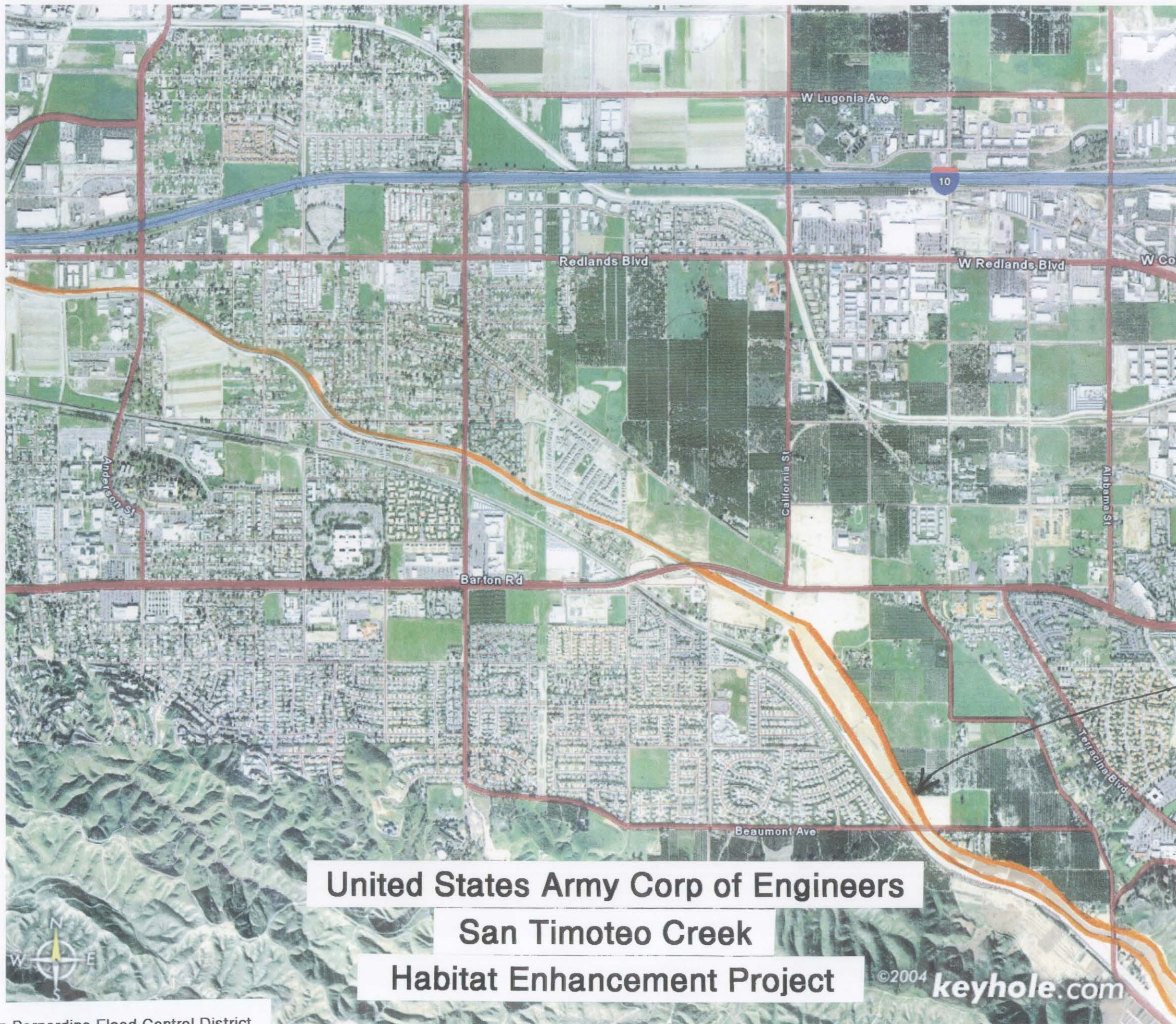
**Project Portion Boundaries**

San Timoteo Creek - Habitat Enhancement Project  
 Cities of Loma Linda and Redlands  
 San Bernardino County, California









Includes 20' wildlife corridor  
plus additional 30'-50' slope  
& invert vegetation







the floodway but outside the USACE-defined mitigation area and will not involve any of the USACE-defined mitigation areas.

### Focus Area Three

Focus Area Three is immediately east of Focus Area Two and is within the City of Redlands. The area stretches from San Timoteo Canyon Bridge to the Riverside County boundary (see Figure 3). The proposed scope for this area integrates land acquisition and habitat preservation by maintenance of existing open space lands. Proposed for this Focus Area is the acquisition of some large parcels adjoining San Timoteo Creek for habitat preservation purposes. Funding for this portion of work is anticipated to come from EPA grant funds, donation of the City of Redlands properties, private property donations and in kind fees. The Redlands City Council has taken action (December 5, 2006) to commit the use of City-owned parcels to serve as the required 45% match commitment for the EPA Grant. These properties (APNs 175-011-77 and 62, 175-122-11, 175-131-01, 18, and 24, and 294-121-31) will be dedicated by the City as permanent open space and maintained as a land conservancy.

Potential enhancement sites in the City of Loma Linda and acquisition sites in the City of Redlands have been identified for evaluation purposes and are mapped and listed in this EA. Meetings with the owners, appraisal information, and scientific studies will be utilized to narrow the list of potential acquisitions to those that can be acquired from 'willing sellers', have soils suitable for the proposed enhancement, and provide adequate space for beneficial enhancement in a cost-effective manner.

Relevant plans and exhibits will be developed to evaluate the potential for, and location of, enhancement work to support desirable avian species along the banks of San Timoteo Creek. A suitable planting palette will be developed and site appurtenances will be selected to enhance the natural beauty of the habitat. These plans and exhibits will be developed in compliance with this NEPA process, as well as local agency approval processes. Signage will be developed to enhance the project and increase public knowledge about habitat and hydrologic issues in the region. Each of the cities will be responsible for irrigation to establish new planting and maintenance of vegetation along the creek.

Two federal appropriations from the U.S. Environmental Protection Agency (EPA) have been earmarked for San Timoteo Creek environmental enhancement totaling \$2,475,100. The three local participating jurisdictions will be responsible together for matching 45% of the federal funds. The grant (ID # XP-97907401-0) is authorized under the Appropriations Act of 1999 as amended by the Omnibus Consolidated Appropriations Act of 1999.

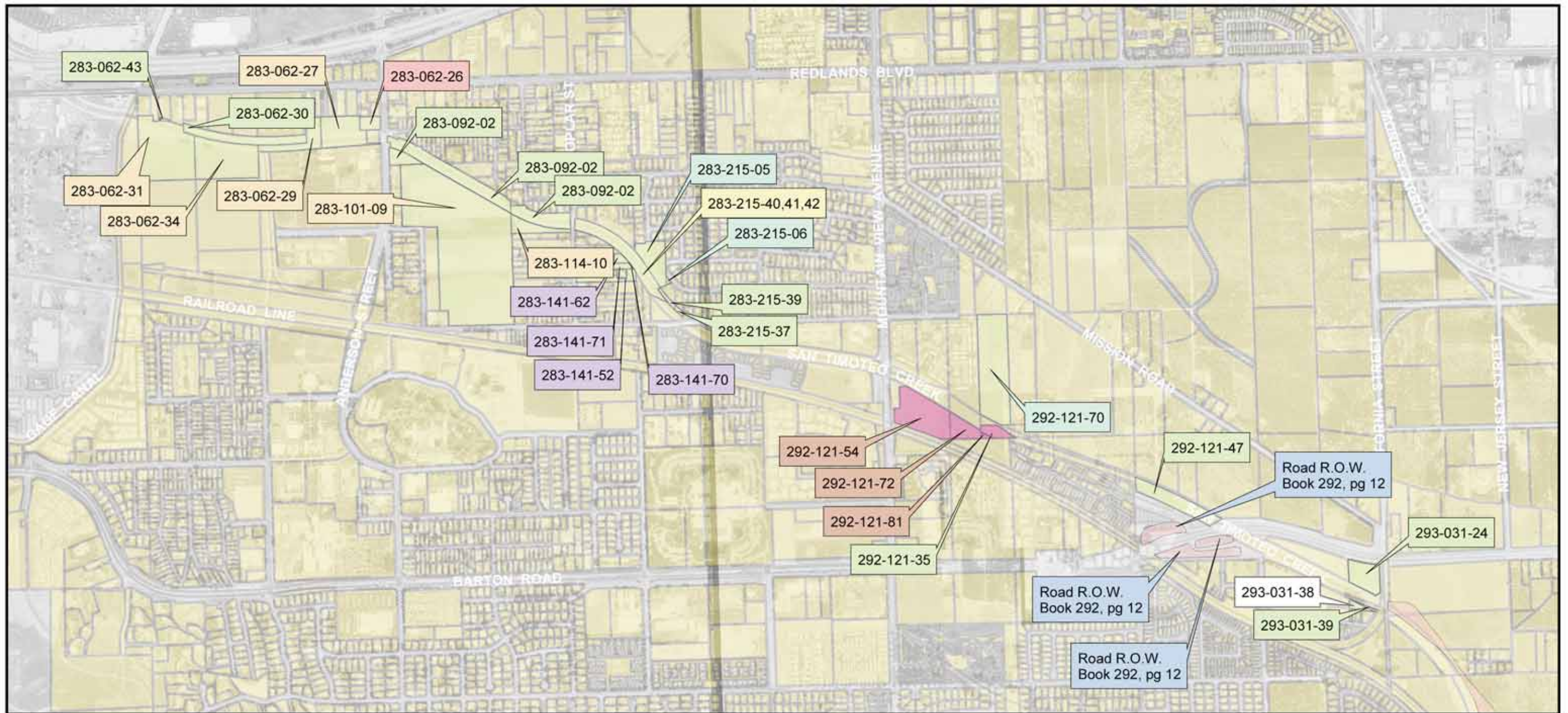
The purpose of this Appropriations Act Grant is to fund environmental restoration of San Timoteo Creek. Restoration is the return of an ecosystem to a close approximation of its previously existing condition. Restoration attempts to emulate the processes, structure, function, and diversity of a specified ecosystem, in this case, the riparian ecosystem associated with San Timoteo Creek. It is recognized that it is no longer possible to restore certain reaches of San Timoteo Creek to a pristine condition. Therefore, restoration goals should be clearly defined in order to properly measure the project's success.

As part of the on-going improvements to San Timoteo Creek, the USACE along with the SBCFCD as the local sponsor, have been providing creek enhancements within the creek right-of-way. The natural enhancements would augment those funded under this EPA grant and should contribute to the establishment of native vegetation. The USACE continues to provide restoration activities and has been monitoring the establishment of native revegetation (upland and riparian and wetlands communities) since 2002. On-going horticultural monitoring focuses on the fitness and health of the planted species and identification of maintenance needs. The final phase of restoration is expected to be completed in early 2007.

The City of Loma Linda was the named recipient for both environmental enhancement-targeted funds. However, after careful consideration, the City of Loma Linda resolved that it could not make full use of the entire awarded amount of Federal funds because of the limited physical area available for applying the enhancement improvements and the improbability of being able to generate the required matching fund. The City determined that it could make use of portions of the awarded amount and pass-on the remainder of the fund to be applied to the adjoining City of Redlands and unincorporated County lands along the Creek. The benefit of grant sharing is that it will assist in meeting the EPA criteria by increasing the habitat enhancement to portions of the creek in the City of Redlands and unincorporated County areas located between the two cities. It also scales down the grant amount (and matching funds) to a more manageable amount for the cities and County. The City of Loma Linda has approved a resolution for undertaking the pursuit of EPA funds, sharing portions of both fund benefits and the obligations for meeting the matching fund obligations and assuming the administrative role for the entire enhancement program. Similar resolutions were previously adopted by the City of Redlands and the County of San Bernardino in 2001.

A portion of the grant would contribute to the acquisition of approximately 10 parcels, easements, or long-term land leases along San Timoteo Creek within the City of Loma Linda (see Figure 5). The application of various properties to the project is being discussed between landowners and the Cities; final acquisitions and/or easements will occur following approval of this environmental document. Due to the existing development adjacent to the Creek, there are





Source: The Dangermound Group, 12/06.

### Legend

- Potential Restoration Parcels
- Potential Acquisition Funds Needed - 9.5 acres - \$325,000 additional funds needed
- Army Corps of Engineers Right of Way north of San Timoteo Creek
- Private
- L.L. University
- San Bernardino County Flood Control District
- San Bernardino County Transportation
- CA State
- Loma Linda
- Conditioned



### Loma Linda Parcels

San Timoteo Creek - Habitat Enhancement Project  
 Cities of Loma Linda and Redlands  
 San Bernardino County, California



very limited opportunities to establish habitat in Loma Linda's urbanized area. The majority of the grant (nearly 75 percent) would be used for property acquisition in San Timoteo Canyon area of the City of Redlands (see Figure 6). The habitat along the creek in this area is fairly well established and will be preserved as open space in a land conservancy. The project area will be further enhanced by habitat established by the USACE project within the creek right-of-way.

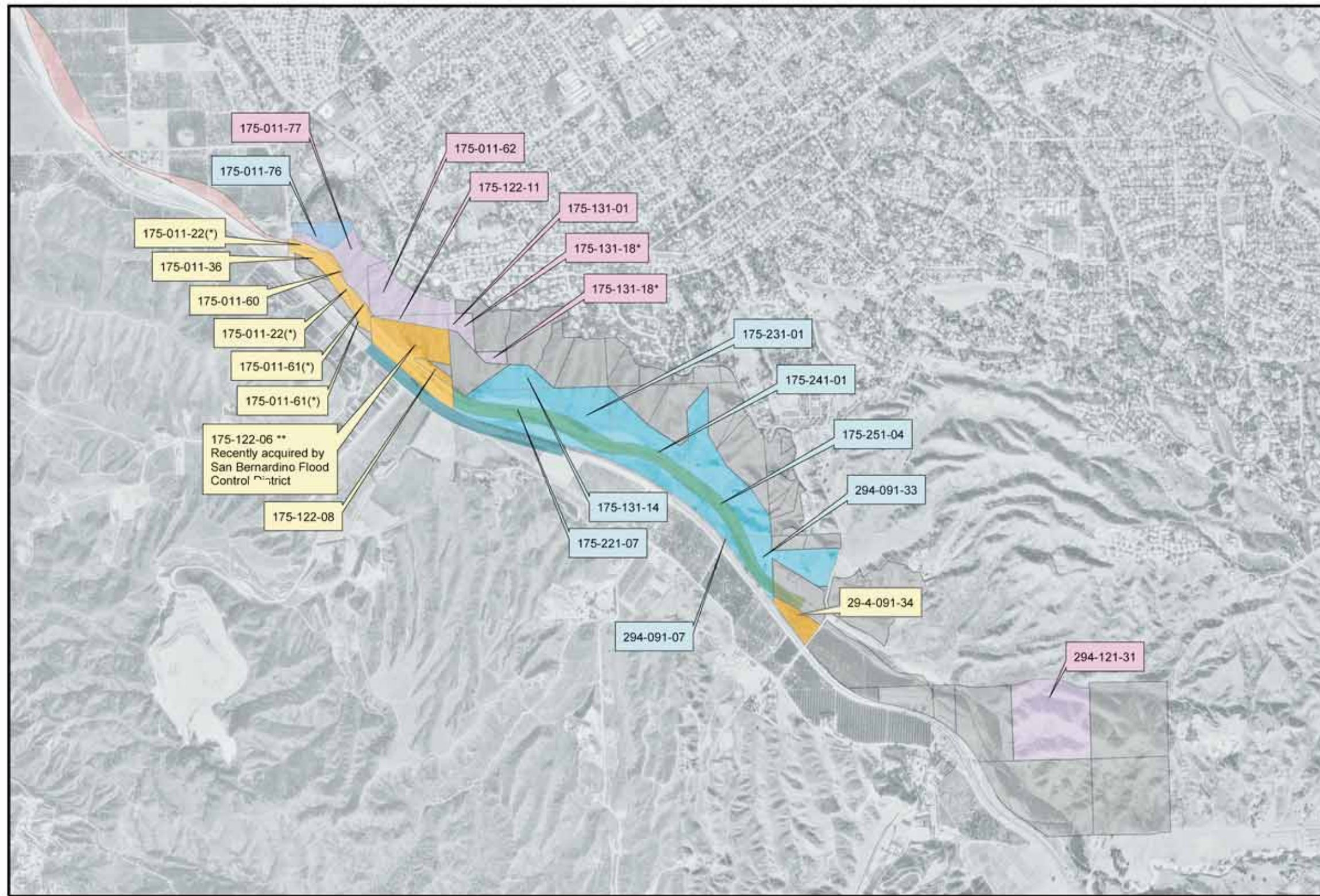
## 1.2 Project Need

This greater watershed of San Timoteo is in the path of rapid urbanization that has already impacted the water retention capacities of the adjoining uplands and consequently increased the potential for floods along the lower reaches of the stream. The USACE has implemented flood control measures along segments of the lower San Timoteo drainage areas and the stretch of creek between the cities of Loma Linda and Redlands. Concurrently, there are environmental enhancement and mitigation efforts underway for significant portions of the Santa Ana River from the confluence point with San Timoteo Creek to the Prado Dam near Corona in Riverside County.

In addition, wildlife corridors are essential in geographically diverse settings, and especially in urban settings, for the sustenance of healthy and genetically diverse biological communities. At a minimum, they promote colonization of habitat and genetic variability by connecting fragments of like habitat, and help sustain individual species distributed in and among habitat fragments. Habitat fragments, by definition, are separated by otherwise foreign or inhospitable habitats, such as urban/suburban tracts. Isolation of populations can have many harmful effects and may contribute to local species extinction.

A viable wildlife corridor consists of more than a path between habitat areas. To provide food and cover for transient species as well as resident populations of less mobile animals, a wildlife corridor must also include pockets of vegetation. Due to the decrease in habitat value as a result of urbanization, it requires considerable effort and expense to open and restore these corridors.

Fully functional wildlife corridors linking the Santa Ana River and Prado Basins on the west with the San Bernardino, San Gorgonio, and San Jacinto Mountains to the east are few. San Timoteo Creek provides one of the only remaining linkages that present the opportunity to restore and enhance wildlife corridors and avian habitat, between these major east and west natural areas. Additionally, San Timoteo Creek connects the natural areas along the Santa Ana River and the upstream San Timoteo Canyon.



- Legend**
- Cardinal - To Be Acquired
  - 200' County Flood Control Easement
  - Miko Parcels - To Be Acquired
  - Other Owners
  - San Bernardino County Flood Control District
  - ROW - Army Corps of Eng - Flood Control Project
  - ROW - Army Corps of Eng - Flood Control Easement
  - City of Redlands Match Parcels - Intended to be used as project match

- \* Indicates APN's with multiple parcels
- Private
  - Redlands
  - San Bernardino County Flood Control District

Source: The Dangermound Group, 12/06.

### Redlands Parcels

San Timoteo Creek - Habitat Enhancement Project  
 Cities of Loma Linda and Redlands  
 San Bernardino County, California



The habitat enhancement of the lower reaches of San Timoteo drainage is therefore viewed as a priority enhancement area because of the advanced degradation of this area, and conversely, its potential for contributing to greater continuity between existing upstream viable riparian habitat lands and major downstream habitat enhancement efforts already underway.

### **1.3 Project Background**

San Timoteo Creek, a tributary to the Santa Ana River, flows through portions of San Bernardino and Riverside counties. Its origin is in the San Bernardino Mountains at the confluence of Noble and Little San Gorgonio creeks west of the City of Beaumont. Within San Timoteo Canyon, it receives flow from Yucaipa Creek, and then proceeds down through the canyon. Historically, it reached a broad alluvial plain in its downstream reach, and eventually the Santa Ana River in the City of San Bernardino. In the past, San Timoteo Creek flowed intermittently but now flows year-round due to agricultural runoff and secondary treatment discharge from a water treatment plant in the City of Yucaipa.

In 1987, the Federal Emergency Management Agency (FEMA) issued a flood insurance rate map, which designated 876 acres of land adjacent to San Timoteo Creek as floodway. Flood protection for San Timoteo Creek was authorized by Congress and added to the Santa Ana River Mainstem Project in Section 104 of the Energy and Water Development Appropriations Act of 1988. As of 1999, 901 acres of floodway and 1,582 acres of floodplain were designated as such within the City of Loma Linda. Floodway is a specific area of the greater floodplain, which must be reserved to convey base floods without cumulatively increasing water-surface elevation greater than one foot. In the City of Loma Linda, no construction is allowed in the FEMA-delineated floodway and structures constructed in the floodplain must be elevated or flood-proofed.

Reasons for pursuing flood protection are to ensure human safety and to maximize economic benefit by preventing flood damage to property, thereby increasing property value. Designs for flood control on San Timoteo Creek were pursued prior to the Santa Ana River Mainstem Project. The U.S. Fish and Wildlife Service (USFWS) prepared a Planning Aid Report dated October 21, 1985, on San Timoteo Creek Project Alternatives and a Draft Fish and Wildlife Coordination Act Report in 1988. The U.S. Army Corps of Engineers (USACE) provided the USFWS with a Special Report and an Environmental Assessment in 1990, and a Supplemental Environmental Assessment for a flood control project in April 1994. At the time, the USACE proposed project was basically a trapezoidal concrete-lined channel and some sediment catch basins (called the “authorized” plan in subsequent USACE documents), with the project extending from the confluence of the Santa Ana River upstream 6.4 miles.

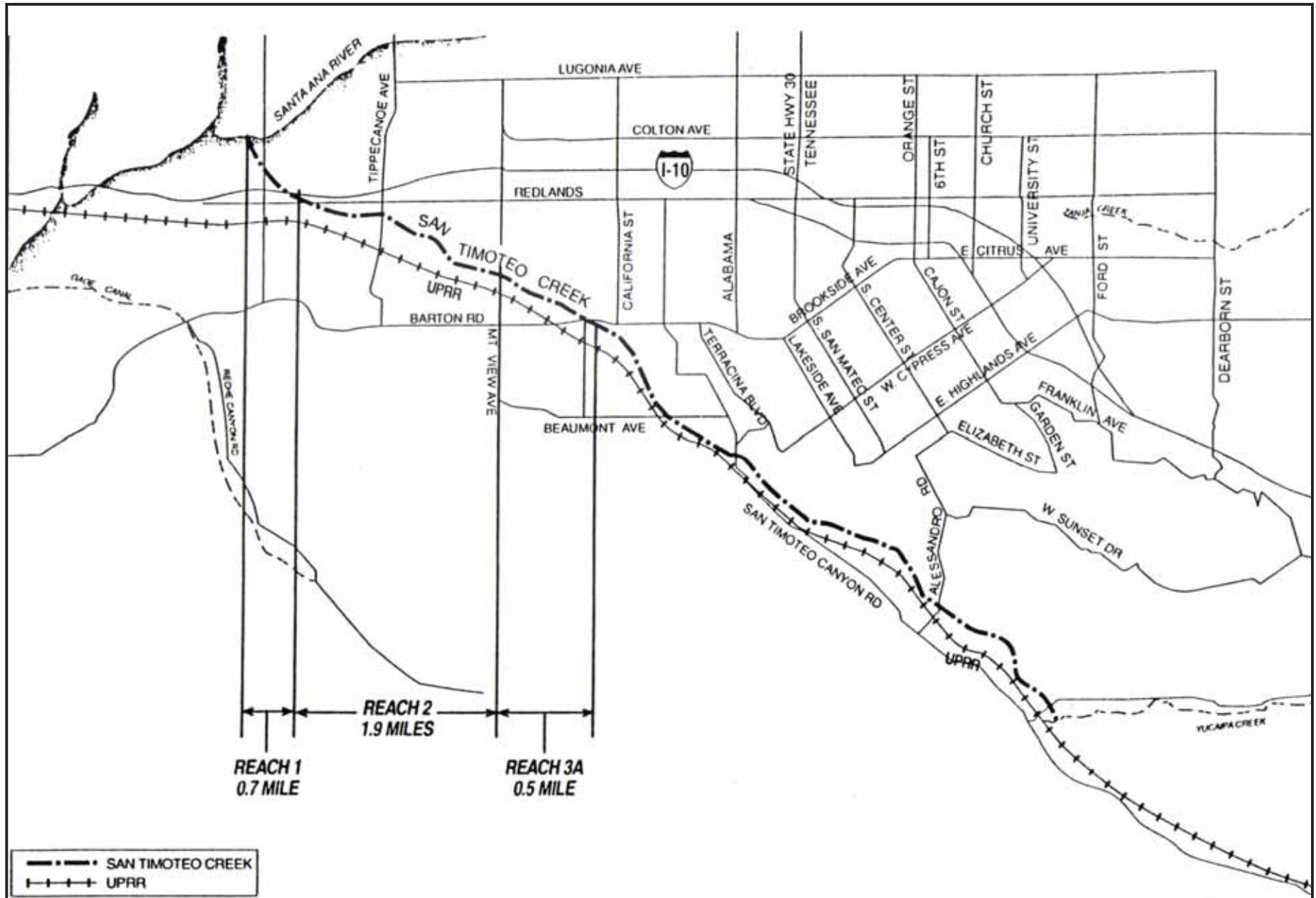
Conditional certification for the USACE authorized plan was granted under section 401 of the Clean Water Act. The first condition of this certification was implementation of USFWS recommendations in their August 1995 Special Report, which included consideration of other project alternatives that retained and enhanced riparian resources, and considered wildlife conservation and habitat connectivity. Before the last Draft Report was submitted to the USACE in 1995 for review, the USFWS was working with the USACE to identify environmentally sensitive alternatives, impacts, and adequate mitigation for the proposed channelization project.

At that time, the USFWS supported an alternative using a soft-bottom channel as being the most environmentally sensitive alternative presented by the USACE consultants. Although there was an expressed desire for a more aesthetic, “natural-looking” channel that preserved native vegetation and continued to function as a wildlife habitat, at the time a soft-bottom channel was cost prohibitive and would not have been in public’s interest. Therefore, the USACE proceeded with a portion of their authorized plan - the concrete-lined channel. It stretched from the confluence of the Santa Ana River upstream 3.1 miles through sections of San Timoteo Creek labeled Reaches 1, 2, and 3A (see Figure 7). Public opposition to extension of this type of concrete-lined channel in more upstream portions of San Timoteo Creek motivated the USACE to consider other project designs for future construction plans.

Reach 3B, is in the area upstream of the existing concrete-channel, running from Barton Road to upstream of San Timoteo Canyon Road bridge (see Figure 7). This project includes a soft-bottom channel through most of the project footprint. When USFWS originally suggested the soft-bottom channel as an alternative to the authorized plan, it was for the entire stretch of San Timoteo Creek from its confluence with the Santa Ana River upstream to just south of Alessandro Road. The existence of the concrete-channel constructed in Reaches 1, 2, and 3A precludes the Creek’s ecological corridor function, and therefore, has broken the habitat linkage previously provided by San Timoteo Creek. San Timoteo Creek is a locally and regionally important wildlife linkage or corridor that should be conserved and enhanced.

The existing San Timoteo Creek has been modified for flood control. Vegetation clearing and soil removing activities by the San Bernardino County Flood Control District have reduced the vegetative cover necessary for the Creek to wholly operate as a wildlife corridor along the upper end. These activities have prevented the Creek channel from becoming a naturally vegetated area, which would be expected to provide viable habitat for sensitive species. In the absence of these activities, one would expect the Creek channel to support an understory and overstory of riparian vegetation.





## Completed Flood Control Improvements

San Timoteo Creek - Habitat Enhancement Project  
 Cities of Loma Linda and Redlands  
 San Bernardino County, California

San Timoteo watercourse is one of the last major drainage systems in the inland area of Southern California with some significant remnants of riparian vegetation and habitat. The remaining riparian corridor provides important habitat for wildlife, particularly migratory avian species. The importance of the habitat values of the area has been long recognized, but of even greater importance is the role of the area as a wildlife corridor. San Timoteo is strategically situated in relation to other important habitat areas including the Badlands, the San Gorgonio and San Jacinto Mountains, Lake Perris State Recreation Area, and Box Springs Mountain Park area. Because of the geographical relationship of these habitat areas to San Timoteo and the Santa Ana River drainage to the north, San Timoteo corridor has historically served as a primary corridor for multiple animal species. This proposed enhancement project will focus on the more northerly (urbanized) reaches of San Timoteo Creek and is viewed as contributing to the re-establishment of a wildlife corridor linkage at a regional scale.

In June 2004, Revegetation and Wildlife Management Center, Inc. prepared a document titled *Evaluation of the Potential of San Timoteo Creek for Revegetation with Native Riparian Species* (see Appendix C). In early June 2004, 56 soil samples were collected along San Timoteo Creek in an effort to evaluate the area relative to suitability for revegetation with riparian species. The samples were taken on parcels located on both the north and south sides of the Creek prior to the project boundaries being limited to parcels on the south side. The data set included information on surface and subsurface soil texture, surface and subsurface salinity estimates, depth to the water table, and soil moisture levels three to four feet below the surface. In addition, the vegetation present near the sample points was also recorded. The sample points were distributed according to a systematic design (see Figure 8).

The data analysis revealed that overall the soil is mostly sand, although it is not totally devoid of clay content. Surface and subsurface soil texture were about the same. The soil found in the area is generally quite suitable for riparian plant species.

The salinity level, as indicated by measure of soil electrical conductivity, was found to be slightly higher on the surface than at three to four feet below the surface. Most of the area was found to have salinity levels below the upper tolerance limit of typical riparian species such as cottonwood and willow – a positive finding.

The water table was estimated to be 20 to 40 feet below the surface. Where willows thrive, the water table is not more than about six feet deep and not more than eight feet where cottonwoods are typically found in peak condition.





Source: Evaluation of the potential of San Timoteo Creek for Revegetation with native riparian species, June 2004.

### Location of Soil Sampling Points Report Map

San Timoteo Creek - Habitat Enhancement Project  
 Cities of Loma Linda and Redlands  
 San Bernardino County, California



Sandy soil moisture levels must have a minimum level of two to three percent of dry soil weight before plants can pull water from it. The moisture content must be higher as the amount of clay in the soil increases. The more clay, the greater the difficulty plants have in extracting water. The soil found in the study area must have moisture of three to five percent of dry soil weight for plants to draw the water out because of the presence of some clay. Most of the soil samples had soil moisture levels in this narrow range indicating that the soil contains a few days supply of water available to plants. Without being recharged regularly, plants planted in this soil would begin to show signs of stress eventually becoming stunted or they might simply die.

The project alternatives are to reestablish the wildlife connections along San Timoteo Creek by vegetating an average 30-foot wide strip of land after a setback of 20-foot from the edge of the creek with native trees and shrubs. This would require easements, common use agreements and property acquisitions in some parcels for access to the project site. The planting would take place based on the alternative selected. The properties being considered are discussed in detail in the next chapter.



---

## Chapter 2 Project Alternatives

---

### 2.1 Alternative Development Process

The purpose of the proposed project is to enhance the ecological environment along portions of San Timoteo Creek that are presently in a state of neglect or highly disturbed. The proposed project includes parcels of land that were not a part of the USACE mitigation efforts for the San Timoteo Creek 3B project. This creek has been an important wildlife corridor linking sensitive animal species and migratory avian species to the larger ecological region including the Badlands, the San Gorgonio and San Jacinto Mountains, Lake Perris State Recreation Area, and Box Springs Mountain Park area. In addition, several riparian habitats having distinctive features from the neighboring upland communities are characteristic to this creek. Some of the common riparian habitats identified along San Timoteo Creek are southern riparian scrub (e.g. mulefat scrub and elderberry savanna), southern willow scrub, and southern cottonwood willow riparian forest. For these reasons, preservation and conservation of sensitive flora and fauna habitats along San Timoteo Creek has been given consideration by the three participating agencies.

The agencies have identified the following objectives for the project and for evaluating alternatives to the proposed project for determining the environmentally superior alternative and the preferred alternative.

- To enhance and augment the habitat along portions of San Timoteo Creek.
- To re-establish a wildlife corridor linking major east and west natural areas.
- To preserve and conserve the riparian and wetland communities.

### 2.2 Project Alternatives

In view of the above stated goals and objectives, three alternatives to the proposed project were evaluated. These alternatives were developed based on the availability of resources such as land, existing and proposed land use and zoning regulations, and financial incentives. Some of the potential constraints for the project could be the uncertainty of the Caltrans Cooperative Training and Assistance Program (CTAP) roadway project. As a major portion of the project in Focus Area 2 for enhancing the wildlife corridor depends upon definite boundaries of the CTAP project, this phase may be implemented as a later phase. Another important aspect for alternative selection would be the conditions imposed by EPA for using the grants.

The following alternatives were considered for the project:

1. *No Build Alternative*: No change to prevailing ruderal conditions
2. *Build Alternative 1*: Habitat enhancement in Loma Linda and Redlands (the proposed project)
3. *Build Alternative 2*: Habitat preservation in Focus Area 3 lying only within Redlands
4. *Build Alternative 3*: Enhancing public open spaces and recreation areas in the City of Loma Linda and the City of Redlands

### **2.2.1 “No Build” Alternative**

The “No-Build” alternative would bring no change to the existing site conditions along the creek. A preliminary site assessment of the project area was conducted in April 2004 and is attached as Appendix D- *San Timoteo Creek Habitat Enhancement Program Phase I Environmental Site Assessment*. Most of the properties under consideration at the time for the project were unvegetated and undeveloped parcels. Some of the properties that lie in the backyard of single-family residences were found to be in poor condition. Mounds of fill-dirt and trash were observed in random location along the creek. In addition, debris (lumber, coolers, sofas, etc.) was found along the northeastern portion of the site. The properties are presently in a state of neglect and improper maintenance creating a visual and aesthetic nuisance.

The proposed General Plan for the City of Loma Linda has delineated these areas for expanding medium density residential, mixed use, commercial and industrial uses in the future. Within Redlands, the project area is designated for resource preservation and for flood control and habitat preservation.

With the No-Build project alternative, the areas adjacent to the creek would suffer significant habitat loss considering the pressures due to urbanization. As discussed earlier, San Timoteo Creek is identified as an important wildlife corridor serving the habitat areas in the San Timoteo Creek and Santa Ana drainages. The San Timoteo watercourse is the last major drainage system in the Inland Empire that provides for the opportunity to enhance wildlife corridors and avian habitat. Other systems, such as the Santa Ana River, have planned recreational facilities (e.g. trails), or other adjacent lands uses that would not be compatible with the establishment and enhancement of wildlife habitat. San Timoteo Creek’s remaining riparian vegetation is particularly important for migratory avian species. This alternative may result in a significant reduction of any open space serving the multiple animal species, making the preservation and enhancement of the habitat less feasible in the future.

The planned urbanization of the parcels along the creek will further limit the public access to the creek for any recreational purpose. The prevailing conditions of neglect on most of the parcels may continue in the future, resulting in further reduction of the more suitable vegetated habitat along the creek. The vegetation in the area is prone to fires during summer. This project alternative would not bring any changes to the existing condition and would continue to need maintenance for fire protection (e.g. weed abatement).

This alternative would not have the temporary noise and air quality impacts associated with the enhancement of vegetation and a wildlife corridor under the proposed build alternative. In general, the overall loss of vegetation will continue to make way for further urbanization. San Timoteo Creek habitat, already on the verge of disappearing, is presently in need of enhancement. This alternative would result in continued degradation of the habitat, making it eventually unsuitable for wildlife habitat, and thereby having negative repercussions on wildlife populations.

### **2.2.2 Build Alternative [1]: Habitat Enhancement and Preservation in Loma Linda and Redlands**

The “Build Alternative 1” is the Proposed Project and considers revegetation on certain parcels within a 6.58-mile portion of San Timoteo Creek to restore and rehabilitate the wildlife corridor. The benefits of this proposal would filter into the long-term sustenance of the creek. Currently the area adjoining the creek is in a state of neglect. The proposed project (“Build Alternative 1”) would require easement rights, common use agreements and land acquisition to gain access to the properties for revegetation and maintenance. Table 1 lists the parcels proposed for the project and existing land use designations. The locations of these parcels are shown on Figures 5 and 6.

Easement rights, common use agreements and land acquisitions will be required to widen the potential habitat to an average of 30 feet (width will vary) with a series of expanded planting nodes along the main drainage way that will enable the establishment of a mixture of riparian and upland native vegetation.

The proposed revegetation plan prepared for the parcels within the City of Loma Linda illustrates the existing and proposed vegetation along the creek. On an average a 20-foot wide setback would be maintained from the edge of the creek to the revegetation boundary. No revegetation would occur on the parcels in Redlands; they would be maintained as open space and support native vegetation. Preservation of existing habitat in perpetuity, through conservation easements would occur on the properties in Redlands.



**Table 1**  
**Existing Land Use and Zoning Designations**  
**For San Timoteo Creek Habitat Enhancement Program**

<b>PARCEL</b>	<b>JURISDICTION</b>	<b>EXISTING LAND USE DESIGNATION</b>
283-092-02	City of Loma Linda	Special Planning Area: Mixed Use
283-141-52	City of Loma Linda	Medium Density Residential
283-141-62	City of Loma Linda	Medium Density Residential
283-141-70	City of Loma Linda	Medium Density Residential
283-141-71	City of Loma Linda	Medium Density Residential
283-215-40	City of Loma Linda	Low Density Residential
283-215-41	City of Loma Linda	Low Density Residential
283-215-42	City of Loma Linda	Low Density Residential
292-121-35	City of Loma Linda	Public Open Space
292-121-47	City of Loma Linda	Barton Road R-O-W
292-121-54	City of Loma Linda	Business Park
292-121-72	City of Loma Linda	Business Park
292-121-81	City of Loma Linda	Business Park
293-031-25	City of Loma Linda	Barton Road R-O-W
293-031-33	City of Loma Linda	Barton Road R-O-W
293-031-38	City of Loma Linda	Medium Density Residential
293-031-39	City of Loma Linda	Medium Density Residential
175-011-76	City of Redlands	Resource Preservation
175-011-77	City of Redlands	Resource Preservation
294-091-07	City of Redlands	Resource Preservation
294-091-33	City of Redlands	Resource Preservation
175-122-06	City of Redlands	Resource Preservation
175-131-14	City of Redlands	Resource Preservation
175-131-24	City of Redlands	Resource Preservation
175-221-07	City of Redlands	Resource Preservation
175-231-01	City of Redlands	Resource Preservation
175-241-01	City of Redlands	Resource Preservation
174-251-04	City of Redlands	Resource Preservation
175-011-62	City of Redlands	Parks and Golf Courses
175-122-11	City of Redlands	Parks and Golf Courses
175-131-01	City of Redlands	Parks and Golf Courses
175-131-18	City of Redlands	Parks and Golf Courses
294-121-31	City of Redlands	Resource Preservation
294-091-35	City of Redlands	Resource Preservation
294-101-21	City of Redlands	Resource Preservation
294-121-20	City of Redlands	Resource Preservation

Sources: Redlands General Plan and Loma Linda General Plan

The proposed revegetation plan has six broad areas for revegetation on an average 30-foot wide strip of land. The planting areas are identified along the south side of the Creek, depending on the location of properties identified for acquisition and availability of land (refer to Appendix E).

Past Biological investigations conducted within the project area indicated that no endangered or threatened species were present. However, the San Bernardino County Museum has found Least Bell's vireo and Southwestern willow flycatcher, both listed as federal and State Endangered species, nesting near the creek corridor upstream and downstream of Alessandro Road (*communication from Jim Borcuk, S.B. County Flood Control District, September 2005*).

In June 2004, the Revegetation and Wildlife Management Center, Inc. prepared a document titled "Evaluation of the Potential of San Timoteo Creek for Revegetation with Native Riparian Species". The data analysis indicated that overall the soil is mostly sandy, although it is not totally devoid of clay content. Surface and subsurface soil texture were about the same. The soil found in the area is generally quite suitable for riparian plant species. The riparian communities that occur along the creek are Southern Cottonwood-Willow Riparian Forest, Southern Willow Scrub, Mulefat Scrub, Coastal and Valley Freshwater Marsh, Elderberry Savanna and disturbed wetlands. The wetlands and riparian communities are present in patches along the creek. These wetlands are rich in native and exotic plant species. Presently much of the Creek channel property from immediately upstream of San Timoteo Canyon Road to the flood control channel downstream at Barton Road is not vegetated. This alternative proposes to promote growth of native vegetation species and remove exotic plants not compatible with the climatic conditions of the region.

Wildlife corridors are essential in geographically diverse settings, and especially in urban settings, for the sustenance of healthy and genetically diverse animal communities. San Timoteo Creek may provide one of the only remaining linkages between major east and west natural areas. In addition, San Timoteo Creek connects the natural areas along the Santa Ana River and the upstream San Timoteo Canyon. The project proposes to enhance the regional wildlife linkages between important habitat areas including the Badlands, the San Gorgonio and San Jacinto Mountains, Lake Perris State Recreation Area, and Box Springs Mountain Park area. As San Timoteo Creek has been identified as most suitable for migratory avian species, native trees and shrubs would be planted to support the avian habitat.

No negative impacts on surrounding properties are anticipated; instead the aesthetic and visual quality of the surroundings would be enhanced. The project would not add an additional source of light and glare in the area as it is a revegetation project and does not propose construction of structures or uses that require nighttime lighting.

As the project would utilize a linear strip along the creek, the expansion potential of residential, commercial and industrial land use would not be significantly affected. The project would also allow public access along the creek for recreational purposes (e.g. pedestrian and bike trail). The City of Redlands' General Plan designates the area along the creek as a linear park. This alternative supports the General Plan policies to expand available open space for use by the residents. The portion of the creek traversing through Loma Linda is surrounded by extensive urbanization. The City of Loma Linda's proposed General Plan update has also expanded the urban use along the creek.

This alternative would continue to require fire prevention (e.g. weed abatement) during the summer months and until the new vegetation is established. Enhancement of San Timoteo Creek would not interfere with any emergency response or evacuation plans in either the City of Loma Linda or the City of Redlands. The alternative would not have any adverse impacts on the air quality of the area. The alternative would not affect any identified historic properties or other cultural resources found within or in vicinity of the project boundary.

In conclusion, this alternative (the proposed action) has the potential of creating synergy between the natural habitat and urbanization. The proposal will enhance the visual and aesthetic environment by planting native species suitable for a riparian habitat. The policies for expanding residential, commercial and other land uses will not be impacted, as only rights of access to properties are required for maintenance. Long-term benefits would include enhancement of a wildlife corridor that is on the verge of disappearing, and balancing the demands for future urban expansion with the maintenance of wildlife areas. The Public Works Department of the City of Loma Linda would be responsible for maintenance of new vegetation along the creek. Activities would include maintenance of the irrigation system, vegetation maintenance and clean-up.

### **2.2.3 Build Alternative [2]: Habitat Preservation in Focus Area 3 within City of Redlands**

“Build Alternative 2” includes the undertaking of habitat preservation for Focus Area 3 only, located entirely within the boundaries of the City of Redlands. This alternative would avoid the uncertainty involving the specific location of the wildlife corridor due to the proposed CTAP project in the City of Loma Linda. The parcels identified for acquisition and conservation easements in the City of Redlands are mostly along the northern side of the Creek. Many of the parcels are property of the San Bernardino Flood Control District, San Bernardino County Transportation Department and the City of Redlands, however the majority of the property is presently under private ownership. Approximately 295 acres of land would be affected by this alternative of which approximately 100 acres is owned by public agencies and approximately 195 acres is privately owned. This alternative would result in regional benefits to wildlife habitat

limited to the preservation of the properties in Redlands as the linear extent of the wildlife corridor would be limited. This alternative would limit the 10 mile reach of enhancement to the wildlife corridor to a smaller localized area.

The impacts of this alternative would remain similar to Build Alternative 1 although a smaller area would be affected. There would be no significant noise or air quality impacts associated with this alternative. However, in comparison to the Build Alternative 1, this alternative would not successfully establish a wildlife corridor, restricting the project's objective. Maintenance of a wildlife corridor requires a continuity with other regional habitats. As this alternative does not link the preservation habitat with the revegetation of lower portions of the creek (or the east-west orientation), it does not contribute towards the objective of sustaining a continuous wildlife corridor. Also, the financial support provided by the EPA to the City of Loma Linda is specific to this project and the allocated funds cannot be transferred to any other project or Lead Agency. In view of these limitations, the "Build Alternative 2" does not meet the project objectives.

#### **2.2.4 Build Alternative [3]: Open Space and Recreational Use along the San Timoteo Creek**

The main premise of "Build Alternative 3" is to create open space for public use along the Creek. Statistics reveal that the City of Loma Linda currently falls short of the parks and open space requirement by 36 acres (City of Loma Linda, Draft General Plan, June 2004). This alternative provides an opportunity to increase the acreage of open space per person to meet the criteria set in the Public Services and Facilities Element of the City of Loma Linda's Draft General Plan. As a number of parcels in Loma Linda and Redlands have an open space and resource preservation designation, this alternative supports the General Plan policies of both cities. Public access to the Creek, which is currently limited, could be allowed and bike paths and pedestrian routes created for recreational purposes. Parks and open spaces could be developed on vacant portions of land considered for acquisition. The main benefit of this alternative would be increased recreational trail areas for residents. However, the limited land available for acquisition and corridor widths could limit the use potential for trails.

The vegetative cover for this alternative would be nearly eliminated in order to provide the required area for maintained trails. This alternative would cover approximately 6.58 linear miles along the Creek.

The impacts associated with this alternative are similar to Build Alternative 1 and 2. Air quality, noise, water and geology of the area may be affected for longer periods of time due to the construction of parks, trails and/or open space. The use of the remaining habitat by wildlife may be further compromised by human interaction and regularly-used recreational areas.

Additionally, public access would increase traffic in the area, which would be potentially significant. This alternative does not meet the objectives of the EPA grants for the enhancement of San Timoteo Creek habitat for preserving native vegetation and ultimately enhancing a wildlife corridor. Hence, although this alternative could benefit the communities, it does not meet the project objectives.

## 2.3 Project Alternatives Summary

### *Vegetation- Wildlife Corridor: Enhancement*

The “No Build” alternative would maintain the prevailing ruderal condition within the project boundaries without achieving any of the identified goals and objectives set by the project. The habitat along the south side of creek is presently unsuitable for animals and avian species and is in a disturbed state. The No Build Alternative would further aggravate this condition without any plans for maintenance and replenishment of species. The north side of the creek continues to have habitat enhanced as a part of the USACE 3B project.

Under Build Alternatives 1, 2 and 3, selected portions of properties along the Creek would be landscaped with native plant species to enhance the riparian corridor along the Creek. Sensitive riparian habitats, native plant and animal communities were identified along the creek by various studies. These communities need assistance to thrive and reestablish to their original state. The three build alternatives differ in the acreage of planting along the Creek. Build Alternative 2 limited to Focus Area 3 and the City of Redlands proposes preservation of existing vegetation. This alternative may not establish a continuous vegetation strip connecting lower reaches of the creek with habitat areas upstream, and benefits would be limited to local properties in Redlands, primarily by enhancing the aesthetic quality and maintaining habitat for the local flora and fauna. Build Alternative 3 would provide for preservation of existing habitat and allow for the development of trail areas adjacent to the 20-foot setback from the creek.

The Build Alternative 1 would enhance the ecological environment along the south side of San Timoteo Creek between approximately Redlands Boulevard and Alessandro Road. The vegetation strip of an average 30 foot after a 20-foot setback from the edge of the creek would be planted and maintained. This will contribute to maintaining a wildlife corridor for avian species and terrestrial animals. One of the main incentives of undertaking this project is the ongoing environmental efforts on significant portions of the Santa Ana River from its confluence point with San Timoteo Creek, downstream to the Prado Dam near Corona in Riverside County. The main objective of the project is to link the wildlife habitat in the east-west regions. This alternative is most suitable to achieve the goal.

### *Land use and Zoning*

As discussed under the No Build Alternative, the intense urban activity in the City of Loma Linda has impacted the environment along the San Timoteo Creek thus disrupting its function as a wildlife corridor. The City of Redlands has designated the areas surrounding the San Timoteo Creek as Resource Preservation and Flood Control/Aggregate Preservation/Habitat Preservation in their General Plan, and their zoning ordinance permits agricultural use and low-density rural living in most areas. Considering the southern expansion of the City towards San Timoteo Creek, the future maintenance of the habitat under this alternative is questionable.

Each of Build Alternatives proposes to enhance and augment native vegetation on an average 30-foot wide corridor after a 20-foot setback from the edge of the Creek. The Build Alternatives allow for revitalizing the sensitive wildlife corridor along the Creek through simple measures involving minimum disturbance related to noise, air quality, traffic, public safety, geology and water. These would require easements, common use agreements and land acquisition for an approximately 30-foot wide corridor. The Build Alternatives would be compatible with the general plan and zoning ordinances of the cities of Loma Linda and Redlands, and the County of San Bernardino. None of the alternatives would cause displacement of any significant existing use or activity from the project area. The landowners from whom the property is planned for acquisition would be compensated by acquisition fees. Build Alternatives 1 and 3 would have the maximum impact on the land use as they cover the largest areas. However, these impacts would improve existing conditions and would not have associated adverse conditions.

### *Financial Incentives*

A large portion of this project is being funded by EPA grants that have underlying conditions for use of the designated funds. The funds provided by the EPA are strictly for enhancement of San Timoteo Creek and cannot be used for enhancement of public open spaces and parks or any other use associated with development. For this reason, Build Alternative 3 was rejected as it proposes new park and recreational areas along San Timoteo Creek and is inconsistent with the language defining the project in the Appropriations Act. In addition, any funds remaining after the improvements could not be used for any other project. It is in the best interest of the participating agencies to make full use of the available financial resources. Therefore, Build Alternative 1 is the most viable alternative in view of the conditions discussed above.

## **2.4 Environmentally Superior Alternative**

Four alternatives were considered for the project. The main criteria for evaluating the alternatives included: 1) enhancement of vegetation; 2) re-establishing wildlife corridor; 3) avoiding land use

and zoning conflicts; and 4) maximizing the financial incentives. Other environmental resources including air quality, noise, traffic and circulation, cultural, public health and safety, energy and groundwater, are not discussed in detail for each of the alternatives. This is because none of these resources would experience any major change from the existing condition with or without the project. The “Build Alternative 1”, which achieves most of the goals of the project associated with vegetative development, would have negligible effects on air quality, traffic, noise, and other environmental criteria due to the temporary nature of maintenance activity around the creek. Based on the objectives discussed in the beginning of the section, “Build Alternative 1” was selected for the project. This alternative is most viable and ecologically acceptable in enhancing and restoring the vegetative cover along 6.58 miles of San Timoteo Creek, in turn creating a wildlife corridor for the various regional habitat areas.

## **2.5 Alternatives Considered and Withdrawn**

The City of Loma Linda worked with its local Congressional Representative to define a project that would enhance the environmental conditions of an urbanizing city. The San Timoteo Creek was selected because of its location and the recent projects undertaken by the U.S. Army Corps of Engineers to improve flood control capabilities of the channel.

The City originally moved forward to develop a project within the city limits. The project was expanded from being solely within Loma Linda, to include a greater stretch of the Creek, thereby expanding into the City of Redlands. The alternative of limiting the project to the City of Loma Linda was rejected due to the limited environmental benefit and the potential for future urbanization along more areas of the creek to impact the effects of maintaining and re-establishing a wildlife corridor.



**Table 2: Potential Benefit and Constraint Analysis for the Project Alternatives**

<b>No Build</b>	Focus Area 1, 2 and 3	City of Loma Linda, City of Redlands and County of San Bernardino	<ol style="list-style-type: none"> <li>1. Continuing impacts to habitat areas.</li> </ol>	<ol style="list-style-type: none"> <li>1. Expansion of Urban uses along the Creek.</li> </ol>	<ol style="list-style-type: none"> <li>1. Federal grant funds would not be utilized.</li> </ol>
<b>Build Alternative 1</b>	Focus Area 1, 2 and 3	City of Loma Linda, City of Redlands and County of San Bernardino	<ol style="list-style-type: none"> <li>1. Revegetation at certain parcels of average 30-foot wide corridor on 6.58-mile stretch.</li> <li>2. Establish regional connections with other wildlife corridors</li> </ol>	<ol style="list-style-type: none"> <li>1. Designation of areas along the Creek as open space and habitat conservation in the General Plans as well as establishing conservation easements.</li> </ol>	<ol style="list-style-type: none"> <li>1. Optimum utilization of the available funds.</li> </ol>
<b>Build Alternative 2</b>	Focus Area 3	City of Redlands	<ol style="list-style-type: none"> <li>1. Preservation of existing corridor on certain parcels within approximately 1.78-miles.</li> <li>2. Local wildlife corridor-no regional connections with lower portions of the Creek.</li> <li>3. No enhancement</li> </ol>	<ol style="list-style-type: none"> <li>1. Designation of areas along the Creek for habitat conservation in Redlands General Plan as well as establishing conservation easements.</li> </ol>	<ol style="list-style-type: none"> <li>1. No contribution of EPA funds to enhancement along greater portion of the creek.</li> </ol>
<b>Build Alternative 3</b>	Focus Area 1, 2 and 3	City of Loma Linda, City of Redlands and County of San Bernardino	<ol style="list-style-type: none"> <li>1. Open access to public for recreation.</li> <li>2. May conflict with wildlife habitat.</li> <li>3. Limited area of revegetation.</li> </ol>	<ol style="list-style-type: none"> <li>1. Designation of areas along the Creek as parks and recreation in the General Plans as well as establishing conservation easements.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inconsistent with language describing project in Appropriations Acts.</li> </ol>

<sup>1</sup>Conservation Easements in perpetuity for owned in fee properties.





# Chapter 3      Affected Environment, Environmental Consequences, and Mitigation Measures

---

## 3.1 Hydrology, Water Quality, Stormwater Runoff

The proposed project includes the enhancement of the existing San Timoteo Creek habitat along portions of the creek in the County of San Bernardino and Loma Linda. In order to revegetate some areas along portions of San Timoteo Creek corridor, minimal corridor grading may be required. These grading activities would not affect the drainage pattern along the Creek. The Creek itself will not be altered by the enhancement along portions of its banks. Land will only be graded for the purpose of and prior to revegetation within the corridor. Discharge of sediments during construction, to the creek will be prevented by the City requiring the following in construction documents:

An erosion control plan shall be prepared and implemented for the proposed project that identifies specific erosion control measures to control on-site and off-site erosion from the time ground disturbing activities are initiated through completion of the planting. This erosion control plan shall include the following measures at a minimum:

- a) Specify the timing of grading and planting to minimize soil exposure to rainy periods experienced in southern California.
- b) An inspection and maintenance program shall be included to ensure that any erosion that does occur either on-site or off-site as a result of this period will be corrected through a remediation or restoration program within a specified time frame.

No impact to water quality standards or waste discharge requirements will occur.

Outside of the areas under jurisdiction of the USACE, the County of San Bernardino and the cities (as co-permittees) hold a regional stormwater permit with the Regional Water Quality Control Board (RWQCB), Santa Ana Region. Any projects that exceed one-acre of disturbance are required to file a Notice of Intent, Storm Water Pollution Prevention Plan, and Water Quality Management Plan with the RWQCB.

The project will not degrade local or regional water quality; no chemicals or other hazardous materials are associated with the proposed project. The project will not have any impact on water supplies or groundwater recharge. Irrigation systems that will be placed along San Timoteo Creek corridor shall be serviced by the City of Loma Linda via extensions of existing water lines. The City of Loma Linda has indicated the ability to cover any project water needs. Properties within the City of Redlands will not be irrigated and therefore no new water structures will need to be constructed. There are no recharge areas within the parcels proposed for habitat enhancement and minimal water supply will be required to establish new native vegetation. This project will not impact any drainage patterns or systems. Even though the project will be located in the 100-year flood hazard area, no people or structures will be exposed to the threat as a result of this enhancement project. There would be no impacts to hydrology, water quality, or storm water runoff.

### **3.2 Hazardous Waste/Materials**

In April 2004, Lilburn Corporation conducted a Phase I Site Assessment along the proposed project area. The discussion in this section is based on the report “San Timoteo Creek Habitat Enhancement Program Phase I Environmental Site Assessment” (see Appendix D). One site (APN# 175-251-04) contained numerous 55-gallon drums, which were washed away during storm events of 2005 (per Dave Lovell, S. B. County Flood Control District). The drums were found to be mostly empty or filled with mud and did not result in any contamination on site. The remaining properties surrounding the project do not appear to have been impacted by hazardous material or historical land uses that would impact the project detrimentally.

Removal of hazardous materials would be transitory and would occur prior to the acquisition of land to be used for creek enhancement. No structures are planned for the proposed project area. The proposed project itself will not result in any impacts related to hazardous material. People may use the project area on occasion for recreational purposes.

Historical aerial photographs of the project area were reviewed for signs of commercial, industrial, or other land uses or development on or near the project site that may impact the development to the proposed property for habitat enhancement or similar passive land uses. No signs of previous intense land use development or use that may impact the property were observed. Historical photos and hazardous material databases were also reviewed for any past negative impacts to the site; none were discovered.

A Request for Records Research on the project area was submitted in February 2004 to the San Bernardino County Fire Department, Hazardous Materials Division. The department has been

unable to perform the record search on the parcels as it was beyond the scope of the agency (correspondence dated July 2005). A review of Federal and State environmental databases revealed no environmental concerns or issues, which would be considered “an impairment” to the subject site. The Federal and State records search revealed nine leaking underground storage tanks within the one-mile radius; seven located north/northwest and two located south/southwest of the project area. Remediation has not been completed at these sites; however due to the site-specific nature of the project, any land acquisition or enhancement activities associated with the project would not adversely impact any on-going remediation at these nine sites.

### **3.3 Air Quality**

The project consists of the enhancement and preservation of San Timoteo Creek habitat on an average 30-foot wide corridor between Redlands Boulevard and Alessandro Road. The proposed project would require use of compactors, loaders and other equipment for initial planting on site. The project would not require regular use of equipment, as maintenance would be undertaken manually. There would be no increase in traffic in the area as a result of the proposed vegetation. Therefore, no significant impact to an air quality plan or standard would occur. There will not be any generation or concentration of air pollutants or any objectionable odors as a result of this project. Therefore, there will be no impact to air quality.

### **3.4 Noise**

The proposed enhancement of portions of San Timoteo Creek will not exceed the local noise standards or ordinances. The project may require use of compactors, loaders and other equipment to establish native vegetation along the Creek. This construction activity during enhancement preparation if required, would occur during normal work hours and would not result in substantial impacts. Individuals will not be exposed to excessive ground-borne vibrations or noise. There will not be any temporary or permanent increase in ambient noise as a result of the enhancement and preservation of habitat along the proposed segments of San Timoteo Creek.

### **3.5 Energy**

The revegetation on the corridor, slopes and other enhancement activities along San Timoteo Creek will require equipment for soil compaction and landscaping which would not be energy intensive. Some of these activities will continue after the project completion for regular maintenance and vegetation removal from the flood plains. Fuel and lubricants required to operate equipment would be the only energy use during the life of the project. The proposed enhancement and augmentation of habitat potential for impacted segments of San Timoteo Creek

will not require the use of any energy resources during or after enhancement. Therefore, there will be no impact to energy.

### **3.6 Wetlands and Other Waters of the United States**

Several riparian communities have been identified along San Timoteo Creek, which supported its role as a wildlife corridor. The proposed project is to enhance and augment the vegetation species endemic to such riparian habitats. This section describes the riparian and wetland vegetation communities within San Timoteo Creek Habitat Enhancement Project. This information was adapted from Section 3.3 Biological Resources of the *Santa Ana River Mainstem Project, Including Santiago Creek, San Timoteo Creek Reach 3B Final Environmental Impact Statement/Environmental Impact Report*, prepared by KEA Environmental Inc. in October 2000.

Riparian communities occur along stream courses and drainages, and are floristically and structurally distinct from the adjacent upland communities. Riparian communities may be floristically similar to each other, but may differ sufficiently in structure to warrant different classifications (e.g. forest, woodlands, and scrub). Most riparian species are restricted to areas of high water table (e.g. drainages), and require moist, bare mineral soils for germination and establishment, much like the conditions following periodic flooding.

Wetlands serve many functions, including flood and sediment control, habitat for rare and common species, corridors for wildlife movement, and control of water quality and erosion. The value of riparian and wetland communities, combined with their loss and degradation, have resulted in the need to protect these communities. Riparian and wetland communities within San Timoteo Creek include southern cottonwood willow riparian forest, southern willow scrub, mulefat scrub, elderberry savanna, and freshwater marsh.

Riparian and wetland communities are considered sensitive by the California Department of Fish and Game (CDFG). Wetland habitat is under the jurisdiction of the USACE pursuant to Section 404 of the Clean Water Act of 1972 as amended in 1977 and 1984. Riparian habitat is regulated by the CDFG, pursuant to Section 1600 of the California Fish and Game Code. Riparian woodlands are considered a special habitat by San Bernardino County. Southern riparian scrub (e.g. mulefat scrub and elderberry savanna), southern willow scrub, and southern cottonwood willow riparian forest are all identified as natural communities of special concern by the City of Redlands. The City of Loma Linda does not specify additional protection for habitats beyond what is provided by the state and Federal resources agencies.

### 3.6.1 Affected Environment

The USACE's San Timoteo Creek Reach 3B Flood Control Project is located within San Bernardino County, including areas within the cities of Loma Linda and Redlands, and unincorporated portions of San Bernardino County. The project has been constructed by the U.S. Army Corps of Engineers and will be operated and maintained by the San Bernardino County Flood Control District. The purposes of the project are to provide 100-year flood protection and debris and sediment trapping along Reach 3B of the San Timoteo Creek, as part of the Santa Ana River Mainstem project. In addition to the flood control facilities, the project also includes the construction of recreation areas and an environmental corridor along the creek.

The vegetative and wildlife communities were surveyed for the USACE's San Timoteo Creek Reach 3B Flood Control Project in 1998. The vegetation communities identified in the study area (601.40 acres) were approximately 14% Riparian and Wetland, 2% Upland, and 84% Non-Native. The following native communities existed located along San Timoteo Creek as identified in the Santa Ana River Mainstem Project EIS/EIR, prior to construction of the USACE's San Timoteo Creek Reach 3B Flood Control Project. These communities existed between the time of the flora/fauna surveys and project construction.

- Southern Cottonwood-Willow Riparian Forest
- Southern Willow Scrub
- Mulefat Scrub
- Freshwater Marsh
- Elderberry Savanna
- Disturbed Wetlands
- Riversidian Sage Scrub
- Riversidian Alluvial Fan Sage Scrub

Revegetation activities have been on-going by the ACOE since 2002 and will occur in a total of three phases. The USACE has been responsible for revegetation of native plant types to enhance the environmental corridor from Alessandro Road downstream to the creek's confluence with the Santa Ana River. The mitigation efforts have included revegetation of 30-foot wide areas of riparian vegetation along the side of the flood control basin bottoms, riparian transition vegetation along basin side slopes, and the remaining side slopes with native upland vegetation.

The USACE conducts annual monitoring and reporting to provide a summary of how the project has complied with the environmental commitments and permitting requirements as established by the project approval process. Applicable permits include:

- Biological Opinion (BO) (FWS-SB-740.4) issued by USFWS;
- Waste Discharge Requirements (WDR) (Order No. 01-75) issued by RWQCB;
- Streambed Alteration Agreement (SAA) (6-2001-135) issued by CDFG; and the
- Monitoring Reporting Program (MMRP) (SCH No. 1998094013) approved as part of the EIS/EIR.

### **3.6.2 Permanent Impacts**

The purpose of the proposed project is to enhance and preserve native vegetation allowing the existing wildlife corridor to be maintained. The proposed project will result in grading and planting activities that will take place outside of Waters of the U.S. and primarily within disturbed areas (see Appendix E). The property in Focus Area 3 supports minimal riparian habitats (see Appendix C of Appendix A) and these will be maintained/conserved as a part of the project. There would be no negative permanent impacts to the riparian and wetland communities.

### **3.6.3 Cumulative Impacts**

Overtime, there would be an improvement in riparian and wetland habitat within the vicinity of the proposed project area. There would be no adverse cumulative impacts.

### **3.6.4 Mitigation Measures**

There are no negative impacts; therefore, no mitigation measures are necessary.

## **3.7 Vegetation**

This section describes the upland and non-native vegetation communities within San Timoteo Creek Habitat Enhancement Project. This information was taken from Section 3.3 Biological Resources of the *Santa Ana River Mainstem Project, Including Santiago Creek, San Timoteo Creek Reach 3B Final Environmental Impact Statement/Environmental Impact Report*, prepared by KEA Environmental Inc. in October 2000.

### 3.7.1 Affected Environment

The following Upland and Non-Native Communities were identified in the Santa Ana River Mainstem Project EIR/EIS and as found along San Timoteo Creek; include:

- Riversidian Sage Scrub
- Riversidian Alluvial Fan Sage Scrub
- Eucalyptus Woodland (non-native)
- Exotic Trees and Orchards (non-native)
- Orchards
- Ruderal (non-native)

Disturbed habitat also exists which refers to areas that have been recently disturbed and either do not support vegetation at all or support only a minimal amount of weedy species. Dirt roads and areas recently disced or graded are classified as disturbed habitats. A linear area of this habitat occurs adjacent to the Creek on the north side upstream of San Timoteo Canyon Road. Most of the area on the south side of the Creek, downstream of Beaumont Avenue is disturbed.

Developed land along San Timoteo Creek includes residential dwellings, schools, commercial buildings, as well as infrastructure such as roads and flood control channels. The railroad on the south side of the Creek and intersecting roadways are developed. Upstream of Beaumont Avenue, along the north side of the Creek, and south of the Creek, upstream of San Timoteo Canyon Road, there are also large areas of developed land.

The following species, within the affected plant communities, have been included in the USACE's project revegetation efforts:

#### Upstream of Barton Road

California Sycamore  
Coast Live Oak  
Toyon  
Desert Encelia  
California Buckwheat  
California Poppy  
Deer Weed  
Arroyo Lupine  
Monkey Flower  
White Sage



Black Sage  
Chinese Houses  
Golden Yarrow  
Goldfields  
Plantain

Downstream of Barton Road

Toyon  
California Sycamore  
Coast Live Oak  
Mexican Elderberry  
California Sagebrush  
California Fuchsia  
California Buckwheat  
Lemmonade Berry  
Laurel Sumac  
Sugar Bush  
White Sage  
Black Sage  
Maritime Ceanothus

Wildlife Corridor

Toyon  
Lemmonade Berry  
Greensphere Manzanita  
Chaparral Broom  
Quail Bush  
California Buckwheat

### **3.7.2 Permanent Impacts**

The purpose of the proposed project is to enhance and preserve native vegetation, allowing native plant species to provide for a continued wildlife corridor. The following is a list of plants, compatible with those planted by the USACE, that are recommended for planting on the parcels included in the proposed project. These plants would not require long-term irrigation – only temporary irrigation for initial plant establishment, and possibly truck irrigation for drought conditions.

Shrubs:

Redberry  
Laurel Sumac

Lemonade Berry  
Fuchsia-flowering Gooseberry  
White Chaparral Currant  
Bush Sunflower  
Greenbark Ceanothus  
Hill Clematis  
Scarlet Larkspur

Trees:

Hollyleaf Cherry  
California Sycamore  
Valley Oak

There would be no adverse permanent impacts to any native plant species. Plant species provided as a part of the proposed habitat enhancement project would be compatible with those species included in the USACE's mitigation efforts for the Reach 3B project.

### **3.7.3 Temporary Impacts**

It may be necessary to install irrigation systems along the revegetated portions of San Timoteo Creek corridor in order to properly care for new vegetation until it is firmly established. In order to revegetate some areas, minimal corridor grading and the use of planters may be required as well. These temporary activities may necessitate the use of construction equipment. Any construction activity would be temporary in nature and would not exceed city and County standards.

### **3.7.4 Cumulative Impacts**

Overtime, there would be an increase in vegetation within the vicinity of the proposed project area and an associated increase in the wildlife supported by the native habitat. There would be no adverse cumulative impacts.

### **3.7.5 Mitigation Measures**

Since there are no negative impacts resulting from project implementation, no mitigation measures are necessary.

## 3.8 Wildlife

San Timoteo Creek has been identified as an important wildlife habitat and one of the focus areas of the proposed project is to re-establish the regional linkages between such habitats and wildlife corridors. Wildlife habitat in an area determines the suitability of the site for use by certain animal species. Factors such as vegetation height, soil type, cover availability, and food and water sources influence which animal species will inhabit a specific vegetation association. These factors can be more or less independent of the specific vegetation community that is present in any given area. The following information was adapted from Section 3.3 – Biological Resources of the *Santa Ana River Mainstem Project, Including Santiago Creek, San Timoteo Creek Reach 3B Final Environmental Impact Statement/Environmental Impact Report*, prepared by KEA Environmental Inc. in October 2000. This section provides an overview of general wildlife and associated habitats that occur within and adjacent to the areas San Timoteo Creek channel. Monitoring has been on-going during the USACE mitigation projects. Findings of the biological monitors have been that no species of special concern or listed species have been found during construction activities. The USACE mitigation has been developed in phases and encompasses the north side of the creek within the Focus Areas 1 and 2 of the proposed project.

### 3.8.1 Affected Environment

Birds associated with the southern cottonwood willow riparian forest include black phoebe (*Sayornis nigricans*) and golden-crowned sparrow (*Zonotrichia atricapilla*). Other riparian bird species that could nest or forage in southern cottonwood willow riparian forest habitat includes the southwestern willow flycatcher (*Empidonax traillii extimus*), yellow warbler (*Denroica petechia morcomi*), and yellow-breasted chat (*Icteria virens auricollis*).

Birds associated with the southern willow scrub and mulefat scrub habitats include house finch (*Carpodacus mexicanus*), black-phoebe, and white-crowned sparrow (*Zonotrichia leucophrys*). The open areas at the fringe of these habitats also provide cover for reptile species such as the coastal western whiptail (*Asidoscelis tigris*) and side-batched lizard (*Uta stansburiana*).

Other riparian habitats within San Timoteo Creek area include freshwater marsh and elderberry savanna. These habitats potentially provide foraging habitat for bird species, such as the house finch, yellow-rumped warbler (*Dendroica coronata*), and western bluebird (*Sialia mexicana*).

The unvegetated channels within San Timoteo Creek are used by a variety of animal species for perching, resting, and foraging, and as a localized movement corridor. Species observed or detected in the unvegetated portions of San Timoteo Creek in 2000, included common raven

(*Corvus corax*), side-blotched lizard, California ground squirrel (*Spermophilus beecheyi*), mule deer (*Odocoileus hemionus*), domestic dog (*Canis domestica*), and horse (*Equus spp.*).

Wildlife species associated with the Riversidian sage scrub and Riversidian alluvial fan sage scrub habitats include several upland bird species, such as California towhee (*Pipilo crissalis*), Lawrence's goldfinch (*Carduelis lawrencei*), Bewick's wren (*Thryomanes bewickii*), and mourning dove (*Zenaida macroura*). Sage scrub habitats on-site also provide cover and forage for mammal species, including California ground squirrel and Audubon cottontail (*Sylvilagus audubonii*). Side-blotched lizards are also commonly found in these habitats.

The eucalyptus woodlands provide potential nesting habitat for red-tail hawk (*Buteo jamaicensis*) and foraging habitat for woodpeckers and various songbirds. Wildlife tracks, such as coyote (*Canis latrans*) and mule deer, were observed in the project vicinity in 2000. The remaining non-native habitats support urban- and disturbance-adapted species such as common raven, house finch, and domestic dog.

Southern cottonwood willow riparian forest, southern willow scrub, and mulefat scrub are considered high-quality wildlife habitat because they provide habitat for various sensitive and non-sensitive species. The southern cottonwood willow riparian forest provides multi-layered canopy cover ideal for sensitive nesting birds such as the federally endangered least Bell's vireo (*Vireo bellii*) and southwestern willow flycatcher. Additionally, southern willow scrub and mulefat scrub provide potential nesting and foraging habitat for the least Bell's vireo. This high-quality habitat is found in the upstream portions of San Timoteo Creek.

The Riversidian sage scrub and alluvial fan sage scrub can potentially provide habitat for the federally threatened California gnatcatcher (*Poliophtila californica*). Though alluvial fan sage scrub is not considered the primary habitat for the California gnatcatcher, several of the dominant plant species of this community are important components of gnatcatcher habitat. For example, California sagebrush and California buckwheat are dominants within Riversidian sage scrub and are known to provide nesting, cover, or foraging habitat for this species. However, these habitats are of low quality due to their disturbed and disjunct nature. Unvegetated portions of the stream channel along the project area provide potential breeding habitat for the federally endangered arroyo southwestern toad (*Bufo microscaphus californicus*).

### Wildlife Corridor

In an urban context, a wildlife corridor can be defined as a linear landscape feature of sufficient width and buffer to allow animal movement between two patches of comparatively undisturbed

habitat, or between a patch of habitat and some vital resources. USFWS defined regional corridors as those linking two or more large areas of natural open space, and local corridors as those allowing resident animals to access critical resources (food, cover, and water) in a smaller area that might otherwise be isolated by urban development.

A viable wildlife corridor consists of more than a path between habitat areas. To provide food and cover for transient species as well as resident populations of less mobile animals, a wildlife corridor must also include pockets of vegetation. Fully functional wildlife corridors linking the Santa Ana River and Prado Basins on the west with the San Bernardino, San Gorgonio, and San Jacinto Mountains to the east are few. Because their habitat value is reduced, it would require considerable effort and expense to open and restore these corridors.

San Timoteo Creek may provide one of the only remaining linkages between these major east and west natural areas. In addition, San Timoteo Creek connects the natural areas along the Santa Ana River and the upstream San Timoteo Canyon. USFWS, therefore, identified it as both a local and regional corridor in 1995.

In 1995, the USACE funded USFWS to complete a study on the use of San Timoteo Creek as a wildlife corridor. Field efforts to detect large mammal use areas within and adjacent to the USACE project area (San Timoteo Creek between the Santa Ana River and Alessandro Road) involved placement of five track pads in four locations. Although no large mammals were detected, coyote presence was recorded at each site. Evidence of bobcat, non-native opossum (*Didelphus marsupialis*), and raccoon (*Procyon lotor*) was also noted at the confluence of San Timoteo Creek with the Santa Ana River. In the absence of animal-specific tracking, however, this study failed to clarify the extent to which San Timoteo Creek actually functions as a corridor. That is, the visitation documented on the track pads could all have been from upland sites adjacent to the Creek.

Whether for terrestrial wildlife movement or for permanent residence, San Timoteo Creek presently provides a rather poor wildlife corridor due to the lack of adequate vegetative cover, foraging habitat, or nesting strata. This stems from a long-term history of herding, orchard, agrarian, and more recent urban and suburban activities. San Timoteo Creek floodplain, specifically, has been the focus of continued, albeit low-density, human activity, over a hundred years.

Habitat reduction within and immediately adjacent to the Creek has also resulted from the scouring effects of storm flows combined with the San Bernardino County Flood Control



District's necessary flood control maintenance/clearing operations. Intensified urbanization downstream and associated urban edge effects (increased noise, meso-predation and nest parasitism) have also contributed to reduced functioning of San Timoteo Creek as a viable wildlife corridor.

Along with USACE's construction of a concrete channel, a dedicated wildlife corridor along the entire length of the Creek Channel in and along the north bank of Reaches 1, 2 and 3A areas, except at the Beaumont Avenue and San Timoteo Canyon Road Bridge crossings has been established. This corridor was vegetated with native, drought-tolerant, upland plant species, including coast live oak (*Quercus agrifolia*), Mexican elderberry, toyon (*Heteromeles arbutifolia*), and California sage (*Artemisia californica*), among others. The intent of the project mitigation was to establish and maintain an area for wildlife movement along the Creek.

By planting the area adjacent to the channel, the USACE's intent was to establish and maintain an area for wildlife movement along the Creek. Local wildlife movement of urban fringe species, both within and adjacent to the project area, is anticipated to occur in two directions: east-west along San Timoteo Creek and north-south from the upland areas to the Creek.

### **3.8.2 Permanent Impacts**

The nature of the proposed project will be to enhance the quality of the environment, continuing habitat enhancement by improving the wildlife corridor on the south side of the creek, and allowing wildlife species to ideally experience population growth. The USACE habitat mitigation project on the north side of San Timoteo Creek has been reviewed and approved by the USFWS. Monitoring of the progress and potential impacts to species has been regularly undertaken by USFWS staff; no adverse impacts have been identified. Findings of the biological monitors have been that no species of special concern or listed species have been found during construction activities. The USFWS has been made aware of the proposed habitat enhancement project by the County, during regular USACE Project 3B meetings and from correspondence submitted by the City of Loma Linda. In March 2006, the City specifically requested the USFWS provide a determination regarding any additional mitigation required for the proposed project. The USFWS communicated that no additional impacts are anticipated and no mitigation is required.

The project would serve to re-establish significant portions of one of the last wildlife corridor in Southern California. There would be no negative permanent impacts to any wildlife species.

### **3.8.3 Cumulative Impacts**

Overtime, there would be an increase in wildlife population within the vicinity of the proposed project area, as well as a more diverse community of wildlife species. There would be no negative cumulative impacts.

### **3.8.4 Mitigation Measures**

There are no negative impacts; therefore, no mitigation measures are recommended.

## **3.9 Threatened and Endangered Species**

The proposed project would enhance a corridor averaging 30 feet in width, along the south banks of San Timoteo Creek with native plant species, with the objective of providing breeding grounds to the flora and fauna. Animal and plant species are designated as sensitive because of their overall rarity, endangerment, unique habitat requirements, and or restricted distribution. In general, it is a combination of these factors that leads to a sensitivity designation. The following information was adapted from Section 3.3 Biological Resources of the *Santa Ana River Mainstem Project, Including Santiago Creek, San Timoteo Creek Reach 3B Final Environmental Impact Statement/Environmental Impact Report*, prepared by KEA Environmental Inc. in October 2000 to describe the general biological environment of San Timoteo Creek between the Santa Ana River confluence and Alessandro Boulevard.

### **3.9.1 Affected Environment**

#### Sensitive Plants

The USFWS conducted a plant survey on foot along San Timoteo Creek and associated terraces between Barton Road and Alessandro Road in June, October, and December of 1998. During the survey, the extent and quality of Riversidian alluvial fan sage scrub vegetation within the area was assessed. No sensitive plant species were observed during the surveys. However, some of the sensitive plant species would not have been detectable because of the seasonal timing of these surveys. Table 3.9-1 lists special-status plant species with the potential to occur within the proposed Habitat Enhancement Project area. Based on the disturbed condition of the habitats that are typically associated with these species, it was determined unlikely that any of these plants occur. None of these species have been identified in the area during subsequent monitoring by the USACE.

**Table 3**  
**Special-Status Plant Species with the Potential to Occur Along San Timoteo Creek**

Special-status species	Status*			Occurrence potential on-site
	Federal	State	Other	
<b>Plants</b>				
Nevin's barberry <i>Berberis nevinii</i>	E	E	CNPS 1B	This species was not observed and, due to the lack of chaparral habitat and the disturbed nature of the alluvial fan scrub, this species is not expected to occur on-site. Nevin's barberry was not detected during surveys conducted by USFWS in 1998.
Slender-horned spineflower <i>Dodecahema leptoceras</i>	E	E	CNPS 1B	This species has a low potential for occurrence along San Timoteo Creek due to the disturbed condition of the alluvial fan scrub. Slender-horned spineflower was not detected during surveys conducted by USFWS.
Santa Ana River woollystar <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	E	E	CNPS 1B	This species was not observed and, due to the disturbed nature of the alluvial fan scrub, this species is not expected to occur on-site. Santa Ana River woollystar was no detected during surveys conducted by USFWS.
Marsh sandwort <i>Arenaria paludicola</i>	E	E	CNPS 1B	Marsh sandwort is not expected to occur on-site due to the limited amount of freshwater marsh habitat. This species is believed to be extirpated from the county. Marsh sandwort was not detected during surveys conducted by USFWS.
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	T	E	CNPS 1B	No populations are known to occur in the project vicinity and this species is not expected to occur on-site. Thread-leaved brodiaea was not detected during surveys conducted by USFWS.
Parish's bush mallow <i>Malacothamnus parishii</i>	-	-	CNPS 1A	This species was not observed and it is presently thought to be extinct.
Payson's jewelflower <i>Caulanthus simulans</i>	-	-	CNPS 4	This species has a low to moderate potential of occurring in sage scrub and alluvial fan scrub habitats along the Creek. Payson's jewelflower was not detected during surveys by USFWS.
Pringle's monardella <i>Monardella pringlei</i>	-	-	CNPS 1A	This species was not observed, and it is presently thought to be extinct.
Parish's gooseberry <i>Ribes divaricatum</i> var. <i>parishii</i>	-	-	CNPS 1B	This species was not observed, and it is presently thought to be extinct.
Plummer's mariposa lily <i>Calochortus plummerae</i>	-	-	CNPS 1B	This species has a low to moderate potential of occurring in sage scrub and alluvial fan scrub habitats along the Creek. Plummer's mariposa lily was not detected during surveys conducted by USFWS.
Parry's spineflower <i>Chorizanthe parryi</i> var. <i>parryi</i>	-	-	CNPS 3	This species has a low to moderate potential of occurring in sage scrub and alluvial fan scrub habitats along the Creek. Parry's spineflower was not detected during surveys conducted by USFWS.

\*Status Codes: Status' have been updated using the California Department of Fish and Game Natural Diversity Database dated September 2004.

Federal: E = Endangered; T = Threatened; FSC = Federal Species of Concern (a State designation for former Federal candidate species)

State: E = Endangered; T = Threatened; CSC = California Species of Concern

Other: California Native Plant Society (CNPS):

List 1A = Plant presumed extinct in CA

List 1B = Plants rare and endangered in CA & elsewhere

List 3 = Plants about which more info is needed - a review list

List 4 = Plants of limited distribution - a watch list.

During the 1998 investigation of San Timoteo Creek, USFWS conducted a survey for slender-horned spineflower (*Dodecahema leptoceras*), an endangered host plant for the Quino checkerspot butterfly (*Euphydryas editha quino*), and other rare plants associated with the Quino checkerspot butterfly. Specific host plants for the Quino checkerspot that were targeted by this survey were California plantain (*Plantago erecta*), woolly plantain (*Plantago ovata*), and owl's clover (*Castilleja exserta*). Although June is typically late in the year for detection of *Plantago* spp., conditions during the spring of 1998 were favorable and *Plantago* would have been detected if it existed in the area; none was found.

Wildlife

No host plants for the Quino checkerspot butterfly were detected during the plant survey. Due to the lack of host plants and the general topography of the site (e.g. no opportunities for hill-topping behavior), it is unlikely that the Quino checkerspot butterfly occurs within the proposed enhancement area. Six sensitive animal species were observed along San Timoteo Creek during surveys, including three bird species, two reptile species, and one mammal species.

The bird species observed were the yellow warbler and yellow-breasted chat, which are considered species of Special Concern by the State, and the blue-gray gnatcatcher (*Polioptila caerulea*), which does not have a Federal or state designation but is considered to be declining locally. The reptile species observed were the western whiptail and orange-throated whiptail (*Asidoscelis hyperytha beldingi*) lizards, both of which are considered Federal Species of Concern. The only sensitive mammal species detected was the mule deer, a game species regulated by the State.

**Table 4**  
**Sensitive Wildlife Species with the Potential to Occur Along San Timoteo Creek**

Special-status species	Status*			Occurrence potential on-site
	Federal	State	Other	
<b>Invertebrates</b>				
Quino Checkerspot butterfly <i>Emphydryas editha quino</i>	E	-	-	Due to the natural scouring and human encroachment, no suitable stands of this subspecies' host plant occur within the Creek. Focused surveys for this species' host plant did not result in any detection; therefore, the Quino checkerspot butterfly is not expected to occur on-site.
Monarch Butterfly <i>Danaus plexippus</i>	-	-	-	Monarch butterflies were observed in low numbers in the sage scrub and eucalyptus woodland in the project vicinity. The species has a moderate potential to use these habitats during the fall migration period. Due to the small number of monarchs observed, the study area would not be considered a wintering site.
<b>Reptiles and Amphibians</b>				



Special-status species	Status*			Occurrence potential on-site
	Federal	State	Other	
California red-legged frog <i>Rana aurora draytoni</i>	T	CSC	-	California red-legged frog is not expected to occur on-site due to a lack of suitable ponded habitat in the stream channel. Additionally, it is believed that the species is currently restricted to one location in Riverside County.
Western spadefoot toad <i>Scaphiopus hammondi</i>	FSC	CSC	-	The western spadefoot toad has a low potential of occurrence on-site due to the lack of suitable pooling habitat and the probability of high flows during the rainy season.
Arroyo southwestern toad <i>Bufo microscaphus californicus</i>	E	CSC	-	Focused surveys conducted by the San Bernardino County Museum did not detect the species upstream from San Timoteo Canyon Road Bridge. Reports of vocalizing male arroyo southwestern toads have been reported for the area downstream of Alessandro Road. Focused surveys during the 1999 breeding season conducted to date have not detected this species within the Creek.
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	FSC	CSC	-	This species requires permanent ponded areas and is, therefore not expected to occur on-site.
Orange-throated whiptail <i>Asidoscelis hyperythra beldingi</i>	-	CSC protected	-	One orange-throated whiptail was observed at the interface between a patch of alluvial fan scrub and disturbed habitat upstream from San Timoteo Canyon Road Bridge.
Coastal western whiptail <i>Asidoscelis tigris</i>	-	-	-	This species was observed within the floodplain of the Creek at the interface between a ruderal area and mulefat scrub habitat immediately upstream from Barton Road.
San Diego horned lizard <i>Phrynosoma coronatum blainvillei</i>	FSC	CSC protected	-	The study area contains suitable habitat for the species and therefore, the San Diego horned lizard has a moderate potential to occur on-site. This species was not detected during surveys.
Northern red-diamond rattlesnake <i>Crotalus ruber ruber</i>	-	CSC	-	Although this species was not detected during surveys, the northern red-diamond rattlesnake is known to occur in San Timoteo Canyon in sage scrub habitats.
<b>Birds</b>				
Southwestern willow flycatcher <i>Empidonax traillii extrimus</i>	E	(E)	-	This species is known to nest upstream and downstream of Alessandro Road. Suitable nesting habitat occurs scattered between Alessandro and San Timoteo Canyon roads. Focused surveys conducted to date during the 1999 breeding season had not detected this species along the Creek.
California gnatcatcher <i>Poliophtila californica californica</i>	T	CSC	NASC	No gnatcatchers were observed during 1998/1999 focused surveys of suitable habitat; therefore, the gnatcatcher is not expected to occur on-site.
Least Bell's vireo <i>Vireo bellii pusillus</i>	E	E	NABL PIF	This species is known to nest upstream in the vicinity of Alessandro Road. Suitable nesting habitat occurs scattered between Alessandro and San Timoteo Canyon roads. Focused surveys conducted during the 1999 breeding season had not detected this species along the Creek, although one migrant was detected in mid-July of that year.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FSC	E	-	Although suitable habitat occurs, this species was not observed during the surveys. The western yellow-billed cuckoo was last documented in the region in 1995 in the Santa Ana River at the Hidden Valley State Wildlife Preserve.

Special-status species	Status*			Occurrence potential on-site
	Federal	State	Other	
Yellow warbler <i>Dendroica petechia morcomi</i>	-	CSC	-	Yellow warblers were not observed on-site during the general wildlife surveys conducted between October 20, 1998, and February 10, 1999, but were observed during the spring of 1999 in the southern willow scrub habitat downstream of Alessandro Road.
Yellow-breasted chat <i>Icteria virens auricollis</i>	-	CSC (breeding)	-	The species was observed on-site during the spring of 1999 in the southern willow scrub habitat downstream of Alessandro Road.
Blue-gray gnatcatcher <i>Polioptila caerulea amoenissima</i>	-	-	Everett-SLC	This species was observed in the Riversidian sage scrub and alluvial fan scrub north of the Creek, upstream of San Timoteo Canyon Road.
Great blue heron <i>Ardea herodias</i>	-	CSC	Everett-S	No great blue herons were observed on-site during surveys; however, past nesting activity has been noted at a pond on private property within the floodplain downstream of San Timoteo Canyon Road.
Cooper's hawk <i>Accipiter cooperii</i>	-	CSC (breeding)	NABL	This species was not detected during surveys but has a high probability of occurring in or adjacent to the Creek.
Golden Eagle <i>Aguila chrysaetos</i>	FSC BEPA	CSC	-	Although no golden eagles were observed during surveys, it may potentially forage in the vicinity.
<b>Mammals</b>				
Stephen's kangaroo rat <i>Dipodomys stephensi</i>	E	T	-	The Creek does not contain the preferred habitat of this species (open, disturbed grassland), and it is not expected to occur on-site.
San Bernardino kangaroo rat <i>Dipodomys merriami parvus</i>	E	-	-	USFWS conducted a live-trapping study of the Creek in suitable habitat (successional sage scrub and chaparral) to determine the presence or absence of this species on-site. No San Bernardino kangaroo rat was observed.
Mule deer <i>Odocoileus hemionus fuliginata</i>	-	CA Reg	-	Mule deer tracks were detected on sandy, bare ground downstream of Alessandro Road, south of the channel and north of the UPRR.

\*Status Codes: Status' have been updated using the California Department of Fish and Game, Wildlife and Habitat Data Analysis Branch California Natural Diversity Database, Special Animals List, dated August 2004.

Federal: E = Endangered; T = Threatened; FSC = Federal Species of Concern (a State designation for former Federal candidate species); BEPA = Bald Eagle Protection Act.

State: E = Endangered; T = Threatened; SA = Special Animal; CSC = California Species of Special Concern; S = Sensitive at wintering locations; CA Reg = Species for which hunting is regulated by the state and for which hunting permits are issued; Protected = species that may not be taken without a take permit.

Other: Everett-S = Sensitive; Everett-SLC = Species of Local Concern; NABL = National Audubon Society Blue List; NASC = National Audubon Society watch List; PIF = Partners in Flight watch List; SDHS = San Diego Herpetological Society; E = Endangered; T = Threatened.

### California Gnatcatcher Surveys

A series of nine visits between October and February 1998 to all coastal sage scrub and bordering dispersal habitats were made to determine the presence or absence of the coastal California gnatcatcher. No California gnatcatchers were observed or detected during the surveys, although one pair of blue-gray gnatcatchers was observed or detected on three occasions in the most intact stands of gnatcatcher habitat. The results of the focused survey and the presence of blue-gray gnatcatchers indicate that the California gnatcatcher probably does not occupy the proposed Habitat Enhancement Project area.

### Least Bell's Vireo Surveys

A total of eight focused surveys for the least Bell's vireo were conducted for the species during the breeding season (March 15 through September 30), targeting the optimal period from April 15 through June 15, 1999.

Even though suitable riparian habitat exists along San Timoteo Creek, no least Bell's vireos were observed or detected during the breeding season. However, an incidental detection of a singing male least Bell's vireo was made approximately 10,000 feet upstream of San Timoteo Canyon Road in mid-July by San Bernardino County Museum personnel conducting upland mammal surveys in areas adjacent to the study area. Nesting activity was not confirmed, and no prior or subsequent detections were made during the focused surveys for the species. This one detection suggests that the individual was a migrant. Although the species was observed during the 1998 breeding season and immediately upstream and downstream of Alessandro Road, the area immediately downstream of Alessandro Road is no longer considered suitable for nesting due to riparian removal from the channel to allow for increased capacity for flood control. Additional nesting habitat, however, is potentially still present within and adjacent to portions of the Creek.

### Southwestern Willow Flycatcher Surveys

Focused surveys for the southwestern willow flycatcher were conducted between April 22 and July 23, during the 1999 breeding season. No southwestern willow flycatchers were observed or detected during the focused surveys, although the species was observed during the 1998 season immediately upstream and downstream of Alessandro Road. The downstream location is no longer considered suitable nesting habitat for the southwestern willow flycatcher due to riparian habitat removal from the channel to allow for increased capacity for flood control. Additional nesting habitat, however, is potentially still present within and adjacent to portions of the Creek.

### San Bernardino Kangaroo Rat Surveys

A San Bernardino kangaroo rat live-trapping study was conducted by the USFWS on five consecutive nights between December 7 and December 12, 1998. Five distinct habitat patches or fragments of alluvial fan sage scrub were selected for the survey.

A total of 65 traps were operated on the nights of the survey. No San Bernardino kangaroo rats were captured during the surveys. From a total of 985 captures of small mammals, 204 unique individual small mammals representing five different native species were trapped. The five native species represented through the trapping efforts included: white-footed deer mouse (*Peromyscus maniculatus*), San Diego kangaroo rat (*Dipodomys simulans*), California pocket mouse (*Chaetodipus californicus*), California vole (*Microtus californicus*), and western harvest

mouse (*Reithrodontomys megalotis*). Twenty-two additional captures were house mice (*Mus musculus*), a non-native species. All of the species captured were typical of coastal Southern California habitats. None of the five native species captured is considered sensitive by state or Federal agencies.

The site lies in the periphery of the San Bernardino kangaroo rat habitat as delineated in the Multiple Species Habitat Conservation Plan. The San Bernardino kangaroo rat has a local territory for breeding and is not known to migrate over large distances. The soil conditions support the breeding and habitat of the species in the area. The project would not impact the kangaroo rat population if present on site.

#### Arroyo Southwestern Toad Surveys

Focused surveys for the arroyo southwestern toad (*Bufo californicus*) were conducted during the 1999 breeding season between April 14 and June 30. Although secondhand data of arroyo southwestern toad vocalizations from San Timoteo Creek have been reported to the San Bernardino County Museum, project-specific surveys of the Creek indicate that the report of vocalizations remains unconfirmed. Based on the completed surveys and data from the 1998 breeding season, San Timoteo Creek is not expected to support breeding arroyo southwestern toads. Much of the habitat described above was temporarily or permanently impacted by the USACE floodway improvement project. The proposed project will re-establish and enhance the habitat by providing for a wildlife corridor. As no sensitive species have been found in the area and the project will not induce or eliminate potential habitat, no impacts are expected.

Past Biological investigations conducted within the project area indicated that no endangered or threatened species were present. However, the San Bernardino County Museum has found Least Bell's vireo and Southwestern willow flycatcher, both listed as federal and State Endangered species, nesting near the creek corridor upstream and downstream of Alessandro Road (*communication from Jim Borcuk, S.B. County Flood Control District, September 2005*).

### **3.9.2 Permanent Impacts**

The nature of the proposed project will be to enhance the quality of the environment, allowing plant and wildlife species to ideally experience population growth. The project would also serve to re-establish significant portions of one of the last wildlife corridors in southern California.

The USACE has monitored its revegetation activities since construction began in 2002. Two additional pre-construction surveys were conducted. A trapping survey was conducted for the San Bernardino kangaroo rat and a nesting survey was conducted for birds. The surveys



confirmed that no sensitive species or active nests were found on-site (San Timoteo Creek Reach 3B Flood Control Project Monthly Monitoring Report February 2002, USACE and San Bernardino County Flood Control District). Environmental monitors on-site daily during the 2003, 2004, and 2005 construction periods have found no sensitive or listed species on-site. Correspondence received by the SBCFCD from USFWS confirms that the proposed action is not likely to effect federally-listed species or critical habitats (see Appendix F).

### **3.9.3 Cumulative Impacts**

Overtime, there may be an increase in the populations of threatened and endangered species utilizing the corridor enhanced and preserved by the proposed project. There would be no adverse cumulative impacts.

### **3.9.4 Mitigation Measures**

There are no recommended mitigation measures concerning threatened and endangered species.

### **3.10 Floodplains**

The proposed project is not located within the 100-year floodplain and does not involve construction of any structures as part of the enhancement of portions of the Creek. There will be no adverse impacts to the surrounding land uses. People will not be exposed to flood danger as a result of the project. There is no threat of inundation by seiche, tsunami, or mudflow. The project may in turn control soil erosion and increase groundwater recharge by maintaining soil cover in the long run.

### **3.11 Coastal Zone**

The proposed project is not located within a Coastal Zone and is therefore not subject to a Coastal Zone Management Plan; there would be no impact.

### **3.12 Wild and Scenic Rivers**

San Timoteo Creek is a tributary of Santa Ana River. The Creek itself is not a wild or scenic river; no wild or scenic rivers will be impacted by the proposed project.

### **3.13 Non-Section 4(f) Parks, Recreational Areas, Wildlife and Waterfowl Refuges**

The Section 4(f) process, as described in Title 49 Section 303 of the United State Code, states that a special effort must be made to preserve the natural beauty of the countryside and public

park and recreation lands, wildlife and waterfowl refuges, and historic sites ([http://www.fta.dot.gov/transit\\_data\\_info/reports\\_publications/publications/environment/4805\\_5145\\_ENG\\_HTML.htm](http://www.fta.dot.gov/transit_data_info/reports_publications/publications/environment/4805_5145_ENG_HTML.htm) accessed May 17, 2004). The enhancement of San Timoteo Creek will be in accordance with Section 4(f) since it will be contributing to the preservation of natural habitat and a wildlife corridor.

### **3.14 Land Use, Planning, and Growth**

The proposed project is a habitat enhancement and restoration plan on an average 30-foot wide corridor (approximately) along the south side of San Timoteo Creek within Focus Area 1 and 2 and preservation of existing vegetation and habitat along both sides of the creek in Focus Area 3. The entire corridor is approximately 6.58 miles in length between Redlands Boulevard and Alessandro Road. The project falls within the jurisdiction of the cities of Loma Linda and Redlands and the County of San Bernardino. The proposed project complements vegetation/habitat mitigation efforts undertaken by the USACE. Areas along San Timoteo Creek would be re-established as a wildlife corridor with native vegetation. For this purpose, the project requires easement rights, common use agreements and land acquisition to gain access to the properties for revegetation and maintenance.

The parcels within the city of Redlands are mostly designated in the City's General Plan for flood control/construction aggregate conservation/habitat preservation and Resource Preservation. Permitted uses on these parcels include water conservation, wildlife preservation, open space, recreation and agriculture. The City's zoning plan designates this land as either Residential Estate, or A-1 to provide for proper utilization of land best suited for agricultural purposes and to prevent incompatible uses. The proposed project would provide for the maintenance of native vegetation along a corridor of San Timoteo Creek compatible with the land use designation and zoning for the area. No adverse impacts are anticipated by the project.

The City of Loma Linda is currently undergoing a General Plan update, and the sites considered for the project are designated as proposed or existing mixed use, commercial, residential (medium density), business park and public open space. The proposed project does not conflict with any local general plan or land use ordinance as open space is an allowed use within each of these land use designations. The proposed enhancement and augmentation of habitat potential for portions of San Timoteo Creek does not conflict with any habitat conservation plan or natural community conservation plan.

None of the potential project sites or parcels proposed for acquisition includes planned residential communities. There would be no conflict with any local general plan or land use

ordinance. The proposed enhancement for portions of San Timoteo Creek does not conflict with any habitat conservation plan or natural community conservation plan. There would be no disruption of planned development, no division of established communities, nor would any community facilities be affected by the proposed project. The project would not support any large commercial or residential development. The land enhanced as a result of this project will be used as open space. Therefore, there would be no impact to land use, planning, or growth.

### **3.15 Farmlands/Agricultural Lands**

According to Figure 2.1 of the City of Loma Linda Draft General Plan Update, the City does not contain any agricultural land. The County has an agricultural preserve in the City of Loma Linda's sphere of influence. No active Williamson Act Agreements are currently in place or expiring. Therefore the western portion of the proposed project (Focus Areas 1 and 2) would have no impact on agricultural resources.

The General Plan of the City of Redlands designates "Resource Preservation" areas in order to maintain and preserve the open space and natural areas within the city limits. The parcels in the north of San Timoteo Creek are zoned as agricultural lands in Redlands (Figure 7.3 of the City of Redlands General Plan). However, the proposed project is compatible with this designation and no change of land use is required for the project. The project does not require conversion of any Farmlands or lands under Williamsons Act Contract and hence there would be no impacts on the agricultural resources.

Therefore, there would be no impact from the placement of portions of the enhancement project on or next to Williamson Act Contract land.

### **3.16 Community Impacts (Social, Economic) and Environmental Justice**

The project consists of the enhancement and preservation of several portions of San Timoteo Creek habitat between Redlands Boulevard and Alessandro Road. None of the potential project sites include planned residential communities. Hence, there would not be disruption of planned development or a division of established communities, nor would any community facilities be affected by the proposed project. The project will not result in any changes to life-styles or neighborhood character or stability. It will only consist of the enhancement and preservation of habitat along portions of the San Timoteo Creek corridor. No minority, low-income, elderly, disabled, transit-dependent, or any other special interest group will be adversely affected by the proposed project. The land enhanced as a result of this project will be used as a wildlife corridor

and support growth of riparian habitat. There would be no negative impacts related to community impacts or environmental justice.

### **3.17 Utilities/Emergency Services**

The project would create vegetated corridors consisting of native species along the creek, which may require regular maintenance to prevent any fire hazard. In some areas, the revegetation corridor would begin beyond a 20-foot wide setback from the edge of the Creek. This would allow access for emergency services. The fire department of the City of Loma Linda is adequately equipped to deal with this minor increase of service. The proposed project will not obstruct or require the use of any emergency services during or after the habitat enhancement efforts. Irrigation systems that would be placed along San Timoteo Creek corridor would be serviced by the city of Loma Linda via extensions of existing water lines. No new water structures will need to be constructed. Therefore, there would be no impacts to utilities or emergency services as a result of this project.

### **3.18 Traffic Transportation/Pedestrian and Bicycle Facilities**

The proposed project would revegetate an approximate 30-foot wide corridor along San Timoteo Creek with native species and preserve existing native vegetation, in turn re-establishing the wildlife corridor. No roadways or highways would be constructed for the proposed project. Therefore, the project will not affect the flow of vehicle or pedestrian traffic. The project will not impede the movement of bicycles along pathways adjacent to San Timoteo Creek. There would be no impacts.

### **3.19 Visual/Aesthetics**

The proposed enhancement and preservation of habitat potential for impacted segments of San Timoteo Creek will have no adverse impacts to scenic vistas, scenic resources, or the visual character of the proposed project sites. On the contrary, the proposed project will improve the surrounding environment through enhancement and revegetation. There would be no adverse impacts.

### **3.20 Cultural Resources**

No prehistoric resources have been identified within the portions of San Timoteo Creek that are included in this proposed project. As the project involves planting native vegetation species along the creek within a relatively narrow corridor (average 30-foot wide), no cultural impacts are anticipated to be associated with the project. Potential historic properties were identified in



previous investigations as reported in Section 3.7 Cultural Resources of the *Santa Ana River Mainstem Project, Including Santiago Creek, San Timoteo Creek Reach 3B Final Environmental Impact Statement/Environmental Impact Report*, prepared by KEA Environmental Inc. in October 2000.

In 1985, Caltrans evaluated the Beaumont Bridge for its potential historic significance by Caltrans. Caltrans concluded that the bridge lacked historic merit on all levels. It was a common military-style bridge, and was not associated with any historic event in San Timoteo Creek area. The bridge has since been removed to accommodate recent channel improvements. The County has removed the bridge and the new bridge is expected to be installed in 2006.

The Vache-Brookside Winery is expected to be eligible for inclusion in the National Registry of Historic Places (NRHP). Assuming that the winery is determined to be a National Register Eligible historic property, any effects to the property would be considered adverse. The winery property directly abuts the north side of San Timoteo Creek channel near the Creek's intersection with San Timoteo Canyon Road. Although the proposed project includes the acquisition of several portions of land along the Creek, the area of land near the Vache-Brookside Winery is not included on the list of potential land acquisitions.

In April 2006, a Historical Resources Review for the proposed project was conducted by the San Bernardino County Museum Archaeological Information Center (SBAIC) recommending an archaeological survey. In May 2006, the City of Loma Linda and the SBAIC further discussed the potential for project impacts based upon the investigations conducted for the USACE Reach 3B project and the nature of the proposed habitat enhancement project. After further review Ms. Robin Laska of the SBAIC concurred that most of the area has previously been surveyed, no resources have been found during past surveys, and the channel area passing through Loma Linda and Redlands is highly disturbed (see Appendix G). Therefore, the SBAIC's April 2006 recommendations (on-file with the City) were amended (via May 2006 telephone conversation) to indicate that additional surveys are not recommended at this time. The potential exists for resources to be uncovered during planting activities and therefore mitigation measures are recommended (Section 3.20.3).

### **3.20.1 Permanent Impacts**

The areas proposed for revegetation have previously been previously surveyed or disturbed and therefore, no known unavoidable adverse impacts associated with San Timoteo Creek Enhancement Project are anticipated.

### **3.20.2 Cumulative Impacts**

No cumulative impacts to cultural and paleontological resources are anticipated.

### **3.20.3 Mitigation Measures**

Although resources within the proposed project's area of disturbance have not been found to date, and most areas proposed for habitat enhancement are disturbed, the City will include the following language in construction contract documents:

- The project proponent shall be aware of the potential for previously unidentified buried cultural resources. If any such resources are uncovered, the contractor shall halt construction activity and contact the City of Loma Linda and a qualified archaeologist to evaluate any uncovered find(s).
- In the event that human remains are encountered during grading, all provisions of state law requiring notification of the County Coroner, contacting the Native American Heritage Commission, and consultation with the most likely descendant, shall be followed.

### **3.21 Unavoidable Adverse Impacts**

No unavoidable adverse impacts associated with San Timoteo Creek Enhancement Program were identified.

## Chapter 4 List of Preparers

---

Lilburn Corporation prepared the Environmental Assessment. The following individuals were involved:

*Cheryl A. Tubbs*, Principal In-Charge. M.B.A., Operations Management, California State University, San Bernardino, B.A., Geography, California State University, San Bernardino; 29 years of experience in environmental and water resources planning and public utility administration.

*Paul Kielhold*, Sr. Project Manager, Natural Resources. B.S. Natural Resource Management, Humboldt State University; 27 years of experience in environmental analysis and planning.

*Michael R. Perry*, Sr. Project manager, Environmental Assessment. B.A, Business Administration, 1985, California State University, San Bernardino; 21 years of experience in land use and environmental planning.

*Sally Walters*, Environmental Analyst. B.A. History; College of the Pacific, University of the Pacific; 1 year experience in California Environmental Quality Act (CEQA) and other environmental regulatory and compliance work.





## Chapter 5           References

---

City of Loma Linda. 2004. General Plan.

City of Redlands. 1995 amended December 12, 1997. General Plan.

KEA Environmental, Inc. October 2000. Santa Ana River Mainstem Project, Including Santiago Creek, San Timoteo Creek Reach 3B, Final Environmental Impact Statement Environmental Impact Report (EIS/EIR). SCH# 1998094013. Vol. I, Part 1. Section 3.3 Biological Resources.

Terp, Jill M. July 1999. Draft Fish and Wildlife Coordination Act Report for San Timoteo Creek Flood Control Project, San Bernardino County, California. U.S. Department of the Interior, Fish and Wildlife Service.

U.S. Army Corps of Engineers and San Bernardino County Flood Control District, February 2002. Monthly Monitoring Report (Note: Pre-Construction Surveys).

U.S. Army Corps of Engineers and San Bernardino County Flood Control District, 2003. San Timoteo Creek Reach 3B 2003 Annual Environmental Monitoring Report.

U.S. Army Corps of Engineers and San Bernardino County Flood Control District, 2004. San Timoteo Creek Reach 3B 2004 Annual Environmental Monitoring Report.

U.S. Army Corps of Engineers and San Bernardino County Flood Control District, 2005. San Timoteo Creek Reach 3B 2005 Annual Environmental Monitoring Report.



# APPENDIX A

## Coordination and Consultation

---

The Initial Study, prepared in compliance with the California Environmental Quality Act has been circulated for a 30-day public review period (November 7-December 7, 2005). The City of Loma Linda advertised the availability of the document for public review in the local newspaper of general circulation. No agencies or individuals provided comments prior to the end of the public review process. One State Agency (Regional Water Quality Control Board) submitted a comment letter dated January 27, 2006 and two e-mail comments dated January 11, 2006 were made by the San Timoteo Greenway Conservancy. The City of Loma Linda has addressed the concerns raised in these comments.

Early in the project's development phase, the City held a public meeting. Comments received during the public review process have been incorporated as appropriate into the final document.





# APPENDIX B

## Summary of Relocation Benefits

---

The proposed project would not displace any existing uses on the project site. Common use agreements or easements rights for conservation purposes are being requested on 80% of the properties. Only four parcels owned by private parties are being acquired in the City of Redlands. Currently most of these parcels are vacant or in disturbed condition and would not require relocation benefits other than the acquisition fee paid to the owner.



# APPENDIX F

## USFWS Correspondence

---

*David W. Lovell*  
*Department of Public Works*  
*Federal Projects/Flood Control Engineering Division*  
(909) 387-7964  
Fax (909) 387-8130  
[dlovell@dpw.sbcounty.gov](mailto:dlovell@dpw.sbcounty.gov)

Dear Dave,

We reviewed the project and conducted a site visit with Santa Ana Watershed Authority and Corps staff on March 1, 2006. The proposed project is to replace typical landscape plants with native plant species with the goal of encouraging the movement of migratory birds between open space areas in the San Timteo Creek area and Grand Terrace open space. The project, as proposed, is not likely to effect federally listed species and/or critical habitat(s). Therefore, no incidental take authorization is indicated.

Should your agency consider that ongoing maintenance of the project area could affect listed species in the future, please contact us to discuss this. This could occur if the re-vegetated areas attracted federally listed bird species. We can certainly address concerns you may have from a regulatory standpoint.

Should you have further questions or comments, please contact Eric Porter at extension 285.

Regards,

Sincerely,

Nancy Ferguson, Ph.D.  
U.S. Fish and Wildlife Service  
Chief, San Bernardino County Division  
Carlsbad Fish and Wildlife Office  
760-431-9440 ext. 244





# APPENDIX G

## Archaeological Information Center Correspondence

ARCHAEOLOGICAL INFORMATION CENTER

San Bernardino County Museum

2024 Orange Tree Lane

(909) 307-2669 x 255

Redlands, CA 92374

FAX (909) 307-0689

[rlaska@sbcm.sbcounty.gov](mailto:rlaska@sbcm.sbcounty.gov)



San Bernardino  
County

---

20 February 2007

Deborah Woldruff

City of Loma Linda

25541 Barton Rd

Loma Linda, CA 92354

Dear Ms. Woldruff,

In regards to the San Timoteo Creek Habitat Enhancement, I do recall our conversation. I changed the recommendation to "no further archaeological work is recommended" due to the limited area this project would entail and the small amount of disturbance that would occur. This recommendation still applies.

If you have any further questions, please, call me at (909) 307-2669 x255 Monday through Friday between 8 AM & 4 PM. Have a great day!

Sincerely,

Robin E. Laska

