EMBRACING EASTVALE'S RIVERFRONT:

A COMMUNITY-WIDE VISION

UCLA Landscape Architecture, Summer 2022



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MISSION AND Vision

GOALS AND Performance objectives



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INTRODUCTION AND PURPOSE

Nearly 100-mile river encompasses seventeen cities from mountains to sea.

Multiple benefit corridor - water management, habitat, recreation, education, and community health.

Many agencies with jurisdiction.

Increasing pressure from urban development on river corridor health.

A shared vision for the corridor balances its role as a natural and recreational resource.

- and protection.
- Agricultural land restoration and protection.

- educational experiences.



UCLA CONCEPT DESIGN STUDIO INTENT

Address SARCON goals.

Work from the SANTA ANA RIVER PARKWAY AND OPEN SPACE PLAN, including analyses, guiding principles and goals.

Establish a CONCEPTUAL DESIGN FRAMEWORK, the primary organizing structure for future detailed design.

Develop an integrated CITY-WIDE PUBLIC REALM CONCEPT, to strengthen the river's interface with the community fabric. Develop focused conceptual design for **STRATEGIC IMPROVEMENT AREAS** within the overall plan.

Address the community's request for improved river ACCESS, CONNECTIVITY, AND ACTIVATION.

Address the broader need for ENVIRONMENTAL PROTECTION and restoration.

Inform the development of a GENERAL PLAN AMENDMENT, with key policy recommendations.

PROJECT LOCATION







The history of Eastvale is largely tied to the role of the river as a natural resource, travel corridor and sanctuary. Storytelling in the public realm can help to renew emphasis on the river itself.

LEGEND

- **1 1838** Juan Bandini was granted almost all the land that is now Eastvale. The marker shows the location of the first house that he built there.
- 2 ? 1800s Probable location of the Guapa Springs, which from prehistoric times until the 19th century attracted travelers and fed a pure stream. The springs dried up when wells lowered the water table.
- 3 1880s The Pomona and Elsinore Railroad was surveyed and graded, but never built.
- 4 1893 Eastvale Elementary School District
- **5 1960** Entertainer Desi Arnaz built the ranch house in Corona. New owners moved it to its present location in 1986.
- 6 1976 Demolition for construction of I-15 begins. The freeway opens in 1989.
- 7 1970s Cucamonga Creek's course through Eastvale is channelized.
- 8 The alignment of river course and braided character are common to every version of the river that we know.

INDIGENOUS HISTORY

PREHISTORY - 19000 years ago



The first humans arrived in what is now called Southern California over 19000 years ago, likely migrating from across the Bering Straight. California's rich natural abundance led it to have the most populous tribes north of what is now Mexico.

MOVEMENT OF TRIBES - 5000 - 2500 years ago





The Indigenous people had an immense knowledge of the environment, plants, and animals that they lived off of. Mainly living and maintaining riparian environments near rivers, their practices included the use of wildfires and other land management techniques to manage the land for sustainable benefits.

PRESENT DAY STATUS

COLONIZATION - 1769 - 1848



The Spanish arrival in 1769 started a period in which Indigenous people were systematically marginalized and killed. The Spanish used indigenous slave labor to build the mission system and defined indigenous people as second class citizens.

UNITED STATES OCCUPATION - 1769 - Present

Through natural migration and warfare the Gabrieleño

3500 years ago, the Serrano 2500 years ago, and the

these three territories merged.

speaking people moved into Southern California around

Cahuilla 5000 years ago. Eastvale occupies the area where



As settlers from the United States started to move into California, the subjugation of the Indigenous people only worsened with imprisonment, theft of land, the breaking of treaties, and murder of thousands of indigenous people.

The Gabrieleño tribe was not recognized by California until 1994. Other tribes are still not recognized and the Gabrieleño-Tongva do not have federal recognition to this day.

RELATIONSHIP TO THE LAND - 3000 B.C. - 1769





Soil conditions represent extensive opportunities for habitat restoration, but more limited opportunities for flood and water quality infiltration. Access challenges exist at escarpments.

LEGEND

Not suitable for infiltration. Supports native riparian habitat.

Suitable for infiltration. Supports various habitats.

Eroded

Severely eroded

Terrace escarpments



SITE ANALYSIS PARK DISTRIBUTION AND ACCESS

There is an opportunity to create pedestrian and micro-mobility-friendly green corridors throughout the city; knitting together existing green spaces, extending into under-served neighborhoods, and better integrating the river corridor with the broader public realm.

LEGEND

Existing Park

Existing Bike Trail

- ~5 Minute Walk from Park
- Potential Detention Basin Retrofit Park

Neighborhood Borders

---- Potential pedestrian-friendly streets



By integrating the river corridor with the broader public realm, a transformative set of community, environmental, economic and cultural benefits can be achieved.

LEGEND

- Access Compromised
- Existing park
 - Santa Ana River Corridor
- Existing access points
- Potential new access points
- ---- Potential pedestrian-friendly streets
- ----- Existing Santa Ana River Trail
- ---- Santa Ana River Trail Extension
- River Crossing



SITE ANALYSIS civic and cultural facilities

A great opportunity exists to connect civic and cultural facilities, parks, open spaces and the riverfront corridor, via an improved city-wide pedestrian and bicycle network.

LEGEND		
	Downtown West - Civic Center	
	School Shopping Mall - Restaurants Church - Community Center Festivals - Seasonal events Park	
	Riverfront Policy Area Chandler Policy Area Citrus Policy Area	
	Existing bicycle routes Future bicycle routes Potential access route from bicycle lane	



SITE ANALYSIS LAND OWNERSHIP AND REGULATORY FRAMEWORK

Collaboration and coordination between multiple agencies will be required to improve areas along the river corridor.

Opportunities for synergistic benefit exist.

LEGEND		
	City of Eastvale	
	Jurupa Community Services District	
	Southwest Resource Management Association	
	William A Vanleeuwen/ Delores M Vanleeuwen	
	Riverside Corona Resource Conservation District	
	Army Corps of Engineers	
	Orange County Water District	
	Riverside County Regional Park and Open Space District	
	Western Riverside County Regional Wastewater Authority	
	Orange County Flood Control District	
	Conservation area under the Western Riverside Regional Conservation Authority - Multiple Species Habitat Conservation Plan Area	

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SITE ANALYSIS ECONOMICS AND OPERATIONS

Eastvale's riverfront redevelopment project will be a partnership between JCSD, The Army Corp of Engineers, and the City of Eastvale. The project will require a collaborative effort between the entities, considering aspects, such as intuitive access, comprehensive uses, and the maintenance and resources required for the environmentally conscious and programmatically diverse development.

CITY OF EASTVALE

· committed to the maintenance and operation of the City of Eastvale's infrastructure

· ensuring the safety and quality of: streets, sidewalks, traffic signals, street lights, traffic signs, and storm drain inlets, etc.

· keeping the amenities that make Eastvale a premiere location to live and raise a family

 making sure the needs of Eastvale residents are met and exceeded every single day.

· responsible for the design and construction of private development and capital/public projects

· collects development fees, processes permits, and provides construction and non-construction activities within the public right-of-way

· ensures the compliance of City Codes and reviews the development proces

· works closely with Federal, State, County, and public utility agencies

manages grant-funded projects and programs

· responsible for ensuring compliance with the City's various land use codes and regulations

· handle complaints on numerous municipal code regulations ranging from unpermitted structures, abandoned vehicles, illegal signage, graffiti, property maintenance, business and rental registration and other various municipal code regulations.

PARKS & RECREATION DEPARTMENT

· Residents that live West of Hamner Avenue are part of Jurupa Community Services District (JCSD). · JCSD provides park and recreation services as well as maintaining frontage landscaping and providing water, sewer and street lights for the City of Eastvale

· Currently, 13 parks in Eastvale with additional parks planned or in different stages of development. This accounts for approximately 250 acres of open space in Eastvale.

• The City will work with the Jurupa Community Services District and the Jurupa Area Recreation and Park District to transition responsibility for public parks in Eastvale to the City.

· Along the Santa Ana River, JCSD owns: Eastvale Community Park on 12750 Citrus St. & Riverwalk Park on 7674 Soaring Bird Court

ARMY CORP OF ENGINEERS

· energizing the economy by dredging America's waterways to support the movement of critical commodities and providing recreation opportunities at our campgrounds, lakes and marinas.

· Currently, The Army Corp owns and protects majority of the riverfront landscape.





JCSD PARKS & RECREATION DEPT



The Santa Ana River corridor sits in a floodplain and may be suitable for multi-benefit, landscape-driven water management practices that address flood control, groundwater recharge, and river water quality.

LEGENDSurface Water1901 Santa Ana River100 Year Floodplain500 Year Floodplain100 Year Floo



SITE ANALYSIS LANDSCAPE TYPES AND HABITAT

Re-connecting fragmented habitat patches will help restore native biodiversity within the Santa Ana River corridor. The restoration of damaged habitats is equally important.

SANTA ANA RIVER WILDLIFE



Bell's Vireo



Red-sided garter snake



California Gnatcatcher



Santa Ana Sucker



Owl



Arroyo Chub

LEGEND

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Water
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Eastvale Riverfront Policy Area

VEGETATION TYPES

- Herbaceous
- Shrub
- Hardwood forest/woodland
- Barren [Rock/Soil/Sand]
- Urban

HABITAT PROTECTION SUITABILITY



Good

Most Suitable



SITE ANALYSIS SPECIAL PLACES

The most special places in the open space corridor occur where the river's presence can be felt, most notably along the river's edge.

Unique and diverse ecosystems can be discovered.

LEGEND

- Direct Waterfront
- Immersive Natural Place
- Seasonal Water Change
- Scenic Views
- 1 River edge near Citrus
- 2 Eastvale Trail
- 3 Marsh
- 4 Informal trail towards river
- 5 Prior river course
- 6 Wetlands channel



EDUCATIONAL OPPORTUNITIES

AREAS WITH POTENTIAL FOR **ENVIRONMENTAL EDUCATION**

A variety of different habitat types as well as different access points along the river creates environmental education opportunities for the community.

EDUCATION POINTS

1 River life cycle 2 Eastvale history

3 Riparian forest

4 Sage scrub ecosystem

5 Wildlife conservation

6 Marshland ecosystem

SITE ANALYSIS DEMOGRAPHICS



STRATEGIC PLANNING & PRIORITIES - % of services most valued and desired







Outdoor:

hiking, biking, walking trails family picnics parkland, camping ziplining, yoga, tai chi exploring the wild "Narnia"

Indoor:

athletic facilities indoor recreation centers programs & activities

Water Play/Sports:

kayak, canoe paddle board, inner tube

Visual:

art exhibits movie in the park

Active:

mommy & me events community/team building workshops (gardening) robust summer programs/camps nature scavenger hunts

Food Experiences:

food trucks & stands breweries/hang outs

Existing Cultural Events:

Lantern Festival Taste the World in Eastvale EATSvale Food Truck Festival

Holiday/Other Events:

festivals & holiday events concerts winter ice rink pumpkin patch Easter egghunt

Displaying Cultural Storylines:

multicultural murals indigenous heritage Dutch & Portuguese dairy farms Gabrieleño Tribe & Mexican history

SITE ANALYSIS COMMUNITY NEEDS

Eastvale residents have specific needs for their **108 miles** of riverfront open space that can accomodate their diverse community and bring economic health and growth to their new community. Programs can help generate revenus and jobs w/ low-cost maintence.

Young Families:

parks/playgrounds safer transit w/ children

family activities

Youth:

cool places to hang out gathering places day & night activities

summer jobs

Visitors:

campgrounds educational opportunities

reason to stay & explore

Nature:

wildlife restoration & preservation

* Information presented have been discussed at the July 12, 2022 Eastvale public meeting.



SITE ANALYSIS RIVER CORRIDOR USES AND SUITABILITY

Environmental, access, and existing use factors suggest that major destination facilities are best suited at eastern and western areas of the Eastvale river corridor. Conservation and restoration areas are warranted in the central area of the corridor.

LEGEND

- Active Recreation
- **Passive Recreation**
- Conservation and Restoration
- Existing Trail
- ---- Proposed Trail

PRECEDENT PROJECT REVIEWS



RIVER CORRIDOR REVITALIZATION: CASE STUDY PERFORMANCE

BUFFALO BAYOU PARK - Houston, Texas



- **Increases habitat quality** in 25% of park
- Contributed to an increase in community health
- Sequesters 9.19 tons of carbon
- Withstands significant flood events
- Catalyzed 2 billion dollars in investment

YANXIU PARK - Liaoyang Shi, China



- Supports at least 60 wildlife species
- Improved Community Health according to survey residents
- Increased available recreation opportunities
- Created jobs in park management
- Improved environmental education



- communities



- "green streets."

RENAISSANCE PARK - Chattanooga, Tennessee



Increases habitat value

- Increased land value by 821% of surrounding area
- Increased floodplain storage by 15000 yards
- Stimulated 55 million dollars in investments within 1/4 mile of the park

TOM HANAFAN RIVER'S EDGE PARK - Council Bluffs, Iowa



- Located in Council Bluffs, Iowa
- Generated \$365,217 in revenue for the city through events
- Increased level of outdoor activity among users
- Increased ease of access to river
- 7,200 linear ft of trails link the park to the regional trail system

YUMA EAST WETLANDS - Yuma, Arizona

Created habitat for 330 species of wildlife Invasive species removed and replaced with native plant

Recycled water used to feed wetlands

Created 150 full and part-time jobs

LOS ANGELES RIVER REVITALIZATION MASTER PLAN

Revitalizes water quality, enhances flood storage, and restores riparian ecosystem

Incorporates best storm water management

Reconnects neighborhoods to the river through a system of



DILEMMA

The vitality of the river corridor is compromised by its disconnectedness with the community fabric.



DILEMMA

The vitality of the river corridor is compromised by its disconnectedness with the community fabric.

THESIS

By integrating the river corridor with the broader public realm, a transformative set of community, environmental, economic, and cultural benefits can be achieved.

Legacy Design[®]: Design Workshop, Inc.



MISSION

Upgrade the role of the river corridor in facilitating livability and sustainability.



MISSION

Upgrade the role of the river corridor in facilitating livability and sustainability.

VISION

A multi-benefit river corridor, responsibly integrated with the life of the community, facilitating stewardship and enjoyment.

GOALS AND PERFORMANCE OBJECTIVES





GOAL ENVIRONMENTAL HEALTH

PERFORMANCE OBJECTIVES

Multi-Benefit Flood Control

River Water Quality Enhancement

Habitat Restoration and Expansion

Urban Heat Island Mitigation

Reduced Landscape

Water Consumption



GOAL ECONOMIC CATALYST

PERFORMANCE OBJECTIVES Flexible Activity Nodes

Revenue Generation

Meaningful Jobs Creation

Reduced Operations and

Maintenance Costs



GOAL COMMUNITY VITALITY

PERFORMANCE OBJECTIVES

Network of Gathering Spaces

Personal Health and Walkability

Equitable Access and Inclusion

Environmental Education and

Community Service



GOAL **INTEGRAL ART AND CULTURE**

PERFORMANCE OBJECTIVES

Diversity-Serving Public Realm

Place-Based Storytelling Art

Stewardship-Inspiring Art

Improved Scenic Quality and Views

PERFORMANCE OBJECTIVES: ENVIRONMENTAL HEALTH

	BASELINE CONDITION	TARGET PERFORMANCE
MULTI-BENEFIT FLOOD CONTROL	Eastvale flood hazard areas limited to open spaces along Santa Ana River and Prado Wetlands. x% stormwater conveyed via pipe to Eastvale stormwater drainage system, discharged to Santa Ana River. Neighborhood detention basins capture x% City runoff; no infiltration.	Capture and infiltrate 100% of runoff from 50-year storm. 100% landscape-based systems for new or retrofitted open spaces.
RIVER WATER QUALITY ENHANCEMENT	x% storm drains released to river, untreated. Surface runoff drains to river, untreated.	x% storm drains and surface runoff treated prior to release to river. Capture and treat first 3/4 inch of stormwater runoff to reduce first flush pollutants. x% landscape areas - filtration and recharge.
HABITAT RESTORATION AND EXPANSION	Riparian canopy and other native ecosystems partly lost and at risk. Underdeveloped urban tree canopy. Park and streetscape trees species do not serve local habitat. Limited plant species diversity.	Restore riparian tree canopy to 90% of historic condition. Restore 100% of marshlands, meadows, and sage scrub landscapes. Increase the number of trees species and varieties by 400%. Reduce ambient light levels in sensitive areas by 50%.
URBAN HEAT ISLAND MITIGATION	Average High Temperature in Summer: Close to 90°F. x% shade cover.	Decrease air temperature by 2.0° F. Decrease temperature under shade by 20° F. Create shade in 60% of open space. Increase urban forest by 40%.
REDUCED LANDSCAPE WATER CONSUMPTION	x% of landscape areas use lower water use plants. x% irrigated public landscapes with potable supply. x% of turf areas use irrigated grass lawns. x% residential front lawns use irrigated grasses.	 90% of landscape areas to use lower water use plants. 90% of irrigated landscape areas serviced by recycled water. 75% of turf areas to be non-irrigated native grasses. 10% front lawns to adopt low water use native landscapes.

DESIGN STRATEGIES

Landscape-based network of infiltration basins, trenches and meadows.

Porous hardscape surfaces, including parking.

Retrofit detention basins for filtration, infiltration and public access.

Multi-benefit flood control design, e.g. community use and ecological function.

Bioretention basins, filtration trenches, constructed wetlands.

Habitat supportive landscapes.

Restore lost habitat with native species.

Remove invasive species.

Mitigate habitat water quality impacts.

Extend habitat into community fabric.

Shade trees and shade structures in urban areas.

Softscape surfaces.

Green parking lots.

Cool pavements (either reflective or permeable).

Native, drought-resistant landscapes.

Native turf, non-irrigated.

Native meadows.

Local green streets and front yard conversions.

PERFORMANCE OBJECTIVES: ECONOMIC CATALYST

	BASELINE CONDITION	TARGET PERFORMANCE
FLEXIBLE ACTIVITY NODES	17 existing parks, 250 acres. Extensive activity and event programming. Two primary riverside parks: Eastvale Community Park and River Walk Park.	Develop or improve four community-scale destination spaces.
REVENUE GENERATION	Primary revenue from parks and open space: ?	Increase park revenue by x%. Increase private/commercial revenue by x%.
MEANINGFUL JOBS CREATION	x% job growth largely attributed to industrial development.	Public realm jobs to facilitate public use, entertainment and education. x% new jobs for youth in public service. x% new jobs for seniors in public service.
REDUCED OPERATIONS AND MAINTENANCE COSTS	Irrigated park grasses, mowed weekly. Traditional application of fertilizers, herbicides, and pesticides. Replanting due to drought-based plant deaths. ? river corridor maintenance.	Monthly or seasonal mowing where appropriate. Eliminate fertilizers, herbicides, and pesticides. Reduced piped stormwater runoff by 90%. Reduce portable water use for irrigation by 85%. Shift maintenance resources to river corridor restoration.

DESIGN STRATEGIES

Passive spaces that can transition to active uses.

Multi-use park centering/nodal spaces.

Designations for small-scale food service venues.

Low-impact event parking.

Convert underutilized sites to accommodate fee-based activities.

Incorporate food/cafe kiosks, markets and pop-up retail opportunities.

Environmental education and habitat restoration venues.

Improved and expanded outdoor event venues.

Food kiosks in select venues, satellites to downtown restaurants.

Native, low maintenance landscapes in passive use areas.

Landscape-based stormwater management systems.

Collect and re-use stormwater, irrigation and A/C water.

PERFORMANCE OBJECTIVES: COMMUNITY VITALITY

	BASELINE CONDITION	TARGET PERFORMANCE	
NETWORK OF GATHERING SPACES	 3.6 park acres / 1,000 people x neighborhoods outside quarter mile walking distance to park. Underdeveloped river corridor gathering spaces. x miles of bicycle lanes. 	5.0 park acres / 1,000 people Develop or improve four community-scale destination spaces. x miles additional bicycle lanes. Santa Ana river trail 100% complete at Eastvale section.	New Impr Reha oper Link pede
PERSONAL HEALTH AND WALKABILITY	 High rates of diabetes, heart disease and obesity (U.S. citizens). Eastvale Walk Score 4 out of 100, car dependent. 4.2 average persons per household/family. 31% of residents under age 18. 	Increase hiking trails by 200%. Increase river access points by 200%. Increase active river uses by x%. Increase walkable access to public space amenities by x%.	Impr place Com Recr Space
EQUITABLE ACCESS AND INCLUSION	x existing river access points. x neighborhoods outside quarter mile walking distance to park. Northern and western neighborhoods	Direct access to river trails from all neighborhoods. x new neighborhood parks at detention basin retrofits. Major new community park and open space(s), west and north.	Expa Gree Free ADA
ENVIRONMENTAL EDUCATION AND COMMUNITY SERVICE	Santa Ana River Student Field Trips by JCSD www.jcsd.us/education	Required environmental education participation, all Eastvale students.	Envir educ Educ trail r Com volur Educ

DESIGN STRATEGIES

- v and improved park and open space development.
- roved river access and interconnected trails network.
- abilitate and revitalize existing river parks and n spaces.
- parks, open spaces and civic facilities with improved estrian corridors and bicycle lanes.
- rove streetscape comfort, safety and cemaking quality.
- nplete streets network.
- reational water activities.
- ces to accommodate both active and passive activities.
- anded network of well-distributed river access points.
- en street corridors.
- e public shuttle loop to primary civic destinations.
- A accessible design.
- ironmental learning and interpretive cational sites.
- cational venues linked via improved network.
- nmunity service and habitat restoration nteer program.
- cational partnerships with aligned entities.

PERFORMANCE OBJECTIVES: INTEGRAL ART AND CULTURE

	BASELINE CONDITION	TARGET PERFORMANCE	
DIVERSITY-SERVING PUBLIC REALM	Ethnic diversity: 7.7% African American, 28.5% Asian, 40.1% Hispanic, 27% foreign born. Two major cultural events: "Taste the World," "Lantern Festival."	Represent all primary ethnic groups.	Spec musi Addi Grou
IMPROVE SCENIC QUALITY AND VIEWS	x acres damaged or unmaintained landscape conditions. x acres native landscapes in need of restoration.	100% restoration of damaged or unmaintained landscapes. 100% restoration of native habitats designated to be restored.	Rest Rem Exte for n Enha vivid
PLACE-BASED STORYTELLING ART	No formal Eastvale public art program.	National Assembly of State Arts Agencies (NASAA) model to assure that communities receive cultural, civic, economic, and educational benefits from the arts. https://nasaa-arts.org/state-arts-agencies/	Art a to ur histo
STEWARDSHIP- INSPIRING ART	No formal Eastvale public art program.	A Public Art Plan for the Expressive Potential of Utility Infrastructure (Bow River, Calgary).	Art a unde Utiliz critic Multi that envir

DESIGN STRATEGIES

ecialized and diversified event venues, e.g., art, sic, food.

litional event and activity venues.

up use sites, by reservation.

tore and extend native landscapes.

nove invasive species.

end current "Conservation Area" land use designation, natural and scenic resource preservation.

ance visual character via three visual criteria: unity, Iness, and intactness.

and interpretive devices that help visitors nderstand native ecosystems and cultural ory on the site.

and interpretive devices that help visitors to erstand, value and protect environmental health.

ze "public art to raise awareness of water as a cal and finite resource." (Bow River Art Plan)

ti-disciplinary art, to "create remarkable places encourage sustainability and stewardship of the ronment." (Bow River Art Plan)
INTEGRATED NETWORK



Integrated public realm networks facilitate pedestrian movement and safety, environmental performance, real estate value and a host of other benefits.

PUBLIC REALM HIERARCHY



A hierarchy of public spaces can play a role in centering public life at neighborhood, community, and city-wide scales.



ECOLOGICAL CONNECTIVITY



Connected habitats are essential to the viability of wildlife movement and migration, and overall survival. Habitat fragmentation poses a great threat to the long-term conservation of biodiversity worldwide.

RIPARIAN BUFFERS



buffers to maintain their effectiveness in protecting species.

Riparian habitats in urban areas require minimal widths and adequate

LET THE LANDSCAPE SPEAK



Vegetation, habitat, soils, topography, hydrology and other site attributes inform a landscape's suitability for particular uses.

STORYTELLING



When public spaces tell stories of place, culture, and history, they are more meaningful for visitors.

CITY-WIDE CONCEPT FRAMEWORK





DESIGN INTENT CONCEPT FRAMEWORK

By integrating the river corridor with the broader public realm, a transformative set of community, environmental, economic and cultural benefits may be achieved.



CONCEPT PROJECT SITES



CANDIDATE PROJECTS

SELECTION CRITERIA

- Valuable to fulfilling the overall project Mission and Vision
- Addresses stated community needs
- Focuses on the role and relationship to the river corridor
- Is comprehensive in fulfilling overall network

LEGEND

New and Improved River Access Points

PROJECT LIST

- 1 Arterial Green Corridor: Scholar Way
- 2 Local Green Street: Cedar Creek Drive
- 3 Riparian Forest River Access Point
- 4 Citrus Park
- 5 River Trails and Activities
- 6 Habitat Conservation Plan
- 7 Renaissance Park
- 8 Eastvale Grand Park
- 9 Urban Greenway

CONCEPT PROJECTS **1. SCHOLAR WAY**

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OBJECTIVES

BRING THE RIVER TO THE CITY

- 1. Connect proposed Downtown to the Santa Ana River.
- 2. Enhance the role of Scholar Drive as a multi-use connector that integrates the public realm network and facilitates bicycle and pedestrian movement and safety.
- 3. Create a multicultural historic storytelling sequence with place-based art that gives the street a unique identity.
- 4. Design habitat corridors that integrate native landscapes and associated wildlife into the city fabric.





ARTERIAL GREEN CORRIDOR SCHOLAR WAY

BRING THE RIVER TO THE CITY

- 1 Create a storytelling sequence that celebrates the multi-cultural character of Eastvale and its historic inhabitants.
- 2 Design a multi-use promenade to encourage pedestrian and bicycle transportation.
- 3 Add tree canopy, increase tree diversity, and replace underutilized turf areas with native water-wise vegetation that supports pollinators and small ground-level wildlife.
- 4 Incorporate sustainable practices, such as solar street lights and parkway bioswales connected to Citrus Park.
- **5** Create flexible, multi-cultural gathering spaces for the community.



THEMATIC STREETS AND PLACEMAKING











Chinese Courtyard

Mexican Street Decorations

Portuguese Paving

SCULPTURES AND LANDMARKS



Portuguese Sculpture in Toronto, Canada





Spanish Mosaic Sculpture



Gabrieleño Landmark

Mexican Sculpture

EVENTS AND FESTIVALS



Spanish Festival





Japanese Festival



Chinese Festival







Gabrieleño Festival

ARTERIAL GREEN CORRIDOR SCHOLAR WAY

STORYLINE

Scholar Way celebrates the multi-cultural character of Eastvale and its historic inhabitants.

- Thematic Blocks (Portuguese Block, Japanese Block, Gabrieleño Block, etc...)
- Street decorations for different festivals.
- Multi-use park to celebrate cultural events.
- Thematic sculptures and planting areas.





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ARTERIAL GREEN CORRIDOR Scholar Way

58TH ST. TO BELLEGRAVE



LEGEND

- Existing planting area
- Existing deciduous tree
 - Existing evergreen tree
 - New planting area
 - New tree
- New tree
 - New tree





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ARTERIAL GREEN CORRIDOR Scholar Way

FUTURE DOWNTOWN



LEGEND

- Existing planting area
- Existing deciduous tree
 - Existing evergreen tree
 - New planting area
 - New tree
- New tree
 - New tree







HARADA PARK

Planting the median in areas where no turn is needed adds tree canopy to the street, without reducing the number of lanes.

A 12' multi-use promenade with parkway planting enhances the experience of pedestrian and bicycle users.





NOTES:

* ** For a complete list of California native trees visit Calscape.org

*** California cultivar flowering trees are drought tolerant and provide seasonal interest to the streetscape

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ARTERIAL GREEN CORRIDOR Scholar Way

HARADA PARK







BIO-RETENTION BASIN PARK

The park is a multicultural gathering place, with a central meadow that can hold varied events.

Bringing the river to the city, the designed landscape emulates how the different plant communities meet at the river.

The park is built as a **bio-retention basin**, using soil, plants, and microbes to treat stormwater before being infiltrated into the ground.

LEGEND Existing planting area Existing deciduous tree New tree New tree New tree



BIO-RETENTION BASIN PARK







SCHOOL DISTRICT

Planting the median in areas where no turn is needed adds tree canopy to the street, without reducing the number of lanes.

A 12' multi-use promenade with parkway planting enhances the experience of pedestrian and bicycle users.





NOTES:

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ARTERIAL GREEN CORRIDOR Scholar Way

SCHOOL DISTRICT





CONCEPT PROJECTS 2. CEDAR CREEK/COBBLE CREEK GREEN STREETS





LOCAL GREEN STREET CEDAR CREEK DRIVE OBJECTIVES

THE ROAD TO THE RIVER

- Connect the Urban Greenway and proposed Downtown to the Santa Ana River.
- 2. Enhance the role of local residential streets as green corridors that integrate public realm networks and facilitate pedestrian movement and safety.
- Create a cultural and historic storytelling sequence that gives the street a unique identity.
- 4. Design habitat corridors that integrate native landscapes and associated wildlife into the city fabric.













LOCAL GREEN STREET CEDAR CREEK DRIVE OPPORTUNITIES

THE ROAD TO THE RIVER

- 1 Storytelling: "The Road to the River." Add signs with educational content, showing elevation and distance to River Walk Park. Add murals with river-themed content.
- 2 Encourage pedestrian circulation with pedestrian-friendly sidewalks and painting street intersections. Improve pedestrian connections through existing parks.
- 3 Add tree canopy, increase tree diversity, and replace underutilized turf areas with native water-wise vegetation that supports pollinators and small ground-level wildlife.
- 4 Incorporate sustainable practices, such as parkway bioswales and solar street lights.
- 5 Create flexible, multi-cultural community gathering spaces.



BLOSSOM WAY	MILE 2 - THE MOUNTAINS ELEVATION : 653' WHITE SAGE (kasili)	¥	White sage is one of the most valuable plants in Gabrieleño culture. While various Native American cultures have spiritual uses for sage, the Gabrieleño	consider white sage a "prayer plant." While it has many strictly medicinal uses, most uses are both medicinal and spiritual. The Gabrieleño gather bundles of white sage,	dry them, and use them for purification ceremonies, spiritual cleansing, smudging, and blessing ceremonies.
LIMONITE AVE.	MILE 2 - THE MOUNTAINS ELEVATION : 649' GRIZZLY BEAR (hoo-nahr)	Y.	Bears were part of the ideological belief system of the Gabrieleño, where shamans had the power to turn themselves into these magnificent animals.	The grizzly bear once ranged throughout California. Being larger and more aggressive than the black bear, it is thought that they were	hunted only on a spiritual basis.
KIWI AVE.	MILE 1 3/4 - THE VALLEY ELEVATION : 638' YUCCA (ah-ko)		The yucca plant was an important fiber plant and food source for the Gabrieleño. The green and ripened fruits were roasted or boiled, and the newly-emerging yucca	flower stalks were cut down and cooked like a giant asparagus, peeled, and eaten. Yucca leaves were used to weave baskets, make rope, natural soap, and sew. Usually,	the Gabrieleño went barefoot. However, if they lived in the mountains, they wore sandals made from yucca plant fibers.
65TH ST.	MILE 1 1/2 - THE VALLEY Elevation : 624' Hunting tools	The second secon	The Gabrieleño used bows and arrows or traps to help them hunt. The bows were made from wood and flexible plant fiber string.	Arrows were often just wood but sometimes included either a bone or rock arrowhead tied to its end.	
CEDAR CREEK PARK	MILE 1 1/4 - THE VALLEY ELEVATION : 611' OAK (wet)	Store State	The acorns from oak trees were the primary plant food for the Gabrieleño. Acorns are edible but very bitter when raw due to their tannic acid content.	To remove the bitterness, the Gabrieleño ground the acorns, put in a shallow basket and hot water was poured over it to wash out the tannin.	The processed acorn meal was made into bread or boiled into a mush-like soup and eaten cold.
SCHLEISMAN RD.	MILE 1 - THE VALLEY ELEVATION : 603' DEER (soo-kaht)		Deer was an important food source for tribes living inland. Hunting was a sacred ritual.	All parts of the deer were utilized. Hunters wore a deer head disguise in order to get closer to the deer, the meat was used for food, the hide as clothing and	artifacts, and the hooves to make musical instruments, such as rattles.
	MILE 3/4 - THE RIVER - ELEVATION : 590' WILLOW (sahch-haht)	N/	Willow is one of the most common riparian plant species in California, usually growing in or very near creeks, marshes and other wet areas.	It is a tree with many important uses for the Gabrieleño. Its strong and pliant branches were used to build houses and to make other artifacts	such as tongs for cooking. Medicinal uses include a tea to relieve body aches.
PROVIDENCE RANCH PARK	MILE 1/2 - THE RIVER ELEVATION : 583' HOUSE (kiiy)		The Gabrieleño built dome-shaped houses. Some measured 59 feet in diameter and sheltered three to four families. The frames were made from willow tree branches	planted into the ground in a circle. The tops of these poles were then bent toward the center creating a domed ceiling. Tule rushes and other stiff grasses were layered	and tied to the frame. The homes had at least one door and sometimes a window.
	MILE 1/4 - THE RIVER ELEVATION : 581' JUNCUS (so-ar)	\bigvee	Juncus, often found growing in ditches, bogs, swamps, marshes, wet pastures, and along the margins of lakes and rivers, was used by the Gabrieleño women to	made baskets using coiling and twining methods. Flat baskets were used as plates and trays. Larger round baskets were used for	carrying and storing food. Other baskets were used in special ceremonies.
	MILE 0 - THE RIVER ELEVATION : 569' FISH (kyuur)		Trout and other fish were caught in the local waterways. Fish would be speared, caught with nets, or poisoned with any of a few common	fish-stupefying plants, which caused them to rise to the top.	

LOCAL GREEN STREET CEDAR CREEK DRIVE STORYLINE

Cedar Creek Drive depicts the Gabrieleño Tribe's journey from the mountains to the river.

Each mile and elevation marker captures a different story that educates people about the Gabrieleño lifestyle and sustainable reliance on natural resources, including wildlife and plants.

Each mile increment is represented by an animal, half miles by artifacts, and quarter miles by native plants.

A totem sign and an interactive sculpture will be placed at each mile mark.





LOCAL GREEN STREET CEDAR CREEK DRIVE

TYPICAL RESIDENTIAL STREET

A continuous tree canopy with native understory planting creates a habitat corridor for native pollinators and enhances the experience of pedestrian users.





Locally Native Trees* Juglans hindsii, Juglans californica, Fraxinus velutina



NOTES: *For a complete list of California native trees from Eastvale area visit Calscape.org

LOCAL GREEN STREET CEDAR CREEK DRIVE

TYPICAL RESIDENTIAL STREET







LOCAL GREEN STREET CEDAR CREEK DRIVE CEDAR CREEK PARK

A multi-use central path through the existing neighborhood parks improves bicycle and pedestrian connections along Cedar Creek Drive







LOCAL GREEN STREET CEDAR CREEK DRIVE

CEDAR CREEK PARK







LOCAL GREEN STREET CEDAR CREEK DRIVE PROVIDENCE RANCH PARK

A multi-use central path through the existing neighborhood parks improves bicycle and pedestrian connections along Cedar Creek Drive







Drought Tolerant Shrubs and Groundcover

Providence Ranch Park Gateway Signage Colorful Crosswalk Marking Access to Park

LOCAL GREEN STREET CEDAR CREEK DRIVE

PROVIDENCE RANCH PARK







LOCAL GREEN STREET Cobble creek drive

COBBLE CREEK PROMENADE

Cobble Creek Drive is turned into a shared street, making it a flexible space to host seasonal events.





Locally Native Trees* Juglans hindsii, Juglans californica, Fraxinus velutina

Festive String Lights. Street Can Host Seasonal Markets and Special Events

Existing *Platanus sp.*

Seating Areas

Wall Mural Depicting Riparian Habitats From The Santa Ana River

Shared Street Permeable Cobblestone Pavement Solar-Powered Pedestrian Street Lights

NOTES: *For a complete list of California native trees from Eastvale area visit Calscape.org

LOCAL GREEN STREET COBBLE CREEK DRIVE

COBBLE CREEK PROMENADE





CONCEPT PROJECTS **3. RIPARIAN FOREST RIVER** ACCESS POINT





100'

" = 100'



End of Cobble Creek Drive

Elevated Lookout Deck to Riparian Forest Restoration Area

Existing Trail

NOTES:

*For a complete list of California native trees from Eastvale area visit Calscape.org

RIVER ACCESS POINT RIPARIAN FOREST RESTORATION





SAGE SCRUB



<section-header>



Lupinus latifolius RIVERBANK LUPINE *Oenothera elata* HOOKER'S EVENING PRIMROSE



RIPARIAN FOREST





Salix laevigata RED WILLOW *Alnus rhombifolia* WHITE ALDER



RIVER ACCESS POINT RIPARIAN FOREST RESTORATION


CONCEPT PROJECTS 4. CITRUS PROPERTY AND EASTVALE COMMUNITY PARK

SANTA AN RIVER

Q

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0.7 MILES





CITRUS PARK

LEGEND

$ \longleftrightarrow $	Current Street Project
	Shared Use Path
	Bicycle Lane
	Schools
	JCSD
	City of Eastvale
	W & D Vanleeuwen
	SW Resource Management Assoc.
	Army Corp of Engineers
	Riverside Corona Resource Conserv Dist
C	Open Space Recreation
	Conservation





















75 EMBRACING EASTVALE'S RIVERFRONT: A COMMUNITY-WIDE VISION

CITRUS PARK

CITRUS PROPERTY & EASTVALE COMMUNITY PARK

- 1 Positioned at the most northern part of the Citrus Property, the City of Eastvale hosts many events throughout the year, including the popular monthly food truck event, EATSvale, the annual Lantern Festival, and other events that celebrate Eastvale's diversity. This property is owned by the City of Eastvale.
- 2 The Citrus Property is a 6,200 square foot Spanish style home, located on over 22 acres. Features include a circular brick driveway with a beautiful fountain, surrounded by magnificent palms.

3 A U-Haul neighborhood dealer occupies a privately owned property.

4 JCSD's Eastvale Community Park includes recreational uses characterized by large open, grassy areas for soccer and other sporting events. The area is also known for its annual Picnic in the Park, a free summer evening event with carnival rides, games and waterslides.



CITRUS PARK OPPORTUNITIES AND OBJECTIVES

BRING THE RIVER TO THE CITY

- 1 Use riparian woodland-inspired tree massing to choreograph a linked set of unique spaces.
- 2 Activate the river by introducing a low impact access point at the river bend.
- 3 Intercept, clean and infiltrate polluted urban runoff prior to entering riparian corridor.
- 4 Use public art, design and programming to tell stories about cultural and environmental conditions.
- 5 Identify potential activities, events & practices that support the role of the river corridor in facilitating livability and sustainability





CITRUS PARK TOPOGRAPHY

There is a gradual downward slope from the most northern part of the Citrus property to the lowest part, which leads to the Santa Ana River. There is approximately a 20-ft difference between the two locations.







CITRUS PARK FLOOD ZONES

This flood map indicates areas that are most vulnerable to flooding, which can help identify locations that are structurally safe and those that are not. About half of the site area is indicated as potential floodway.





CITRUS PARK

LEGEND

- 1 Senior Housing Facility
- 2 Hotel
- 3 Citrus Community Center
- 4 The Wetlands
- 5 Citrus Nature Garden
- 6 Gabrieleño Viewpoint
- 7 Picnic Meadow
- 8 The Great Lawn
- 9 Citrus Grove
- 10 Baseball/Softball Field
- **1** Soccer Fields
- 12 Riparian Habitat Preservation
- 13 Riverbend Landing Kayak Start Point
- 14 Riverwalk Trails
- 15 Riparian Habitat Buffer
- 16 Multicultural Event Space
- 17 Pollinator Garden
- Pathway to Silverlakes Equestrian and Sports Park





CITRUS PARK GABRIELEÑO VIEWPOINT







KEYMAP





CITRUS PARK GABRIELEÑO VIEWPOINT







Santa Ana River

Kayak Start Point

CITRUS PARK RIVERBEND LANDING







KEYMAP





CITRUS PARK RIVERBEND LANDING







CITRUS PARK CITRUS NATURE GARDEN







KEYMAP



CITRUS PARK CITRUS NATURE GARDEN





CONCEPT PROJECTS 5. RIVER TRAILS AND ACTIVITIES



SANDBAR TRAIL

This proposed riverside section of the trail offers benches on which to relax and view the water.











TRAILS GOALS AND OBJECTIVES

 Geographically connect the city with the river, removing a physical barrier and mitigating the orientation of the city away from the river. Citizens have been unable to enjoy the beauty of the river close up.

2. Culturally connect the community with the river by creating a multicultural storytelling sequence linked with the new trails, enhancing its sense of identity.

 Connect with and educate the community with the endangered habitats and wildlife of the river corridor, fostering a sense of local stewardship of conservation area.

4. Provide access for the public to see distubed and degraded areas and areas with invasive plants as well as the progress of restoration efforts.

5. Create opportinities for healthful and enriching activities for local people in the river corridor while protecting habitats.





















TRAILS

Hiking

Birding

Kayaking/Innertubing

Scenic viewing

Fishing

Sketching/Painting/Photography

Learning

Volunteering

Relaxing



TRA	LS
PLAN	

Access Points

Living Responsibly with the River - Educational Installation
Wetland Restoration - Trail Head
Riparian Forest Restoration - Trail Head
Sandbar Trail - Trail Head
Jurupa-Guapa Trail/Indigenous Heritage - Trail Head
Sage Scrub Restoration - Trail Head
Meadow Restoration - Trail Head
The Wetlands Channel - Scenic Overlook

Recommended Class I Bike and Soft Surface

Existing Class I Bike and Soft Surface

Recommended Multi-use

Example New



TRAILS ACCESSIBILITY REQUIREMENTS



On November 25, 2013, the U.S. Access Board under the Architectural Barriers Act ABA) issued new accessibility standards for outdoor developed areas on federal lands. These standards provide detailed specifications for accessible trails that apply to facilities that are built, altered, or leased on federal lands or with federal funds.

These standards only apply to trails designated for use by pedestrians only. Trails designated for use by mountain bikers, equestrians, off-highway vehicles, or a combination thereof are exempt from

The ABA standards recognize the existence of constraints and limitations in the outdoor environment and allow for exceptions from specific provisions in the technical requirements where certain circumstances, referred to as "conditions for exceptions," apply. The

Terrain makes accessibility infeasible.

Construction practices, ie. volunteer unskilled labor.

Change to function or purpose - for example a wilderness trail.

Precluded by existing laws, for example a protected site.

CONCEPT PROJECTS 6. HABITAT CONSERVATION PLAN





Eastvale's Riparian Forest

HABITAT CONSERVATION AND RESTORATION

IMPORTANCE AND NEED

The section of the Santa Ana River that borders Eastvale is noteworthy in that it is one of the last few remaining areas in the Santa Ana River corridor that includes an intact riparian area and high habitat potential.

Riparian zones support a disproportionate amount of biodiversity and provide multiple benefits, yet they are one of the rarest and most threatened ecosystems in the United States. Agriculture and development activities have irreversibly damaged these sensitive ecosystems, and riparian habitat loss is estimated at a staggering 95 percent in the western United States. This sobering fact underscores the importance of protecting and preserving what few riparian areas remain—including Eastvale's riparian forest.

As a young city, Eastvale is well-positioned to embrace its river and forest as an integral part of its identity. By caring for this rare and valuable resource and weaving its story into the fabric of the city, Eastvale can be an ally to the environment while enjoying the multitude of benefits that a healthy riparian zone provides.

RIPARIAN ZONES

ecosystems that occur along the edges of rivers and streams

RIPARIAN ZONE BENEFITS

habitat, habitat connectivity, temperature regulation, flood control, erosion control, water quality improvements, recreation opportunities

THREATS TO RIPARIAN ZONES

development, hydrologic alterations, pollution, invasive species, unrestrained human activity, climate change



PRADO DAM IMPACTS

The Prado Dam was built in 1941 for downstream flood control, and for better or for worse, it has permanently changed the landscape of this area by impounding water and raising the water table. Eastvale sits directly adjacent to the resulting Prado Basin, which is now home to the largest riparian forest in Southern California.

Because of the inevitable changes that dams impart on riparian ecosystems, the U.S. Army Corps of Engineers and Orange County Water District are undertaking a combined ecosystem restoration and water conservation effort to both mitigate negative ecosystem effects resulting from the construction of the Prado Dam and retain higher water levels at the dam for increased water availability. Key ecosystem restoration measures of the plan are outlined in the table below. These measures can serve as a springboard for conservation and restoration efforts undertaken by the City of Eastvale.

Measure

Invasive plant removal*

Planting of na vegetation* Cowbird trap

Diversion of tr channel

Sediment management

*Priority measures within the Eastvale section of the corridor

	Function
t	Eliminates invasive plants that displace native vegetation communities and provides for native plant succession.
ative	Accelerates plant community succession for habitat structure and function.
ping*	Removes parasitic bird species that threatens endangered birds by parasitizing their nests.
ibutary	Addresses channel incision and altered stream gradients induced by land use changes and drainage alteration.
	Removes sediment from areas where deposition has covered habitat.



HABITAT CONSERVATION

The Habitat Conservation and Restoration Plan aims to protect, restore, and expand the riparian zone through awareness, invasive species removal, and revegetation. The river corridor's ecological role in Eastvale is twofold: provide high-quality habitat for riparian wildlife and maintain corridor connectivity for safe, free movement along the river corridor.

CONSERVATION

Consists of intact native riparian plant communities that should be protected against excessive disturbance and development. These areas contain critical habitat for wildlife, including several endangered species.

INVASIVE SPECIES REMOVAL

Consists of predominantly *Arundo donax* (giant reed) areas with less than 10% cover of other vegetation. Arundo destroys native vegetation and has little habitat value. Priority should be placed on removing Arundo and other invasive plants and replacing with natives to reconnect fragmented habitat areas. See Appendix for additional invasive plant information.

MIXED RIPARIAN RESTORATION

Consists of areas with 50% native riparian vegetation and 50% non-native riparian vegetation. Focus should be on selective removal of non-native plants and replacement with natives to maintain habitat and biodiversity.

NATIVE LANDSCAPING AND REVEGETATION

Consists of developed and highly disturbed areas where little to no original vegetation remains. These areas include opportunities to reintroduce native ecosystems to increase habitat, extend corridor connectivity, and reinforce a unique sense of place. Revegetation can range from large areas of naturalistic planting to more manicured areas that use native plants for both aesthetics and wildlife support. In addition to the river corridor, native landscaping can and should be applied all across the city.

HABITAT CONSERVATION AND RESTORATION

WILDLIFE

Protecting the riparian zone is most important for the wildlife that it houses. It's estimated that 80 percent of all wildlife depends on the riparian ecosystem for some portion of their life, and 50 percent of bird species nest primarily in riparian zones.

The Eastvale portion of the Santa Ana River corridor contains critical habitats of five federally-listed endangered or threatened animal species: least Bell's vireo, Southwestern willow flycatcher, California gnatcatcher, yellow-billed cuckoo, Santa Ana sucker.



LEAST BELL'S VIREO Vireo bellii pusillus

Least Bell's vireos nest exclusively in dense riparian habitats, preferring native willows that are characteristic to riparian ecosystems. This area houses one of the top two populations found anywhere of this endangered species.



The predominant landscape type in the river corridor is riparian forest. with small areas of emergent wetland and grassland. Related upland landscape types include sage scrub and oak woodland.



Riparian Forest Grassland Emergent Wetland





RIPARIAN FOREST



EMERGENT WETLAND



SAGE SCRUB



GRASSLAND



OAK WOODLAND



activities, and any other creative into the future.

ADDITIONAL PROTECTION **MEASURES**

In addition to restoration and education, some other measures for consideration include prohibited invasive plant lists, native plant palette suggestions for developers and homeowners, conservation easements, and controlled access to sensitive areas during nesting season.

See Appendix for more information on habitat conservation and restoration.

EDUCATION AND VOLUNTEERING

An important part of fostering good stewardship is educating the public about the value of natural resources. Education can take the form of volunteer programs, interpretive signage, nature-based

way to teach residents about the river. Providing opportunities for Eastvale's residents to learn about and partake in the care of their river will go a long way in protecting the river corridor well

EDUCATION OPPORTUNITIES

- interpretive signage
- outdoor classrooms
- nature center
- volunteer programs
- school programs
- summer camps
- nature-based activities
- any other creative way to teach residents about the river

CONCEPT PROJECTS 7. RENAISSANCE PARK







RENAISSANCE PARK OPPORTUNITIES AND OBJECTIVES

A unique space sited at the interface between urban and natural areas, Renaissance Park presents ample opportunities to fulfill environmental, community, economic, and cultural objectives.

1	Preserve and restore sensitive lands and habitat
2	Create a network of community gathering spaces
3	Promote education and community stewardship
4	Encourage health and wellness
5	Support events and economic activity
6	Tell stories of history and place



RENAISSANCE PARK SITE INVENTORY



- Project Area
- ••• Pedestrian Circulation
- Vehicular Circulation
 - Access Points
- Maintenance Access Points
- 1 Residential Neighborhood
- 2 Detention Basin
- 3 Riverview Recreation Park (RRP)
- 4 RRP Halloween Event Space
- 5 RRP Renaissance Village
- 6 Wastewater Treatment Facility
- 7 Proposed Eastvale Grand Park
- 8 OCWD Constructed Wetlands



RENAISSANCE PARK site analysis: elevation

The site contains relatively flatter areas to the north with a more gradual grade change entering the riparian zone. Everything below the 566' flood elevation should be designed to withstand flooding in the event that the Prado Dam reaches maximum storage capacity.

595'
585'
575'
565'
555'
545'
535'
525'
515'
 566' Flood Line



RENAISSANCE PARK

Existing soil conditions play a role in the development of native landscape types. Poorly drained soils with shallow depths to the water table are suitable for riparian plants while well-drained soils at higher elevations are better-suited for upland plant communities.





RENAISSANCE PARK

Renaissance Park will preserve critical habitat areas while expanding opportunities for residents to experience California's unique ecosystems through varied recreation. As a multi-benefit community asset, the park will ultimately strengthen the city's ties to nature and foster community stewardship of its precious riparian zone.



RENAISSANCE PARK NORTH ZONING AND PROGRAM





1 ENTRANCE AREA Community presence

Eastvale brand



2 PICNIC AREA Small gathering Picnicking



3 THE OUTLOOK Views Education





6 THE GREEN Informal gathering Light active recreation



8 THE KNOLL

Views Small gathering Outdoor classroom **9** INTERPRETIVE AREA Education

10 FLEX EVENT SPACE Craft markets

Outdoor gatherings Seasonal events Parking

11 RIPARIAN **IMMERSION**

Conservation Birdwatching Education Hiking

12 TRAILS

Walking Running Biking

13 BIOSWALE

Water quality improvement Education

14 BYPASS TRAIL

Go around Renaissance Village if necessary *Requires trail development on wastewater facility property

400



RENAISSANCE PARK SOUTH ZONING AND PROGRAM





14 BYPASS TRAIL

Go around Renaissance Village if necessary *Requires trail development on wastewater facility property



15 RENAISSANCE VILLAGE SEASONAL EVENT SPACE

Koroneburg Renaissance Festival Live Action Roleplay Weddings Parties Quinceanera Themed Events



16 DEMONSTRATION PLANTING

Education Resting spots

WETLANDS CHANNEL INTERPRETIVE AREA

Education Water interaction



18 RIPARIAN CONSERVATION Conservation



RIPARIAN FOREST



Riparian forests run along river courses and can be hundreds of feet wide. They are comprised of a canopy tree layer, subcanopy tree layer, and understory shrub layer. Most trees are winter deciduous and require consistent moisture.

ALKALI MEADOW



Alkali meadow forms in areas of frequent flooding and alkaline soil conditions. Plant composition is dominated by perennial monocots with roots that can survive in wet conditions.

SAGE SCRUB



Sage scrub is characterized by low to moderately-sized shrubs with flexible branches, semi-woody stems, and shallow root systems. Sage scrub plant composition varies based on available moisture.





CALIFORNIA SAGEBRUSH

Encelia farinosa BRITTLEBRUSH





COASTAL LOTUS

CHAPARRAL MALLOW

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RENAISSANCE PARK PLANT COMMUNITIES

Matching native plant types to their ideal conditions ensures long-term plant success with minimal maintenance. Native plants provide habitat for local wildlife, preserve biodiversity, and instill a unique sense of place to the landscape.

Riparian Forest

Alkali Meadow

Sage Scrub

Meadow

Oak Savanna

Turf Grass

MEADOW



Native meadows that originally existed in upland areas have been lost due to agricultural practices. What remains are grasslands dominated by introduced annual grasses. Opportunity exists to restore meadows with native perennial grasses and herbacious flowering plants.



Eschscholzia californica **CALIFORNIA POPPY**

Aristida purpurea PURPLE THREE AWN



Layia platyglossa TIDY TIPS









KOTOLO MILKWEED

OAK SAVANNA



Oak savannas or open woodlands are characterized by scattered trees with an understory layer of grasses and occasional shrubs. Oak savannas are closely associated with meadows, and restoring native perennials will benefit oak trees by removing competition from aggressive annual grasses.



Quercus agrifolia



Stipa pulchra PURPLE NEEDLEGRASS

Stipa cernua NODDING NEEDLEGRASS

Lasthenia californica

GOLDFIELDS

Quercus engelmannii



Trifolium willdenovii TOMCAT CLOVER



Dedicated areas of contained turf grass serve recreational needs of the community. The higher water requirement of turf means that riparian trees can be planted in these areas.



NON-NATIVE TURF GRASS

Quercus lobata VALLEY OAK



Platanus racemosa WESTERN SYCAMORE

Populus fremontii FREMONT COTTONWOOD



Acer negundo **BOX ELDER**

Juglans californica **CALIFORNIA WALNUT**

TURF GRASS

RENAISSANCE PARK PLANT COMMUNITIES

Matching native plant types to their ideal conditions ensures long-term plant success with minimal maintenance. Native plants provide habitat for local wildlife, preserve biodiversity, and instill a unique sense of place to the landscape.

Riparian Forest

Alkali Meadow

Sage Scrub

Meadow

Oak Savanna

Turf Grass

















RENAISSANCE PARK EDUCATIONAL OPPORTUNITIES ECOSYSTEM TRANSITIONS (1 Riverine-Riparian-Upland continuum **2** OAK SAVANNA PLANT COMMUNITY Plant types, associated wildlife **3** BIOSWALES Bioswale function, stormwater filtering, erosion control 4 WASTEWATER TREATMENT Western Riverside County Regional Wastewater Authority Water treatment process and purpose Clean Water Act (5) NATIVE PEOPLE AND PLANTS Gabrieleño relationship with plants Edible plants, medicinal plants, functional plants 6 RESTORATION AND HISTORY Original landscape types Agriculture and development impacts on original landscapes 7 MEADOW PLANT COMMUNITY Plant types, associated wildlife 8 RIPARIAN FOREST PLANT COMMUNITY Plant types, associated wildlife 9 ENDANGERED SPECIES AND HABITAT CONSERVATION Least Bell's vireo, Southwestern willow flycatcher, etc Photos and critical habitat description **10** PRADO DAM Flood control, water quality, habitat impacts, sediment management **11** SAGE SCRUB PLANT COMMUNITY Plant types, associated wildlife 12 OCWD CONSTRUCTED WETLANDS Wetland habitat description Purpose of OCWD wetlands

Water quality improvement

13 INVASIVE PLANT MANAGEMENT Detriment to native ecosystems Ongoing maintenance needs





Trail to Riparian Zone

| Interpretive Sign

View of Meadow Plant Community

RENAISSANCE PARK

Near the main entry, the Outlook takes advantage of a gentle slope to provide views of different native plant communities on display at the park.





Nature-Inspired Play

| The Green

RENAISSANCE PARK

The Ecotone Zone is a play space at the riparian edge. While enjoying outdoor activities, kids can interact with their surroundings and become familiar with the local landscape.




Outdoor Classroom

RENAISSANCE PARK

A place for gathering and learning, the Knoll features an outdoor classroom atop a hill that offers views of the park and surrounding landscape.





Tule Boat-Inspired Seating

Wetlands Channel

RENAISSANCE PARK WETLANDS CHANNEL INTERPRETIVE AREA

The Wetlands Channel Interpretive Area brings visitors right by the water's edge. The water in the channel flows to Orange County Water District's constructed wetlands and eventually ends up in the Prado Basin. This area is an opportunity to educate the public about wetlands and water quality improvements.



CONCEPT PROJECTS 8. EASTVALE GRAND PARK





EASTVALE GRAND PARK OPPORTUNITIES AND OBJECTIVES

Connect the Community with the River

- 1 Educate the public about the indigenous history
- 2 Improve community health
- 3 Increase storm water capture with check dams, an arroyo and increased tree canopy
- 4 Restore the native habitat through native planting
- 5 Increase bike and pedestrian safety with road crossings and separated paths
- 6 Create community gathering spaces including spaces for events, a visitor center, and recreation spaces



EASTVALE GRAND PARK CURRENT BOUNDARIES



LEGEND

1	WATER TREATMENT PLANT
2	SANTA ANA RIVER
3	CHANDLER AREA
4	CUCAMONGA CREEK
5	KORONEBURG RENAISSANCE FESTIVAL
6	PRADO WETLANDS
7	MILL CREEK TRIBUTARY



EASTVALE GRAND PARK EXISTING CONNECTIONS







EASTVALE GRAND PARK

The topography of the area is relatively flat with a few important exceptions. Mill Creek drains out of the site and eventually into the Sana Ana river. This area descends in elevation and is an important Riparian Habitat.

On the south end of the site there are two hills that are perfect viewing spots for the river and mountains.

The other important note is that the Prado Basin fill line of 543' encompasses much of the area. The implications of which are that structures cannot be built without major thought as to flood risk.



EASTVALE GRAND PARK USE RESTRICTIONS





EASTVALE REGIONAL PARK

The Army Corp of Engineers conducted a habitat analysis for the River Road Dike Project and identified several important habitat areas that should be considered for conservation.

"Occurrences or designated critical habitat for three special status species were identified in the vicinity of the project site: **least Bell's vireo** (LBV; Vireo bellii pusillus), **southwestern willow flycatcher** (SWFL; Empidonax traillii extimus) and **western burrowing owls** (Athene cunicularia hypergia) (Figure 7). No special status species or critical habitat is known to occur within the project boundaries."

Fieldwork identified no evidence of historic structural remains or archaeological features. There are no historic properties located within the River Road project area.



EASTVALE GRAND PARK

Connect the Eastvale community from the new downtown through Cucamonga Creek all the way to the river in a continuous but diverse greenway network.

Incorporate lateral connections from neighborhoods to the future Prado Regional Park.

Integrate nature with the city fabric and achieve the goals set for the broader city public realm network.

Improve Environmental Health

Improve Community Vitality

Economic Catalyst

Increase Art and Cultural Engagement



EASTVALE GRAND PARK

Encompassing a variety of restored ecosystems, community spaces and recreation opportunities Eastvale Grand Park will play a role in transforming quality of life for Eastvale residents.



EASTVALE GRAND PARK PROPOSED LAND USE

By minimizing active uses in close proximity to the river corridor, environmental impacts are minimized, habitat continuity is facilitated and a continuous wildland experience is allowed. An overall transition south to north from restoration, to passive, to active uses addresses contextual relationships and environmental connectivity.

LEGEND **RESTORATION AREA PASSIVE RECREATION ACTIVE USES** MAIN PEDESTRIAN CIRCULATION SECONDARY PEDESTRIAN CIRCULATION VEHICLE CIRCULATION WATER TREATMENT PLANT 2 SANTA ANA RIVER 3 CHANDLER AREA 4 CUCAMONGA CREEK 5 KORONEBURG RENAISSANCE FESTIVAL 6 PRADO WETLANDS 7 MILL CREEK TRIBUTARY 8 FUTURE PRADO REGIONAL PARK



Walking Path

Class 1 Bike Path

Native Plants

EASTVALE GRAND PARK RESTORATION ZONE

Restoration zones are intended to reestablish natural systems and associated habitat. Emphasis is placed on riparian woodlands, meadows and riparian corridors. Native plants, natural drainage, and limited pedestrian access facilitate desirable habitat conditions.

Constructed restoration zone paths are limited to a primary corridor, with a class one bicycle trail and accompanying pedestrian path. Formal recreation uses are limited.

Ample opportunities for environmental education focus on diverse ecosystems and environmental health.

Environmental education can yield a community stewardship ethic.





Drought Tolerant Meadow Grasses

EASTVALE GRAND PARK RECREATION MEADOW

Modest opportunities for recreation in woodland clearing meadows maintain an ecology- and restoration-driven native landscape.

Recreational venues are positioned along the primary multi-modal corridor.





Planting Buffer Between Roads and Paths Pedestrian Bridges Across Major Roads Will Greatly Increase the Safety of the Bike Corridor and Encourage Ridership

EASTVALE GRAND PARK STREET CROSSINGS

All major streets crossings incorporate signaled crossings or a pedestrian bridge, for pedestrian safety and continuity.





EASTVALE GRAND PARK

A generous wildlife crossing under River Road includes arroyo and hydrological continuity, all aimed at maintaining a continuous, unfragmented habitat corridor.

While dry most of the year the arroyo will capture a significant amount of water during rain events.





Permeable Pavers Can Be Used for High Traffic Paths to Improve Stormwater Infiltration

EASTVALE GRAND PARK

A visitor center in the park can serve multiple purposes: park orientation, history and environmental education, community events and park volunteer facility.



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URBAN GREENWAY

- Connect the Downtown Eastvale Development with the Chandler Redevelopment and greater Santa Ana River Trails system.
- 2. Create a system of primarily off-street trails to encourage a safer, healthier way of moving around the city.
- Utilize existing infrastructure as a medium for cultural/historic storytelling and placemaking.
- Rewild overdeveloped, underused corridors with native vegetation to create a more pleasant environment for both people and wildlife.

ZONES

Cucamonga Creek Channel Transmission Corridor

Local Streets Path





URBAN GREENWAY SITE INVENTORY

Trail character varies throughout its 4 mile stretch.

Opportunity to connect existing and proposed green spaces.

Opportunity to improve accessibility and connect bisected neighborhoods.

ZONES







URBAN GREENWAY

PLACEMAKING

- 1. A conceptual wayfinding signage system that can become identifiably 'Eastvale'.
- 2. Create a flexible system that will greet, educate, and direct visitors.
- 3. Eastvale color palette evolves from green to blue over the journey from City Center to the Santa Ana River.





City of Eastvale Logo and Brand Colors



Conceptual bas relief channel wall mural detail depicting the Gabrieleño Tribe and their relationship to the site and its historic vegetation and wildlife. Made to view from the opposite side of the channel, educational signage can be made to accompany each section.

URBAN GREENWAY

CUCAMONGA CREEK CHANNEL

An abstracted riparian forest lines each side of the channel; creating a more enjoyable space and providing shade for a system of trails and improved connection/access points.

PROGRAM HIGHLIGHTS

- 1 Areas for contemplation within the urban riparian forest
- 2 Improved circulation and views
- 3 Channel edge beautification
- 4 Social/gathering spaces
- 5 Bas relief channel wall mural activates the edges and provides educational opportunities



Tiburon Dr & Cucamonga Creek Detention Basin Retrofit Park and Observation Point

Illustrative Enlargement Focus Area (See Next Page)

Jake Way & Walters Street Detention Basin Retrofit Park

BALLAN BE MER

Carlos Carlos

Schleisman Bridge Observation Point

East Bank Cycling Paths, Reflecting Ontario's Channel Improvements

(ISHAND) (IIDIDARD

MIALINIA

West Bank Equestrian and Pedestrian Paths, Reflecting Ontario's Channel Improvements

Her san s de la Constant

Improved Access Points to Adjacent Neighborhoods

0402000

South Cucamonga Creek Pedestrian Bridge

URBAN GREENWAY CONCEPT PLAN 1/4

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CUCAMONGA CREEK CHANNEL SOUTH





Historical/Cultural Channel Wall Mural SCE Corridor Tree Enhancement Within SCE Guidelines



South Cucamonga Creek Pedestrian Bridge East Bank Cycling Trails, Reflecting Ontario's Channel Improvements. Incorporates Service Access.



URBAN GREENWAY CONCEPT PLAN 1/4: ENLARGEMENT

CUCAMONGA CREEK CHANNEL SOUTH

Opportunities to connect adjacent neighborhoods to the Urban Greenway and each other through improved access points and pedestrian bridges.





0 5' 10' 20' 40'

URBAN GREENWAY SECTION/ELEVATION

CUCAMONGA CREEK CHANNEL SOUTH

Cycling, pedestrian, and equestrian trails reflect and connect to Ontario's Cucamonga Creek Channel improvement plan.

Native landscape bioswales capture all stormwater along the miles-long shoulders of the creek channel, filtering and recharging the ground water.



California Native Plant Palette



Guardrail Provides Security While Creating a Sense of Place Seating Areas for Meeting and Meditation East Bank Cycling Trails, Reflecting Ontario's Channel Improvements. Incorporates Service Access.

Trail Mile Marker Signage

URBAN GREENWAY EAST BANK CYCLING PATH AND INTERPRETIVE AREA

CUCAMONGA CREEK CHANNEL

Signage greets, educates, and directs visitors along the Urban Greenway.

Opportunities to create a space that is identifiably 'Eastvale' through strategic infrastructure design choices.



Power Line Zone

* 107.6 W.

Bright Gem & Cucamonga Creek Detention Basin Retrofit Park

West Bank Equestrian and Pedestrian Paths, Reflecting Ontario's Channel Improvements

> Schleisman Bridge , Observation Point

Montessori Academy

South Cucamonga Creek Pedestrian Bridge

East Bank Cycling Paths, Reflecting Ontario's Channel Improvements



Creek Park

URBAN GREENWAY CONCEPT PLAN 2/4

CUCAMONGA CREEK CHANNEL NORTH







URBAN GREENWAY OPPORTUNITIES

TRANSMISSION CORRIDOR

From Dairy Farm to Solar Farm, the Transmission Corridor looks to historical remnants of the region's dairy farms as inspiration for solar shade structures, shaded seating areas, and educational installations.

PROGRAM HIGHLIGHTS

- 1 Solar shade structures provide shade for trails system
- 2 Shaded seating areas
- 3 Large boulder installations mimic dairy cows grazing
- 4 Interpretive educational and wayfinding signage
- 5 Native landscape restoration water quality and infiltration ponds



Illustrative Enlargement Focus Area (See Next Page)

LIMONITE AVE

Power Line Zone

Enhanced Tree Buffer Outside of Power Line Boundaries

Bike Path/Access Road and Primary Pedestrian Path

ARCHIBALD AVE

Existing Access Points to Neighborhood and Parks

and the first start

Solar Farm Shade Structures

Power Line Tower

URBAN GREENWAY CONCEPT PLAN 3/4

TRANSMISSION CORRIDOR





URBAN GREENWAY CONCEPT PLAN 3/4: ENLARGEMENT

TRANSMISSION CORRIDOR

LEGEND



Power Line Zone

Power Line Tower

Interpretive Boulder Installation

- Bike Trail/ Service Road
 - Pedestrian Trails







URBAN GREENWAY SECTION/ELEVATION

TRANSMISSION CORRIDOR





Boulder Installation Cultural/Environmental Interpretive Signage California Native Plant Palette Secondary Pedestrian Trail

URBAN GREENWAY AN INTERPRETIVE LANDSCAPE THAT SPEAKS TO EASTVALE'S DAIRY FARM HISTORY

TRANSMISSION CORRIDOR

The Transmission Corridor landscape gives visitors an opportunity to learn about a part of Eastvale's past.

Built structures like the solar farm shade structures and the shaded seating areas use materials and shapes that reference the dairy buildings that once stood on this site. Cow-sized boulders are placed to mimic dairy cows grazing.





URBAN GREENWAY OPPORTUNITIES

LOCAL STREET ALTERNATIVES

A system of green streets connects cyclists and pedestrians to the city center on the final leg of their journey from the river.

PROGRAM HIGHLIGHTS

- 1 Enhance visual character of paths with artwork on the ground plane
- 2 Provide additional passive recreation spaces through integrated seating and pocket parks
- 3 Improve safety via protected bike and pedestrian paths with native green street planting
- 4 Mitigate urban heat island effect with enhanced shade tree planting





URBAN GREENWAY CONCEPT PLANT 4/4

LOCAL STREET ALTERNATIVES

Three alternative routes provide access to the redeveloped Scholar Way and connection to the proposed Downtown Eastvale Development.





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URBAN GREENWAY SECTION/ELEVATION

LOCAL STREET ALTERNATIVES BELLEGRAVE AVENUE

- 1. Create safer, more complete streets by incorporating protected bike lanes and moving sidewalks further from the road wherever possible.
- 2. Add tree canopy to help mitigate the urban heat island effect.
- 3. Create native landscape bioswales to help collect and filter stormwater runoff and recharge groundwater.
- 4. Replace underutilized turf areas with native water-wise vegetation that supports pollinators and small ground-level wildlife.





Flowering Street Trees Provide Visual Interest Throughout the Year

URBAN GREENWAY CONCEPT PLANT 4/4: ENLARGEMENT

LOCAL STREET ALTERNATIVES BLOSSOM WAY




URBAN GREENWAY SECTION/ELEVATION

LOCAL STREET ALTERNATIVES BLOSSOM WAY

- 1. Create safer, more complete streets by incorporating protected bike lanes and moving sidewalks further from the road wherever possible.
- 2. Add tree canopy to help mitigate the urban heat island effect.
- 3. Create native landscape bioswales to help collect and filter stormwater runoff and recharge groundwater.
- 4. Replace underutilized turf areas with native water-wise vegetation that supports pollinators and small ground-level wildlife.



EXISTING



EXISTING



URBAN GREENWAY SECTION/ELEVATION

LOCAL STREET ALTERNATIVES BERRYHILL DRIVE

- 1. Create safer, more complete streets by incorporating protected bike lanes and moving sidewalks further from the road wherever possible.
- 2. Add tree canopy to help mitigate the urban heat island effect.
- 3. Create native landscape bioswales to help collect and filter stormwater runoff and recharge groundwater.
- 4. Replace underutilized turf areas with native water-wise vegetation that supports pollinators and small ground-level wildlife.



KEY ACTIONS AND POLICY CONSIDERATIONS

POLICY AND FUNDING

- General Plan Update, Open Space Element
- City-Wide Open Space Network
- Parks, Trails, and Open **Space Policies**

Concept Projects Definition

- Project Site Area
- Design Intent
- Plan Framework
- Key Program
- Performance Metrics
- Sustainable Water Management Practices
- **Urban Forest Improvements**
- Native Landscape Requirements
- Project Budgeting and Funding Source Opportunities

STAKEHOLDER-BASED **COORDINATION AND DESIGN** UCLA Document Review by **Governing Jurisdictions** Indigenous People Collaboration **Detailed Project Design** Community Stakeholders

 Planning Commission and **City Council**



SUPPORTING PROGRAMS

Volunteer Program: Open Space Maintenance and Restoration

Public Art Program

Environmental Education Program

Major Events and Activities Venue Plan

Capital Improvement Program

IMPLEMENTATION

Demonstration Projects

River Access and Trails Implementation Plan

Habitat Conservation and Restoration **Plan Execution**

APPENDIX: HABITAT CONSERVATION AND RESTORATION



CONTEXT



PURPOSE AND NEED

The section of the Santa Ana River that borders Eastvale is one of the few remaining areas left in the river corridor with an intact riparian area and high habitat potential. It is directly adjacent to the Prado Basin, which contains the largest riparian forest in Southern California.

Riparian zones support a disproportionate amount of biodiversity and provide multiple benefits, including habitat and habitat connectivity, temperature regulation, flood control, erosion control, and water quality mitigation. Despite their intrinsic value, riparian areas are threatened by human activities such as development, pollution, and introduction of invasive species.

The purpose of this document is to provide context and habitat conservation guidelines for the stretch of the Santa Ana River corridor along Eastvale. This area is rare and valuable, and it should be actively protected.

PROBLEMS AND OPPORTUNITIES

Eastvale is located next to the Prado Dam and Flood Control Basin. Constructed in 1941, the Prado Dam has altered the hydrology and vegetation of the area, converting much of the landscape into riparian forest. Eastvale's adjacency to the Prado Dam provides significant benefits and is consequently included in the Army Corps study area. A wealth of information regarding wildlife and habitat exists for the Eastvale portion of the Santa Ana river corridor.



"Cumulative Analysis: Habitat" diagram from the Santa Ana River Parkway & Open Space Plan

With its rich riparian forest, the river corridor is a unique asset for the City of Eastvale. Opportunities exist for the city's residents to engage with and learn about its riparian forest. Since the riparian zone contains sensitive lands and critical habitat, however, it is essential to manage human activity to minimize human-wildlife conflict.

Beyond the river corridor, there has been substantial habitat loss due to urbanization and development. It may be impossible to completely reclaim once-wild areas, but habitat zones can be connected and expanded by restoring native plant communities throughout the city.

REGIONAL HABITAT CONDITIONS

The "Cumulative Analysis: Habitat" diagram from the Santa Ana River Parkway & Open Space Plan shows that portions of the river in Eastvale are "Good," "Very Good," and "Most Suitable" for both habitat preservation and restoration. This is in contrast to the majority of areas along the corridor that are "Not Suitable" or "Fair" at best.

CONTEXTUAL HABITAT CONDITIONS



WILDLIFE HABITAT TYPE



The primary habitat types found in Eastvale under the California Wildlife Habitat Relationship (CWHR) system are Valley Foothill Riparian, Riverine, Annual Grassland, and Urban. Urban plant communities are generally composed of exotic vegetation and do not have high habitat value.



VALLEY FOOTHILL RIPARIAN HABITAT

The Valley Foothill Riparian habitat consists of a canopy layer, subcanopy layer, understory shrub layer, and minimal herbacious groundcover layer. Mature canopy coverage can range from 20 to 80 percent, and most trees are deciduous. In a healthy riparian forest, there is dense, multi-layer coverage, which supports the highest levels of biodiversity. The majority of wildlife species rely on riparian habitat zones for some portion of their life.



RIVERINE HABITAT

Riverine habitat encompasses both streams and rivers. Streams start at an elevated source and flow at faster velocities downstream until the volume of water increases, velocities slow, and they eventually become rivers. In areas with exposure to direct sunlight, water temperatures are warmer, and riparian canopy coverage along the edges is essential to provide cooler microclimates for aquatic wildlife. Shallow waters, such as those in the Eastvale portion of the Santa Ana River corridor, are home to aquatic wildlife such as fish and turtles. They are also feeding grounds for many avian species.



ANNUAL GRASSLAND HABITAT

Annual grasslands are composed primarily of non-native annual grasses and herbacious plants, often as the understory of oak woodlands. Fall rains germinate the seeds, which grow through spring and then die off during the dry summer months. Annual grasslands descend from grasses introduced for agricultural grazing purposes, and they now occupy what likely was once native meadows and coastal sage scrub. Annual grasslands serve as breeding, foraging, and hunting grounds for reptiles, mammals, and birds.



CANOPY LAYER



Populus fremontii FREMONT COTTONWOOD



Populus trichocarpa BLACK COTTONWOOD



Platanus racemosa WESTERN SYCAMORE

SUBCANOPY LAYER



Alnus rhombifolia WHITE ALDER



Acer negundo **BOX ELDER**



Fraxinus velutina VELVET ASH

Juncus xiphioides **IRISLEAF RUSH**

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UNDERSTORY SHRUB LAYER



Salix lasiolepis **ARROYO WILLOW**



Salix exigua NARROW-LEAF WILLOW

Baccharis salicina **EMORY'S BACCHARIS**



Vitis girdiana DESERT WILD GRAPE

HERBACIOUS GROUNDCOVER LAYER

Artemisia douglasiana **CALIFORNIA MUGWORT**





Hesperocnide tenella WESTERN NETTLE



Euthamia occidentalis WESTERN GOLDENTOP



Urtica dioica **COMMON NETTLE**



Castilleja minor LESSER INDIAN PAINTBRUSH

KEY WILDLIFE SPECIES



ENDANGERED SPECIES CRITICAL HABITAT

- Prado Basin Boundarv Yellow Billed Cuckoo Critical Habitat Santa Ana Sucker Critical Habitat
- Southwestern Willow Flycatcher Critical Habitat Least Bell's Vireo Critical Habitat California Gnat Catcher Critical Habitat

The Santa Ana River corridor falls within the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). The Eastvale section of the MSHCP aims to maintain a continuous linkage along the Santa Ana River and preserve critical habitat areas for riparian species.

The Eastvale area contains critical habitats for five federally-listed endangered or threatened animal species: Least Bell's Vireo, Southwestern Willow Flycatcher, California Gnatcatcher, Yellow-billed Cuckoo, Santa Ana Sucker.

Other species with habitats in the Eastvale area that the MSHCP aims to preserve are:

- Arroyo Chub
- Western Pond Turtle
- Cooper's Hawk
- Tricolored Blackbird
- Burrowing Owl
- American Bittern
- Cactus Wren
- Northern Harrier

- Yellow Warbler
- White-tailed Kite
- California Horned Lark
 Double-crested
- Peregrine Falcon
- Yellow-breasted Chat
 White-faced Ibis
- Loggerhead Shrike
- Black-crowned Night
- Heron

- Osprey
- Downy Woodpecker
- Cormorant
- Tree Swallow
- Bobcat
 - Mountain Lion

FEDERALLY-LISTED ENDANGERED (E) AND THREATENED (T) SPECIES



Vireo bellii pusillus LEAST BELL'S VIREO (E)

Least Bell's Vireos nest exclusively in dense riparian areas, preferring native willows. This area houses one of the top two populations found anywhere of this endangered species. Their breeding season lasts from mid-March to September.



Polioptila californica CALIFORNIA GNATCATCHER (T)

California Gnatcatchers nest in coastal sage scrub, which is an upland plant community associated with riparian ecosystems. Their breeding season lasts from late February to early August.



Empidonax trailii extimus SOUTHWESTERN WILLOW FLYCATCHER (E)

Southwestern Willow Flycatchers prefer nesting in dense riparian vegetation, usually in willow branches near water. Their breeding season lasts from late April to August.



Catostomus santaanae SANTA ANA SUCKER (T)

Santa Ana Suckers live shallow portions of rivers and streams. They are endemic to (occur exclusively in) southern California and are one of the few native fish species remaining. Hydrologic alterations both upstream and downstream of Eastvale have damaged its habitat.







Coccyzus americanus YELLOW-BILLED CUCKOO (T)

Yellow-billed Cuckoos prefer nesting in riparian zones among cottonwoods and willows. They are rare on the west coast due to lack of suitable habitat. Their breeding season lasts from mid-May to late September.

HISTORIC CONDITIONS AND HABITAT LOSS



INVASIVE SPECIES

Also contributing to habitat loss are introduced exotic and invasive species that came (and still come) with people developing the land.

Invasive plant species grow aggressively and have few or no checks in their new surroundings. They compete with native plants, eventually overtaking them and destroying habitat for local wildlife. Care must be used when developing areas, especially near the riparian zone, since disturbed landscapes are more invasive-prone.

Invasive species are not just limited to plants. The Eastvale portion of the Santa Ana River corridor breeds populations of invasive cowbirds that parasitize other birds' nests and contribute to the declining population of least Bell's Vireos. There are also feral pigs in the river corridor that trample and damage vegetation.

Diagram showing the ecosystem transitions between riparian and upland areas, reproduced from The Preservation and Restoration of Riparian Resources in Conducting Flood Control Activities, 1981, by Lockard and Burgess.

RIVER TO UPLAND TRANSITION

Over a relatively short time period, several factors have contributed to changes in historic landscape conditions and habitat loss. In pristine times, ecosystems transitioned gradually from aquatic to riparian to upland plant communities, sometimes over several miles. Though aquatic and riparian zones often persist (sometimes unintentionally and to varying degrees of health) through urbanization due to water protection laws, some upland plant communities have all but disappeared.

Because upland plant communities existed on prime land, much of it was lost to agriculture, grazing, and eventually development. Upland plant ecosystems include grasslands and meadows, vernal pools, chaparral, coastal sage scrub, and oak woodlands. In southern California, habitat loss to agriculture and development is so great that we no longer have native meadows and associated vernal pools. What remains are annual grass areas, and we can only speculate what their original plant composition was.



MEADOW AND VERNAL POOL



CHAPARRAL



COASTAL SAGE SCRUB



OAK WOODLAND



Arundo donax

The most noteworthy and threatening of the invasive species present in the riparian zone is *Arundo donax* (giant reed). Arundo forms dense, impenetrable growth that crowds out native riparian vegetation, has little habitat value to native wildlife, increases fire risk, intereferes with flood control, and consumes large volumes of water.

PRADO DAM

One of the largest changes to the local landscape was the construction of the Prado Dam in 1941, which raised the water table and converted historic grasslands and coastal sage scrub into riparian zones. Although the area now benefits from an expansive new riparian forest, a negative side effect of the dam is a homogenized landscape that no longer undergoes characteristic temporal changes that are tied to water-level fluctuations.

The dam also prevents larger-grained sediment from making its way downstream, which compromises habitat both upstream and downstream. The upstream sediment deposit damages habitat by covering vegetation, and downstream aquatic ecosystems are deprived of necessary large-grained sediment deposits that form specialized in-stream habitat areas.

Additionally, the sediment-devoid water released from the dam erodes downstream areas, incising the stream channel, lowering the water level, and reducing the riparian zone.

PRADO DAM AND BASIN



The Prado Dam was authorized in 1936 to mitigate catastrophic downstream flooding, and construction was completed in 1941. The dam and reservoir make up the Prado Flood Control Basin, which is jointly owned and operated by the Army Corps of Engineers and Orange County Water District. The Prado Basin is comprised of over 11,500 acres, 4,100 of which are riparian habitat.

PRADO BASIN ECOSYSTEM RESTORATION AND WATER CONSERVATION PROJECT

The U.S. Army Corps of Engineers and Orange County Water District are undertaking a combined ecosystem restoration and water conservation effort to both mitigate the long-term negative ecosystem effects resulting from the construction of the Prado Dam and retain higher water levels at the dam for increased water availability.

Key ecosystem restoration measures of the plan that fall within or adjacent to the Eastvale portion of the Santa Ana River corridor are invasive species removal, removal maintenance, and native vegetation planting. Other measures falling outside of Eastvale are a tributary channel diversion and sediment management system.

The eventual higher water levels at the dam may further alter the local riparian ecosystem.

ECOSYSTEM RESTORATION MEASURES

Measure	Function
Invasive plant removal*	Eliminates invasive plants that displace native veget
	succession.
Planting of native vegetation*	Accelerates plant community succession for habita
Cowbird trapping*	Removes parasitic bird species that threatens enda
Diversion of tributary channel	Addresses channel incision and altered stream gradulateration.
Sediment management	Removes sediment from areas where deposition ha

*Priority measures within the Eastvale section of the corridor

INVASIVE PLANT REMOVAL



Invasive Spec	ies
Top Tier	Arundo donax (giant reed), Eucalyptus globulus (eucalyptus), Phoenix canariensis (Canary Island date palm), Washingtonia robusta (Mexican fan palm)
Second Tier	Lepidium latifolium (perennial pepperweed), Kochia scoparia (kochia), Conium maculatum (poison hemlock), Ricinus communis (castor bean), Brassica nigra (black mustard), Tamarix spp. (saltcedar, tamarix)

Species listed as top-tier are those most threatening to the biodiversity of the project area

Plant species identified for riparian forest restoration in the Army Corps document include Salix gooddingii (black willow), Salix lasiolepis (arroyo willow), Populus fremontii (Fremont cottonwood), and Baccharis salicifolia (mulefat).



Maintenance Road

The proposed sediment management system would be sited downstream from Eastvale's portion of the river. The primary purpose of the trap is to remove sediment that would displace water and decrease the storage capacity of the Prado Basin, but secondary benefits to the ecosystem would be sediment removal from upstream habitat.

tation communitites and provides for native plant

at structure and function.

angered birds by parasitizing their nests.

dients induced by land use changes and drainage

as covered habitat.

PLANTING OF NATIVE VEGETATION

SEDIMENT MANAGEMENT SYSTEM

JURISDICTIONAL RESTRICTIONS

LAND OWNERSHIP

Key land owners in the river corridor are the Army Corps of Engineers, Orange County Water District, and Riverside-Corona Resource Conservation District. See "Site Analysis: Land Ownership and Regulatory Framework" of the main document for a complete list of land ownership in the river corridor. Collaboration and coordination with multiple agencies will be required to improve areas along the river corridor while remaining sensitive to ecosystem needs.

REGULATORY FRAMEWORK

Federal Endangered Species Act (FESA)

Federal Clean Water Act (CWA)

Migratory Bird Treaty Act

California Environmental Quality Act (CEQA)

California Endangered Species Act (CESA)

California Fish and Game Code Section 1600

California Fish and Game Code Fully Protected Species

California Fish and Game Code Sections 3503, 2505, 3513, 3800, 3801

Porter-Cologne Water Quality Control Act

WESTERN RIVERSIDE MULTIPLE SPECIES HABITAT **CONSERVATION PLAN**

The vast majority of the river corridor in Eastvale falls under the Western Riverside Multiple Species Habitat Conservation Plan (WR-MSHCP). The main goal of the MSHCP is to protect biological resources in the conservation area, but another primary objective is to provide compatible recreational and educational opportunities.

Covered public access and recreational activities in the conservation area include trails, select facilities (trailheads, interpretive centers, maintenance facilities), and passive recreation. The plan shows one allowed trailhead in the southwestern portion of the Eastvale area.

Permitted passive recreation includes hiking, bird watching, photography, biking, horseback riding, picnicking, sun bathing, scientific research, swimming, fishing, and boating.

The MSHCP also lists invasive plants that are prohibited in and adjacent to the conservation area.

PROHIBITED PLANT LIST

Botanical Name

Acacia spp. (all species) Achillea millefolium var. millefolium Ailanthus altissima Aptenia cordifoliax Arctotheca calendula Arctotis spp. (all species & hybrids) Arundo donax Asphodelus fistulosus Atriplex glauca Atriplex semibaccata Carex spp. (all species*) Carpobrotus chilensis Carpobrotus edulis Centranthus ruber Chrysanthemum coronarium Cistus ladanifer (incl. hybrids/varieties) Cortaderia jubata [syn.C. Atacamensis] Cortaderia dioica [syn. C. sellowana] Cotoneaster spp. (all species) Cynodon dactylon (incl. hybrids varieties) Cyperus spp. (all species*) Cytisus spp. (all species) Delosperma 'Alba' Dimorphotheca spp. (all species) Drosanthemum floribundumrosea Drosanthemum hispidumpurple Eichhornia crassipes Elaegnus angustifolia Eucalyptus spp. (all species) *Eupatorium coelestinum* [syn. *Ageratina* sp.] Festuca arundinacea Festuca rubra Foeniculum vulgare Fraxinus uhdei (and cultivars) Gaura spp. (all species) Gazania spp. (all species & hybrids) Genista spp. (all species) Hedera canariensis Hedera helix *Hypericum* spp. (all species) Ipomoea acuminata Lampranthus spectabilis Lantana camara Lantana montevidensis [syn. L. sellowiana] Limonium perezii Linaria bipartita Lolium multiflorum

Common Name

acacia common yarrow tree of heaven red apple cape weed African daisy giant reed or arundo grass asphodel white saltbush Australian saltbush sedge ice plant sea fig red valerian annual chrysanthemum gum rockrose jubata grass, pampas grass pampas grass cotoneaster Bermuda grass nutsedge, umbrella plant broom white trailing ice plant African daisy, Cape marigold ice plant ice plant water hyacinth Russian olive eucalyptus or gum tree mist flower tall fescue creeping red fescue sweet fennel evergreen ash, shamel ash gaura gazania broom Algerian ivy English ivy St. John's Wort Mexican morning glory trailing ice plant common garden lantana lantana sea lavender toadflax Italian ryegrass

Botanical Name

Lolium perenne Lonicera japonica (incl. 'Halliana') Lotus corniculatus Lupinus arboreus Lupinus texanus Malephora crocea Malephora luteola Mesembryanthemum nodiflorum Myoporum laetum Myoporum pacificum *Myoporum parvifolium* (incl. 'Prostratum') Oenothera berlandieri Olea europea Opuntia ficus-indica Osteospermum spp. (all species) Oxalis pes-caprae Parkinsonia aculeata Pennisetum clandestinum Pennisetum setaceum Phoenix canariensis Phoenix dactylifera Plumbago auriculata *Polygonum* spp. (all species) Populus nigra 'Italica' Prosopis spp. (all species*) Ricinus communis Robinia pseudoacacia Rubus procerus Sapium sebiferum Saponaria officinalis Schinus molle

Schinus terebinthifolius Spartium junceum Tamarix spp. (all species) Trifolium tragiferum Tropaelolum majus Ulex europaeus Vinca major Yucca gloriosa

be appropriate.

Common Name

perennial ryegrass Japanese honeysuckle birdsfoot trefoil yellow bush lupine Texas blue bonnets ice plant ice plant little ice plant myoporum shiny myoproum ground cover myoporum Mexican evening primrose European olive tree Indian fig African daisy Bermuda buttercup Mexican palo verde Kikuyu grass fountain grass Canary Island date palm date palm cape plumbago knotweed Lombardy poplar mesquite castorbean black locust Himalayan blackberry Chinese tallow tree bouncing bet, soapwart Peruvian pepper tree, California pepper Brazilian pepper tree Spanish broom tamarisk, salt cedar strawberry clover garden nasturtium prickly broom periwinkle Spanish dagger

An asterisk (*) indicates some native species of the genera exist that may

Sources: California Exotic Pest Plant Council, United States Department of Agriculture-Division of Plant Health and Pest Prevention Services, California Native Plant Society, Fremontia Vol. 26 No. 4, October 1998, TheJepson Manual; Higher Plants of California, and County of San Diego-Department of Agriculture.

RECOMMENDATIONS AND RESOURCES

The measures outlined in the Prado Basin Ecosystem Restoration and Water Conservation Project—invasive species removal and native planting—provide a critical starting point for habitat conservation and restoration in Eastvale. Consulting with the Riverside-Corona Resource Conservation District may help to develop a more explicit restoration action plan. The organization owns portions of the corridor and currently has over 90 active restoration projects in Riverside and San Bernadino Counties.

In conjunction with active restoration, there are additional ways to get citizens involved and invested in the river corridor.

Some ideas include:

Educational Programs

These can consist of school programs, after-school programs, summer camps, weekend classes, and nature-based clubs. Possible topics include local plant identification, plant community relationships, plants used by native people, medicinal plants, plant and wildlife relationships, native insects, etc.

Volunteer Programs

Volunteer activity can consist of invasive plant removal, native planting, native plant nursery operations, and docent work.

Conservation Easements

Securing conservation easements along the river corridor can help incrementally expand habitat areas. The Riverside-Corona Resource Conservation District may be able to provide additional guidelines regarding conservation easements.

Controlled Times of Access

Closing off certain trails or areas in sensitive habitat zones during peak nesting season can help minimize human-wildlife conflicts. Endangered bird breeding times in the area range conservatively from February to September, with the largest overlap from April to August.

Residential and Commercial Native Plant Palette Suggestions

Curated native plant palettes for homes and commercial establishments make it simple and straightforward to fill the streets with attractive, compatible native plants that expand habitat, use less water, and lend the city a distinct character. Information on plants native to the Eastvale area can be found on the Calscape.

HISTORIC PLANT LIST

The San Francisco Estuary Intitute's Resilient Landscapes Program studies historical ecology in native California landscapes. A select portion of their historical plant list for the Riverside area is reproduced below and can aid in plant selection for riparian restoration projects.

RIPARIAN FOREST AND SCRUB

Artemisia douglasiana Baccharis salicifolia Baccharis salicina Castilleja minor Epipactis gigantea Euthamia occidentalis Helenium puberulum Helianthus annuus Hesperocnide tenella Juncus xiphioides Lupinus latifolius Oenothera elata Platanus racemosa Populus fremontii Pseudognaphalium leucocephalum Ribes divaricatum Salix exigua Salix gooddingii Salix laevigata Stachys ajugoides Stachys albens Symphyotrichum subspicatum Urtica dioica

*Bolded plants are historically dominant species

RESOURCE WEBSITES

Calscape https://calscape.org/

SFEI Resilient Landscapes Program https://www.sfei.org/rl

Riverisde-Corona Resource Conservation District https://www.rcrcd.org

SOURCES

The Bandini-Cota Adobe - Prepared for the US Army Corps of Engineers by Roberta S. Greenwood, Jay D. Frierman, and John M. Foster

California's Changing Landscapes: Diversity and Conservation of California Vegetation - Michael Barbour, Bruce Pavlik, Frank Drysdale, and Susan Lindstrom

A Guide to Wildlife Habitats of California - State of California, Resources Agency, Department of Fish and Game

Prado Basin Ecosystem Restoration and Water Conservation Study - US Army Corps of Engineers

The Preservation and Restoration of Riparian Resources in Conducting Flood Control Activities - William M. Lockard and Richard A. Burgess

Santa Ana River Parkway and Open Space Plan - Prepared for Coastal Conservancy by PlaceWorks

Stream Corridor Restoration: Principles, Processes, and Practices -The Federal Interagency Stream Restoration Working Group

Western Riverside Multiple Species Habitat Conservation Plan -Prepared for County of Riverside by Dudek & Associates



ACKNOWLEDGEMENTS

This concept development was a group project collaboration between UCLA students: Brennan Groh, Teresita Larrain, Amy Norman, Jina Park, Tyler Peters, and Jacqueline Wee.

Under the guidance of Charles Ware, UCLA Instructor.

Much appreciation to our Guest Lecturers: Jim MacRae - Principal, Design Workshop, Inc. Meredith Wenskoski - Principal, Livable Cities Studio, Inc. Conners Lander - Principal, Design Workshop, Inc Rodrigo R. Rodarte – Project Manager, Agora Partners

With the support and contributions from: Gina Williams – Community Development / Public Works Director, City of Eastvale Gus Gonzalez - Planning Manager, City of Eastvale Jimmy Chung - City Engineer, City of Eastvale Randy Jackson - President, Placeworks, Inc. Karen Gulley - Principal, Placeworks, Inc. Pamela Galera – Director of Parks, Recreation, and Community Services, City of Riverside Eileen Takata – Watershed Program Manager, U.S. Army Corps of Engineers Andrew Salas - Gabrieleno Band of Mission Indians, Kizh Nation

Special thanks to Stephanie Landregan - Director, UCLA Landscape Architecture Program